



Yosemite National Park Aviation Management Plan

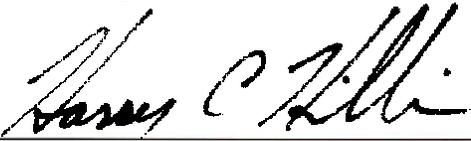


2008

2008 Yosemite National Park Aviation Management Plan

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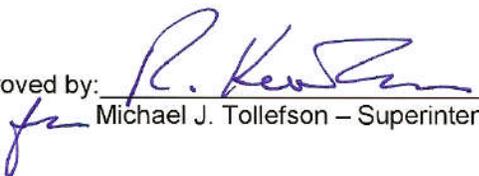
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Table of Contents

I. INTRODUCTION 6

II. PURPOSE 7

A. NPS Policy8

B. Compliance with Park Legislative Mandates8

C. Park Aviation Policy8

D. Yearly Flight Restrictions8

E. Helicopter Landings Outside of Yosemite Wilderness9

F. Helicopter Landings within Yosemite Wilderness9

G. Authorized Passengers, Cargo, and Flights10

H. Employee and Visitor Safety10

I. Emergency Preparedness11

J. Operational Considerations for Aircraft Use in Yosemite National Park11

 1. Airspace11

 2. Unauthorized Low Level Flights11

K. Environmental Concerns.....12

 1. Topographic Conditions12

 2. Environmental Concerns.....12

III. ROLES AND RESPONSIBILITIES 12

A. Yosemite Aviation Organization for 2008.....13

B. Organizational Responsibility.....13

C. Training and Certification13

 1. Park Superintendent14

 2. Chief Ranger14

 3. Other Division Chiefs15

 4. Park Aviation Manager15

 5. Acting Park Aviation Manager Designation15

 6. Exclusive Use Helitack Foreman15

 7. Assistant Fire Helicopter Manager16

 8. Project Manager.....16

 9. Aviation Dispatcher16

 10. Flight Manager (Fixed-Wing and Helicopter)16

 11. Resource Helicopter Manager16

 12. Law Enforcement Helicopter Positions17

 13. Law Enforcement Helicopter Crew Member17

 14. Flight Manager/Chief of Party17

 15. Air Crew Personnel17

 16. Employees17

IV. AIRCRAFT ADMINISTRATION 17

A. Fixed-Wing Aircraft18

B. Exclusive Use Contract Helicopter.....18

C. Aircraft Rental Agreements19

D. End Product Contracts.....19

E. Cooperator Aircraft.....19

F. Routine Flight Requests and Project Aviation Management.....20

G. Non-Routine/Emergency Flights20

H. Special Use Activities.....21

I. Cost Analysis22

Yosemite National Park Aviation Management Plan

J.	Documentation Records and Reports	22
1.	AMD 23	22
2.	Safecom and AMIS	22
K.	Issue Resolution	23
L.	Aviation Program Reviews	23
M.	Aviation Management Plans	23
N.	Dispatching and Controlling Flights	23
1.	Flight Following for Routine Flights	23
2.	Flight Following for Non-Routine/Emergency Flights	24
O.	Overdue/Missing Aircraft.....	24
V.	AVIATION OPERATIONAL POLICY	24
A.	Project Aviation Planning	24
B.	Project Aviation Safety Plans (PASP).....	25
C.	Overdue Aircraft.....	25
D.	Search and Rescue of Lost/Missing Aircraft	25
E.	Aviation Documentation	25
VI.	AVIATION SAFETY PROGRAM AND DISCUSSION.....	25
A.	Safety Standards	25
B.	Passenger Safety.....	26
C.	Personal Protective Equipment (PPE)	26
D.	Personal Protective Equipment (PPE) Exception Waivers	26
E.	Aviation Life Support Equipment (ALSE)	27
F.	Aircraft Data Cards	27
G.	Manifests.....	27
H.	Load Calculations	27
I.	Communications	28
J.	Pilot Authority.....	28
K.	Pilot Duty Limitations	28
L.	Near Miss/Bird Strikes	28
M.	Transporting Hazardous Material Guidelines.....	28
N.	Smoking.....	29
O.	Fuel Reserves.....	29
P.	Pilot Briefings	29
Q.	Pre-Flight Briefings	29
R.	Known Flight Hazard Maps.....	30
S.	Air Space Restrictions.....	30
VII.	AVIATION OPERATIONS.....	30
A.	Flight Operations.....	30
B.	Helicopter Operations	30
C.	Low Level Flights	30
D.	Wildland Fire	30
E.	Search and Rescue Missions	31
1.	Transportation of Dogs.....	31
F.	Emergency Medical Services Missions.....	32
G.	Hoist Operations with California Highway Patrol	32
H.	Law Enforcement Missions	32
I.	Prisoner Transport.....	34
J.	Short-haul Missions	34
K.	Rappel Missions.....	34
L.	Wilderness and Trail Support.....	34
VIII.	AVIATION SECURITY	34

Appendix A – Departmental Manuals 350 – 354..... 35

Appendix B – Operational Procedures Memoranda 35

Appendix C – Directors Order 60 and Reference Manual 60 for Aviation Management 35

Appendix D – Agreements and MOUs 35

Appendix E – Reference Documents 35

Appendix F – Personal Protective Equipment Exemptions 35

Appendix G – Mishap Response Guide 35

Appendix H – Project Aviation Safety Plans 35

Appendix I – Yosemite Aviation Reviews 35

Appendix J – Yosemite Landing Areas 35

Appendix K – Yosemite Aviation Contract Documents 35

Appendix L – Yosemite Aviation Training and Qualifications 35

Appendix M – Yosemite Helibase Operations Plan 35

Appendix N – Yosemite Aerial Ignition Operations Plan 35

Appendix O – Yosemite Aviation Communications Plan 35

Appendix P – Yosemite Rappel Program 35

Appendix Q – Yosemite Short Haul Program..... 35

Appendix R – Wildland Fire Support 35

Appendix S – Yosemite Search and Rescue Support 35

Appendix T – Yosemite Law Enforcement Support..... 35

Appendix U – Yosemite Wilderness and Trails Support 35

Appendix V – Yosemite NP and California Highway Patrol Cooperation 35

Appendix W – Yosemite NP and California National Guard Cooperation..... 35

Appendix X – Yosemite NP and California Against Marijuana Production Cooperation35

Appendix Y – Yosemite NP Med Flight Coordination 35

I. INTRODUCTION

The Yosemite Aviation plan provides guidance and direction for fiscal year 2008 to implement a highly safe and effective aviation program. Input from the Division of Visitor and Resource Protection has been on-going since December and will continue through the rest of the fiscal year with the understanding that adaptive management will be taken into consideration during all operational missions. It is simply impossible to identify and describe all possible combinations of aircraft utilization to achieve National Park Service missions. The key to successful operations will be to ensure open communication with the Chief Ranger, Park Aviation Manager, Helitack Foreman, and SAR Manager throughout the 2008 season. Under highly uncertain conditions, the advice and counsel of the Regional Aviation Manager will be sought.

Record keeping will become part of this plan and yearly updates will be kept on file with the Branch Chief of Fire and Aviation Management.

This plan is required by policy (RM-60) to implement and approve aviation activities within the park. This Aviation Management Plan will provide the basis for aviation management activities in Yosemite National Park, but will require additional documentation and input from all divisions in Yosemite in order to make this a document that will be able to withstand the current and future demands of the aviation program. This plan is a living document that will be upgraded as necessary to enhance safety and evolve with mission or technology changes.

Importantly, the continuous adaptive management process will proceed throughout the year with the ability to update and add to Standard Operating Procedures found in the appendices of this plan. This plan will be updated on an annual basis.

All comments and documents will be collected by the Branch Chief for Fire and Aviation Management. Contact Kelly Martin at kelly_martin@nps.gov or call 209-372-0325.

II. PURPOSE

Yosemite's aviation program is an all-risk, all-hazards program, supporting all divisions, under the general line authority of the park superintendent. The Yosemite Aviation Management Program is managed by the Branch of Fire and Aviation Management under the Division of Visitor and Resource Protection. Yosemite's program is highly specialized and very complex due to environmental conditions such as high elevations and steep granite cliffs, competing demands for aircraft, and demand for service from the 3.5 million visitors that visit Yosemite each year. This Park Aviation Management Plan is designed to address these complex missions with the ultimate goal of providing a highly skilled and trained workforce willing to commit to personal safety above all during highly energized and emergent situations.

The Park Aviation Manager is responsible for providing safe, cost-effective aviation support to the various divisions in the park as well as its interagency partners. The Branch of Fire and Aviation Management will be guided by adherence to Departmental aviation policy, safe aviation practices, sound mission planning, risk management and ongoing safety training with technical and contractual support from the Regional Aviation Manager, the NPS Branch Chief of Aviation Management, and the DOI Aviation Management Directorate (AMD). Continuous evaluation and critique of mission performance and customer satisfaction through the use of after action reviews will be used as a continuous improvement process.

Yosemite National Park utilizes fixed-wing and rotor-wing aircraft in all phases of park management. The use of aircraft is essential to the mission of Visitor and Resource Protection and Resource Management and Science.

This plan was developed to provide all users of aviation management assets the ability to obtain information quickly and easily, allowing for safe, efficient, and effective aviation operations in Yosemite National Park. Employees should be able to access needed and required documentation on the Internet, the Yosemite Fire Website, or on the annual Park Aviation Management Plan CD.

This plan establishes guidelines and specific direction for the frequent user (Fire Management Branch) and the occasional user (Search and Rescue and Law Enforcement) of aircraft. This plan has no sunset date, but will be reviewed and updated by Division employees during the annual review process to ensure assumptions regarding the coming year's program are consistent with this plan. It is the intent to have this plan as a foundational document that can be referenced each year by all employees.

The annual review and update of this plan can be found in Appendix I. Original signed reviews will be kept in a hard copy file with the Branch Chief of Fire and Aviation Management. Signed documents will be scanned and become part of the annual update package.

This plan tiers to the Pacific West Region Aviation Management Plan that was completed in 2008 and conforms to policy direction as stated in NPS Reference Manual 60 – Aviation Management.

The majority of the information that pertains to daily operations will be found in the appendices of this document. Any major updates to this plan during the current fiscal year will be forwarded electronically to the Regional Aviation Manager.

A. NPS Policy

National Park Service (NPS) aviation activities will be performed in accordance with applicable Federal Aviation Regulations (FAR), Department of the Interior (DOI) Aviation Policy, National Business Center Aviation Management (AM) publications, Reference Manual 60, and NPS Aviation Management. Deviations are permitted only by waiver from persons in whom the authority is vested.

Weblinks to policies, handbooks, and guides regarding the use of aircraft at Yosemite National Park can be found in Appendix E. Each year these documents will be checked to ensure employees have the most current policy documents.

B. Compliance with Park Legislative Mandates

The authorities for implementing this plan are contained in various documents, including the National Park Service Organic Act (16 USC 1), and the 1976 Authorities Act (16 USC 1.a). A wide variety of specific NPS Management Policies also affect the use of aircraft for administrative purposes in NPS areas. These include policies related to wilderness preservation and management, visitor safety, emergency preparedness, search and rescue, emergency medical services, law enforcement, and specific policies on aircraft use.

C. Park Aviation Policy

It is Yosemite National Park policy to use its aircraft for activities involving employee and visitor safety, wildland fire support, emergency preparedness, maintenance and construction projects, search and rescue missions, emergency medical services, law enforcement support, the administration and/or protection of resources, research, and for individually approved special purpose missions. The objective of every flight is to be the safest, most efficient, economic, and effective method of performing the required task, consistent with wilderness goals. All administrative use of aircraft will comply with the policies and guidelines contained in Section I.A. All employees with aviation duties are responsible for becoming familiar with and applying correct procedures in all phases of aircraft use. The number one concern at all times is SAFETY. Authorized aviation activities shall occur in a safe and appropriate manner with minimum impact on Yosemite's resources, values, and visitor experiences.

Throughout most of the year the use of aviation assets in Yosemite National Park will come from helicopter missions. The exclusive-use helicopter contract will perform the following missions: fire suppression, fire monitoring, initial attack, prescribed fire and aerial ignition, short-haul, rappel, search and rescue missions, medical evacuations, law enforcement limited to non-threatening surveillance and reconnaissance, and other administrative and related resource activities. Aviation use related to marijuana eradication and/or backhaul of seized material may be considered beyond the scope of the current exclusive use contract. In this case the mission may be considered "inherently governmental" due to the need to maintain chain of custody of evidence. The park may elect to utilize the MOU with the California National Guard under the counter-drug nexus.

D. Yearly Flight Restrictions

Each year flight restrictions are instituted from March 1 to August 1 to protect nesting peregrine falcons. The closure states that "Helicopter and other aircraft should avoid operating within a half mile of peregrine aeries, unless aircraft use is necessary to protect human life." Although nesting pairs often occupy the same ledge for many years, both locations and dates of the restrictions may change based on current information on the birds. As of 2008, there are four known in Yosemite Valley, and two in Hetch Hetchy and one at the

northeast end of Lake Eleanor. The greatest threat to the falcons from aircraft comes when the aircraft appear suddenly, which can startle the young birds and cause them to jump off the ledge before they are ready to fly, damage eggs, or cause nest abandonment. When flying within the restricted areas is unavoidable, such as when using the Ahwahnee Meadow landing area, the risk can be minimized by approaching slowly and staying below the aerie, allowing the birds to watch the approach. The worst possible approaches for the birds would involve flying suddenly around a corner or over the cliff edge, creating a sudden sound profile and visual intrusion. When approaching the Ahwahnee Meadow landing area, using an approach route that utilizes airspace from the south avoids the immediate Rhombus Wall/Royal Arch feature to the north. This seasonal flight restriction will become part of the Yosemite National Park Flight Hazard Map located in Appendix H. Although not a flight hazard per se, all pilots are briefed on the aviation hazard map, thus reducing the need to brief from more than one map.

E. Helicopter Landings Outside of Yosemite Wilderness

Helipads may be established to meet park or incident needs. Generally speaking the most utilized landing zones outside of wilderness are Ahwahnee Meadow, El Capitan Meadow, El Portal (on the road next to the sewage treatment plant), Wawona (south end of the golf course), Gaylor Pit and Glacier Point Road. These landing areas are identified on a park GIS map and can be found in Appendix J. Crane Flat Helibase serves as the main facility for incident helicopter operations. For large fire support, helicopter operations will be moved to a different location to limit the disruptions at Crane Flat. Depending on the complexity and duration of large project fires, information on potential helibase locations will be part of the line officer briefing packet and provided to the logistics section chief. All potential helibases are located outside the Park. Coordination for the use of these helibases will be negotiated by the Incident Management Team and the Yosemite Administrative Officer. There are no standard operating procedures for these off-site helibases per se; these would be negotiated with the private land owner and/or the US Forest Service when a helibase is put into service. These potential helibase sites will be included in the Crane Flat Helibase Operations Plan.

Unimproved landing areas and helispots with minor improvements may be used to meet emergency needs. Unimproved landing areas and helispots with minor improvements may be used for authorized non-emergency aircraft landings if such use was addressed in an approved environmental compliance document. In any case, helispot improvements will be limited to the minimum necessary to provide a safe landing site, such as the removal of individual shrubs or rocks. Wherever helispot improvements are made, they will be rehabilitated upon completion of the activity and before all incident or project personnel are released from the scene.

F. Helicopter Landings within Yosemite Wilderness

Aircraft landing is specifically prohibited in Wilderness by The Wilderness Act (16 U.S.C. 1133(c)), except for measures for saving lives, control of fire, insects, and diseases (16 U.S.C. 1133(d)(1)). Wilderness management policy for the National Park Service is found in Directors Order/Reference Manual 41: Wilderness Management. In compliance with this law, the unit's guidelines will apply to aircraft use in Wilderness:

Heliports and helipads are not allowed in the Wilderness of Yosemite National Park. For fire management purposes, it is generally possible to use unimproved landing areas and helispots in Wilderness and walk into the worksite if such an unimproved helispot is available within a 30 minute walking distance. In such cases, minor improvements to create a closer helispot are not warranted. All known helispots that have been created or have the potential to be used has a helispot should be documented by Crane Flat Helicopter Managers and

information provided to the Fire GIS specialist to produce a master map that contains existing and/or potential helispots.

Some emergency medical services may require minor improvements to helispots for the purpose of gaining immediate access to the injured party. In such cases, where use of an unimproved helispot and carry-out of the injured party would compromise the survivability of the injured party, minor improvements to helispots are warranted.

To the extent possible, non-emergency use of helispots in Wilderness should be avoided. However, non-emergency use of unimproved landing areas may be necessary to complete the project. Furthermore, under rare circumstances, a non-emergency project may require the conveyance of large items that cannot otherwise be transported (e.g., transporting out large bundles of corral or fencing materials) and in those cases minor helispot improvements may also be warranted. In the event of such “planned” actions, the decision to use an unimproved landing area or an improved helispot in Wilderness will be detailed in a Wilderness Minimum Requirement Analysis. This form can be found in Appendix U.

For safety purposes, low altitude flights, helicopter or fixed wing, will be avoided to the extent practicable. Furthermore, low altitude flight directly over wild animals or areas of visitor concentration will be avoided at all times unless such an activity is the express purpose of the flight (e.g., wildlife census flights). It is particularly important to avoid the areas of El Capitan, Half Dome, and Glacier Point. Generally these areas have a high concentration of visitors expecting a limited intrusion by helicopters.

A yearly log of all helicopter landings that take place in the park will be recorded by the user and submitted to the Wilderness Manager upon request or at the end of the fiscal year. A copy of this form can be found in Appendix U.

G. Authorized Passengers, Cargo, and Flights

Only personnel who have an official purpose, or are essential to the execution of a particular mission, may participate in a flight. The following categories of personnel define official passengers as per RM-60, Chap 11.1A:

The following categories of personnel are official passengers:

- Officers and employees of the Federal Government traveling on official business;
- Members of Congress and employees of Congressional committee staffs whose work relates to DOI programs;
- Non-Federal passengers when engaged in missions which enhance accomplishment of a Departmental program such as personnel of cooperating state, county, or local agencies; representatives of foreign governments; and contractors' representatives to include those employed by such agencies, and private citizens;
- Space-available passengers authorized and approved in accordance with OMB Circular A-126; and
- Space-available travelers approved by the Secretary of the Interior on a trip-by-trip basis.

H. Employee and Visitor Safety

The preservation and saving of human life will take precedence over all other management actions. The National Park Service and its concessionaires, contractors, and cooperators will seek to provide a safe and healthful environment for employees and visitors. All aviation activities embrace mission planning, risk assessment, hazard analysis, and after action reviews. Yosemite National Park will work cooperatively with other federal, state, and local agencies, organizations, and individuals to carry out this responsibility.

I. Emergency Preparedness

The National Park Service will develop a program of emergency preparedness in accordance with the Federal Civil Defense Act (50 USC 2251 et seq.), National Security Decision Directive 259 (Feb. 4, 1987), Departmental Policy, and other considerations at the Washington, Regional, and Park levels. The purpose of the program will be to maximize visitor and employee safety and the protection of property. This program will include a systematic method for alerting visitors to potential disasters and evacuation procedures. Each park superintendent will develop and maintain an emergency operations plan to ensure an effective response to all types of emergencies that can be reasonably anticipated.

J. Operational Considerations for Aircraft Use in Yosemite National Park

A variety of aircraft types including military, commercial, and general aviation are used for NPS administrative purposes. Noise and sonic booms resulting from overflights have the potential to adversely affect park resources and values such as fragile cultural resources, sensitive wildlife species, the natural quiet of park settings, and interfere with visitor enjoyment. The majority of aircraft flight time in Yosemite National Park occurs from wildland fire support. This includes transportation of firefighters, logistical support, and water retardant operations. When practical, efforts should be made to utilize alternative methods to support wildland fire management; e.g. pack mule strings for food and water resupply, and hiking into and out of fires when practical and safe to do so.

1. Airspace

Since the National Park Service has no direct authority or jurisdiction over airspace above 2000 feet AGL (above ground level), it will actively seek the assistance of the Federal Aviation Administration and appropriate agencies of the Department of Defense to resolve overflight concerns and to prevent, eliminate, or minimize the degradation of park resources and values associated with overflight activity. The 1984 Interagency Agreement among the National Park Service, the Federal Aviation Administration, and the US Fish and Wildlife Service establishes agency responsibilities and procedures to be followed to address site specific aircraft overflight concerns.

The exceptions to the National Parks Overflight Act of 1987 (PL-100-91) include the following:

- (1) Emergency situations involving the protection of persons or property, including aircraft;
- (2) searches and rescue operations;
- (3) flights for purposes of firefighting or for required administrative purposes; and
- (4) compliance with instructions of an air traffic controller.

When possible, NPS use of aircraft will be planned and scheduled to consolidate flights. NPS aircraft operations are subject to the regulations and policies of the Department of the Interior, Aviation Management Directorate and the Federal Aviation Administration and NPS Aviation Management (Director's Order #60).

2. Unauthorized Low Level Flights

All low-level over-flights that are clearly below 2000 feet above ground level (AGL), regardless of aircraft type, should be reported to Yosemite ECC by phone or radio as soon as possible. Administrative helicopter flights such as 551 or medical evacuations are not included. To limit false reporting of covert law enforcement missions, flight managers will contact Yosemite ECC to inform them of the type and time the aircraft will be flown over the park prior to commencing flight operations. A reporting form "Yosemite National Park Aviation Occurrence Report" can be found in Appendix E.

K. Environmental Concerns

95% of Yosemite National Park is designated Wilderness. All flights that include landings, shorthauls, or rappels in wilderness must meet the minimum requirements test from Section 4 (c) of the Wilderness Act. For all flights, efforts should be made to identify and mitigate aviation activities on wilderness values, wildlife, and park visitors. A variety of laws and policies may have potential influence on aircraft activity and require additional planning and review processes. Routine flight requests should be scheduled at least 30 days prior to the requested flight. All non-emergency flights into wilderness require a written Minimum Requirement Analysis document signed by the Superintendent.

1. Topographic Conditions

Yosemite National Park is located in the Central Sierra Nevada Mountains of California. The 750,000 acres of the park are comprised of three of the finest sequoia groves in existence, vast high country wilderness, hundreds of glacial lakes, deep glacier cut valleys, and some of the highest mountains in the Continental United States. Also included are virgin oak, fir, mountain and sub-alpine pine forests, numerous sub-alpine and alpine meadows, low elevation manzanita, varied wildlife, and a number of waterfalls.

Much of the park is only accessible by foot or on horseback. Most of the park is high elevation backcountry, which is managed as wilderness.

Yosemite National Park enjoys a relatively mild climate with a distinct winter/spring wet season and an equally distinct summer/fall dry season. Lower elevations are generally warm and clear during the winter and hot and dry during the summer, whereas higher elevations are cool during the summer and cold during the winter.

Elevations range from 1,800 feet to 13,000 feet with general wind direction from the southwest. Strong winds are occasionally found in Yosemite Valley and thunderstorm downdrafts can be both erratic and intense. Canyon winds generally blow up-canyon during the day and down-canyon during the night.

2. Environmental Concerns

Noise and visual pollution resulting from aircraft, particularly low-altitude flights, are concerns to all. Development of park aviation plans and specific mission planning must consider impacts on wildlife, the natural quiet and visual values of wilderness, historic and cultural scenes, Native American sacred sites and traditional practices, as well as specific local restrictions or exceptions provided for by law and policy. A variety of laws and policies may have potential influence on aircraft activity and require additional planning and review processes, including Environmental Assessments, Section 106, clearance and formal consultation with segments of the Native American community associated with the specific park area.

III. ROLES AND RESPONSIBILITIES

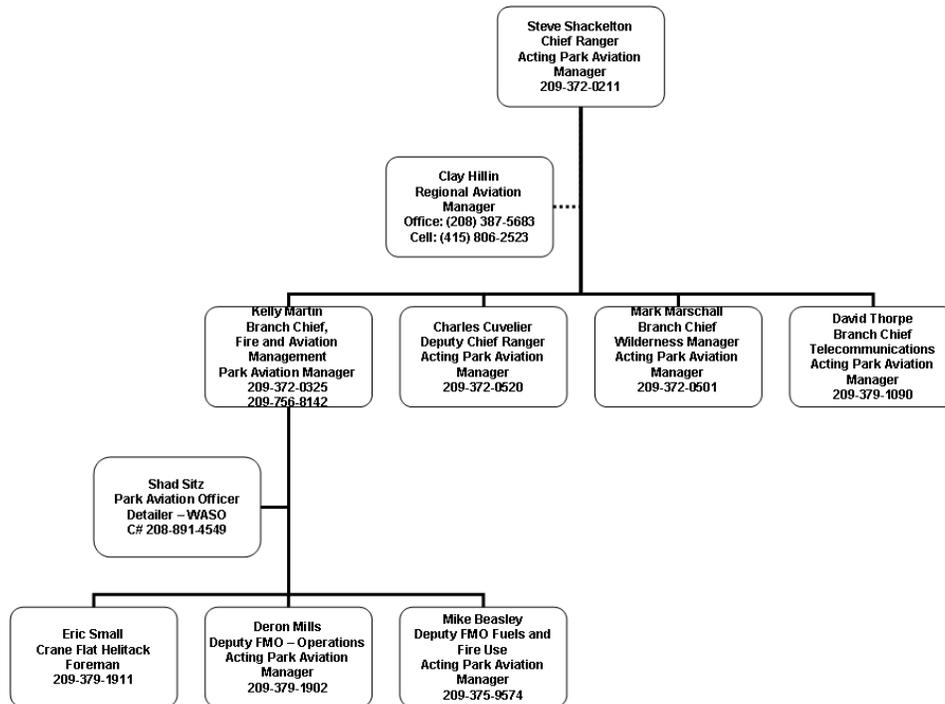
Aviation activities or services are authorized within Yosemite National Park through an approved Park Aviation Management Plan. This Plan will be signed by the Superintendent and will meet the minimum requirements specified in Aviation Management Directors Order and Reference Manual 60. All aviation activities must be carried out with the minimum adverse impact to the park and neighboring resources and visitor experience.

National Park Service management activities are essential to the protection of human life, personal property, irreplaceable natural and cultural resources, and the accomplishment of the National Park Service Mission. The objectives of these policies and required procedures are to: (1) establish a

Yosemite National Park Aviation Management Plan

framework for a safe, efficient, and cost-effective aviation management program; and (2) minimize adverse impacts that NPS aviation activities may impose on park resources and visitor enjoyment. Aircraft use in wilderness areas is permitted only in accordance with provisions of the Wilderness Act, legislation applicable to specific park areas, the Interagency Strategic Plan for Wilderness Management, and other NPS policies applicable to wilderness.

A. Yosemite Aviation Organization for 2008



B. Organizational Responsibility

There are several documents that provide guidance for training and qualifications for aviation operations. The guiding document for overall aviation training and qualifications as it pertains to non-fire aviation positions, training and qualifications in Yosemite National Park can be found in the OPM-06-04. Additional positions not found in the OPM-6-04 can be found in Interagency Aviation Training Guide 2006. For fire helicopter training and qualifications refer to the NWCG 310-1, and the Interagency Helicopter Operations Guide 2006, Chapter 2 Personnel. For non-fire (Helicopter Manager – Resource) refer to OPM-06-04 and the IHOG Chapter 2. Refer to the annual review and update of Appendix I for current trained and qualified personnel for Yosemite National Park.

C. Training and Certification

It is impossible to cover in this park aviation management plan each and every type of operation or training matter related to aircraft. The intent is to provide clear direction that meets policy to ensure a safe as possible aviation management program.

The basic training requirements for aviation users are contained in the following documents:

- Operational Procedures Memorandum (OPM) 06-04
- IHOG Chapter 20 – Personnel
- NWCG 310-1 April 2006 Training and Qualifications, pages 73-88

- Interagency Aviation Training Guide April 2006, part 2, Position Descriptions and Required Modules
- Pacific West Regional Office Aviation Management Plan, Chapter 14, Aviation Training & Certification

Given the complexity of training and qualifications required for aviation related positions, contact the Park Aviation Manager for guidance and direction for completing individual training and certification in aviation management positions.

OPM-06-04 specifies training requirements for Line Managers and Supervisors whose personnel use aircraft to accomplish agency programs. In order to clarify those positions that fall into these categories the following lists are provided. M3 is offered online, but is required to be taken first in a classroom setting and then taken online every three years thereafter (Pacific West Region Regional Aviation Management Plan 14.2.1.1)

Online M3 training: <https://www.iat.gov/Training/modules/m3/index.html>

All master aviation training records will be kept with the Park Aviation Officer throughout the year. Master fire records will be kept on file at Yosemite ECC. Copies of the rappel and short-haul training and certification records will be kept at Crane Flat Helibase during the contract period and will be brought down to the Park Aviation Manager's office during the off season.

Line Managers and supervisors are those individuals that have direct or indirect responsibilities for aviation activities in Yosemite National Park. These positions have been identified as key personnel to ensuring the safety, effective and efficient use of aircraft in the park. Line managers and supervisors will be required to attend Aviation Management Training for Supervisors (M3).

Line Manager: Regional Director, Deputies, and those acting in these positions, Park Superintendents, Deputies, and those acting in these positions.

Supervisors: of those employees who use aircraft to accomplish agency programs (first and second level supervisors) to include: Branch Chief of Fire and Aviation Management, Deputy FMOs, Chief Ranger, Deputy Chief Ranger, Chief of Resources, Chief of Maintenance, SAR Coordinator, Helitack Supervisor, Assistant Helitack Supervisor, and Helitack Lead. These positions have been identified that pertain directly to the aviation program in Yosemite National Park. A more detailed training and qualification flow chart for each of these positions can be found in Appendix L.

1. Park Superintendent

Responsibilities are detailed in DO and RM 60 and can be found in Appendix C. For the purposes of training and qualifications, the Park Superintendent is identified as a "Line Manager" who is responsible and accountable for using aviation resources to accomplish Bureau programs. The knowledge required by the Superintendent includes familiarization with the DOI aviation management program, policies, and related requirements and responsibilities. The Superintendent delegates authority for aviation activities to the Chief Ranger which in turn will be managed by the Branch Chief for Fire and Aviation Management.

2. Chief Ranger

The management of the aviation program in Yosemite National Park has been delegated authority for the safe and efficient operational and administrative control of the Park aviation program by the Superintendent. Since the Chief Ranger is expected to act as the Park Superintendent and s/he directly supervises the Park Aviation Management

Program, the Chief Ranger is considered both a Line Manager and a Supervisor and would be required to complete the Aviation Management Training for Supervisors (M-3) training course.

3. Other Division Chiefs

Division Chiefs may utilize aviation assets to complete park mission requirements by supporting trail construction and rehabilitation, over-flights for forest health, reconnaissance, and surveillance. The Park Aviation Manager will work with other Division Chiefs to ensure employees receive appropriate training as per the Interagency Aviation Training Guide. Division Chiefs in the park are responsible for ensuring that all work units in their division are familiar with, and abide by, the policies and procedures in this plan. For all routine flight requests, the Division Chiefs will consult with the Park Aviation Manager or the acting for appropriate project planning.

4. Park Aviation Manager

The designated Park Aviation Manager will be the Branch Chief for Fire and Aviation Management who provides the overall implementation for aviation activities to be conducted in Yosemite National Park. This person serves as the chief aviation advisor to park management. This is a full-time designation based on the complexity of the park's program and need.

The Park Aviation Manager serves as the focal point for all aviation activities and information by providing support to all park programs and their respective specific projects.

OPM-06-04 serves as the primary document for the training and qualifications of the Park Aviation Manager. This position and training qualification is unique to DOI and to parks that have additional aviation activities beyond exclusive use helicopter contracts. The designated Park Aviation Manager will meet the training required by Department of Interior Aviation Management Operational Procedure Memorandum 06-04.

Priorities include adhering to policy and plans, coordinating the planning and completion of project plans and risk assessments, ensuring that aircraft and pilots are appropriately carded for the mission, and requesting technical assistance for aviation issues.

5. Acting Park Aviation Manager Designation

During times the designated Park Aviation Manager is called to fire assignments, the Division Chief of Visitor and Resource Protection and Branch Chiefs have been identified to fulfill the role of Acting Park Aviation Manager: Chief Ranger, Deputy Chief Ranger, Deputy FMO-Operations, Deputy FMO Fire and Fuels, Wilderness Branch Chief, and the Telecommunications Branch Chief. These acting positions will fulfill similar duties, but as complexity in operations increase, deferral to the Regional Aviation Manager may be needed. A detailed list of operational roles and responsibilities can be found in Appendix L.

6. Exclusive Use Helitack Foreman

Crane Flat Helibase hosts an exclusive use contract that was awarded to Kachina Helicopters for 2008 through 2010. The Helitack Foreman will serve as the Contracting Officer Representative for the duration of this contract. The foreman is expected to perform the leadership duties of providing for safe, efficient, and effective helicopter operations in the park. Expert communications and coordination is expected of this position when working with fire, EMS, and law enforcement and resource personnel.

The Helitack Foreman will be the COR and will document unavailability due to maintenance discrepancies. The COR should clear back to "contract availability" through an AMD maintenance inspector or the Contracting Officer Technical Representative (COTR). The Regional Aviation Manager (RAM) may be useful in coordinating with the CO for other unavailability issues.

7. Assistant Fire Helicopter Manager

In the Helicopter Manager's absence, the Assistant Helicopter Manager on the park's exclusive-use fire helicopter contract performs the same operational duties and responsibilities as the Manager.

8. Project Manager

This is a specialized position that will be filled on a case-by-case basis during routine flight requests. The project manager will begin the process of completing the Project Aviation Safety Plan to best describe the mission objectives. This should be an individual who plans, organizes, and manages the aviation operations of a project utilizing aircraft (helicopter or fixed-wing). The Project Manager may or may not be at the site of the project. In this situation a Fixed-Wing Flight Manager or Helicopter Flight Manager would be assigned to supervise the operational implementation of the mission. Consult with the Park Aviation Manager for further direction and clarification on personnel assignments and mission planning. The Park Aviation Manager will be responsible for reviewing and completing the Project Aviation Safety Plan to determine the risks associated with the aviation mission and assigning a flight manager to the mission.

9. Aviation Dispatcher

Yosemite Emergency Communications Center (ECC) has two fire-funded dispatchers that perform as public safety dispatchers. As such, these individuals will perform as aviation dispatchers as a collateral duty as needed throughout the year. Every effort will be made to develop a training plan specifically designed for aviation dispatchers. This can be found on [page 8 of the IAT Guide](#). All public safety dispatchers at Yosemite ECC may receive, process, and place orders for aircraft, and provide flight following and other aviation support services as needed or requested.

10. Flight Manager (Fixed-Wing and Helicopter)

Reference IHOG Chap 2

The flight manager is an individual who supervises non-recurring missions limited to point-to-point transport of personnel from one helibase/airport to another helibase/airport, low and high level reconnaissance, and landings or takeoffs at unimproved sites. The Helicopter Flight Manager is not expected to fulfill all the duties of a qualified Resource Helicopter Manager. Rather, s/he is the government representative who coordinates with the pilot regarding the safety and efficiency of the flight.

The Flight Manager is the government representative who ensures compliance with contract or Aircraft Rental Agreement (ARA) requirements and is responsible for coordinating the given flight or project. S/he must have received Aviation Management Directorate (AMD) Flight Manager training within the last three years.

11. Resource Helicopter Manager

The position of Helicopter Manager – Resource is reserved for those individuals who desire and have the skills necessary to manage helicopter assets that are not "Fire" qualified. The intent here is to begin to provide additional staffing when the contract helicopter is on fire assignments and/or the assignments are limited in scope and

complexity to where individuals could be trained to manage helicopters for non-fire incidents in the park, i.e. SARs and medicals.

12. Law Enforcement Helicopter Positions

Sensitive mission requirements and objectives may require security clearances of personnel participating in the mission. Any individual deemed not suitable for the mission by the Law Enforcement Officer shall be removed from the operation and documentation of the action taken shall be submitted to the Park Aviation Manager. See IHOG Chapter 16 for law enforcement operational procedures and requirements.

All law enforcement aviation operations utilizing helicopters shall, depending on the mission profile, be conducted either by a fully-qualified Resource or Fire Helicopter Manager or by a Helicopter Flight Manager.

It is recommended that qualified Law Enforcement Officers fill the Helicopter Manager position. The one exception to personnel being required to fulfill the above requirement is when the park is utilizing other-government agency or military aircraft, and the provider of the aircraft is also providing all helicopter and/or helibase management services (for example, flight following, loading/unloading of personnel and/or cargo, external load operations, etc.).

Consult with the Park Aviation Manager as soon as practical to ensure staffing and equipment needs can be met, and mission planning can be completed prior to flight operations.

13. Law Enforcement Helicopter Crew Member

Any law enforcement personnel participating as a Helicopter Crew Member and not solely as a passenger being transported shall meet the requirements for a Project Helicopter Crew Member which includes required training S-271.

14. Flight Manager/Chief of Party

The Flight Manager is an employee on board the aircraft and is responsible for conducting the mission and assuring that it is accomplished in accordance with DOI aviation policies and directives.

15. Air Crew Personnel

Persons directly involved with loading or unloading passengers or cargo, aircraft servicing, rigging and connecting external loads, etc., must be thoroughly familiar with their duties and meet NPS standards regarding training for the task performed.

16. Employees

Employees are responsible for knowing and following applicable policy and directives. They will maintain currency by attending required aviation training in accordance with DOI and NPS policies. They will use appropriate personal protective and life support equipment. They will report potential and actual problems and ensure their own safety as well as that of others.

IV. AIRCRAFT ADMINISTRATION

The primary responsibility for Yosemite National Park's Aviation Management Program falls under the Branch of Fire and Aviation Management which is directly supervised by the Chief Ranger.

A. Fixed-Wing Aircraft

All flights will be conducted at or above 500 AGL (above ground level). Such flights will be tracked by Yosemite ECC and, if conducted by charter or point-to-point, a flight plan will be filed with the Federal Aviation Administration (FAA). If the flight consists of multiple take-off and landings, the flight manager will contact Yosemite ECC for each take-off and landing.

A pilot/passenger briefing will be completed prior to each flight. The pilot will receive a briefing from the Flight Manager which will include mission objectives, communication procedures, and local aviation hazards.

All civilian fixed-wing aircraft procured for use in Yosemite will have a current Aircraft Data Card Form AM-3. All civilian pilots will carry a current Pilot Qualification Card issued by Aviation Management Directorate. With certain cooperator aircraft, (CHP and military aircraft for example), will not be carded by AMD. Rather they will be approved for unique mission requests through a Memoranda of Understanding (MOU) and Standard Operating Procedures. California Highway Patrol has an MOU with the NPS that provides a list of "approved" aircraft and pilots. If aircraft or pilot carding or approval is in question, contact the Park Aviation Manager.

B. Exclusive Use Contract Helicopter

Aircraft services identified in the Regional FIREPRO funds allocation will be accomplished within a specified timeframe and, in excess of \$25,000, require a formal aviation contract. Requests for exclusive use contract services require the submission of form AMD-13 and AMD-13A or AMD-13H and are made to the Regional Aviation Manager (RAM). Aviation Management Directorate (AMD) will solicit and award the contract and assign a Contracting Officer (CO) and Technical Representative (COTR). The Helicopter Foreman is the Contracting Officer's Representative (COR). The COR will receive mission direction and commanders intent from the Chief Ranger and Branch Chief for Fire and Aviation Management.

The minimum *daily staffing* requirements for the exclusive use helicopter will consist of one qualified helicopter manager and three crew members (IHOG Chart 2-4) and as per the 2008 REDBOOK Chapter 20 - Personnel the crew configuration for NPS exclusive use crew will consist of a minimum of 8 total personnel.

Note: Yosemite National Park awarded an exclusive use contract to Kachina Helicopters in 2007. This is a four-year contract renewable for an additional year beyond the guaranteed 4 years. The contract period is for 162 days each year to provide support to the park in fire suppression, fire monitoring, initial attack, prescribed fire and aerial ignition, search and rescue, medical evacuations, short-haul, rappel, law enforcement limited to non-threatening surveillance and reconnaissance, and other administrative and related resource activities. The contract document can be found in Appendix K. To meet the terms of the contract, 65% of the cost of the contract will be paid by appropriated FIREPRO funds and the remaining 35% coming from emergency accounts (fire, SAR and LE) and/or other project accounts.

Pre-work Meeting

A pre-work meeting between the government and the contractor, along with their primary flight crew members, is typically held at or near the starting designated base and is usually in conjunction with the start of the exclusive use period. The Contractor's primary flight crew members must attend any pre-work meeting that is scheduled. The meeting may include, but is not limited to: (1) review of the contract in detail; (2) operational procedures, dispatch, flight following, hazard/risk assessment and reduction, airspace coordination, incident/accident reporting, etc.; (3) review of the local base procedures; (4) capabilities and limitations known

or expected of the current year pilot(s) and aircraft; and (5) commander's intent. A pre-work meeting will be scheduled with the Contracting Officer Representative, Project Inspectors, Helitack Foreman, Assistant Helitack Foreman, Park Aviation Manager, and the Chief Ranger at the start of each exclusive use period during the contract. It is recommended that a mid-season review of the program be completed to address any lingering issues with contract availability, safecom, and mission requests. The COR will complete a final evaluation on the current year contract and will forward it to the Park Aviation Manager within 30 days of the end of the contract.

C. Aircraft Rental Agreements

Procurement of aircraft for administrative and aviation projects less than \$25,000 is accomplished through the Aviation Management Directorate (AMD) Aircraft Rental Agreement (ARA). These agreements are used when airlines, contract aircraft, and ground transportation are unavailable, unfeasible, or not cost effective. Requests from Division Chiefs for routine flight requests are made through the Park Aviation Manager (PAM) and/or Yosemite ECC. For non-routine or emergency missions employees will work directly with Yosemite ECC as the point of contact to procure aircraft. Project Managers and/or Incident Commanders should make contact with the company that was procured. No employee may schedule or procure Aviation Services without the express consent of Yosemite ECC and the Park Aviation Manager (PAM) or acting PAM. This will ensure correct ordering and payment of services known by the PAM and ECC and to limit the airspace conflict. This is facilitated by Aviation Managers or qualified dispatch office personnel. Any employee who is asked to accompany personnel from another agency on any type of flight must consult with their respective PAM to ensure proper standards and protocols are being followed.

D. End Product Contracts

For additional guidance on obtaining end product contracts, reference the Pacific West Regional Aviation Management Plan. The Park Aviation Manager and/or Regional Aviation Manager should be consulted whenever an End Product Contract that involves aircraft use is being contemplated or written. An example of an End Product Contract would be a resource flight to map areas of beetle infestation or helicopter delivery of supplies and materials that could not be completed by the contract helicopter.

DOI takes a "hands off" approach to end product contracts. Aerial projects accomplished through this method are intended to be accomplished with no internal operational controls from the agencies, thereby placing accountability for project accomplishment and project liability with the operator/contractor. Aircraft are operated as civil aircraft (14 CFR 1.1).

E. Cooperator Aircraft

Use of state/local government, military, or other federal agency aircraft by NPS employees may require prior inspection and approval by Aviation Management Directorate (AMD). Proposed routine flight requests on these aircraft must be requested by the employee to the Park Aviation Manager and/or the Regional Aviation Manager. Wildland firefighting aircraft operated by state and federal governments are approved for personnel transportation unless specifically identified as a restricted category aircraft. For all non-revenue flights reporting requirements will consist of completing the AMD-23 and submitting it to the Park Aviation Manager for routing to AMD.

All park cooperators must be coordinated and approved through the process provided in RM-60 and any applicable Department Policy. Requests for new programs or cooperators will be forwarded by the Superintendent through the Regional Director to the National Director. The Regional Aviation Manager should be included in all such correspondence and planning.

F. Routine Flight Requests and Project Aviation Management

A routine flight is considered an event that can be planned, that is not related to wildland fire, search and rescue, or emergent covert law enforcement missions. Employees must assure that there is appropriate funding for the mission and that approval has been granted by the Park Aviation Manager or acting and the Division Chief. For routine flight requests into the wilderness the project manager must complete a minimum requirement analysis that demonstrates that aircraft support is the minimum tool needed to preserve wilderness character. For routine flights a Project Aviation Safety Plan must be completed and approved. A flight request/notification form will be provided to the ECC. Non-routine flight requests will be at the discretion of the Superintendent, Chief Ranger, Park Aviation Manager, Wilderness Manager or the Emergency Communications Center.

Aircraft are involved in nearly every function within the unit: law enforcement, search and rescue, wildland fire detection/suppression, emergency medical response, basic transportation of personnel and cargo for managerial and administrative purposes, and cultural and resource management.

Appendix 3 of RM-60 consists of a planning tool to be used by a flight manager upon commencing of flight operations – the “Aviation Planning Guide”. It is recognized that operational missions at Yosemite are variable and highly complex and need further documentation and clarification on the mission request. Yosemite will attempt to develop and implement a comprehensive program that deals with each project request. This process can be best accomplished by combining several operational planning documents into one. The one document that will be used as a base template for all routine flight requests will be captured in a Yosemite NP Project Aviation Safety Plan. These plans will be completed and reviewed by the Project Manager, Flight Manager, Park Aviation Manager and depending on the complexity of the mission will be reviewed and approved by the Park Aviation Manager, Chief Ranger, or Superintendent.

A Project Aviation Safety Plan will be completed by the Project Manager (person requesting the flight and/or project to be completed) and routed to the Park Aviation Manager, and appropriate Division Chief for approval. Division Chiefs will review requests and forward to the Chief Ranger’s office for scheduling. Requests will be submitted to the Chief Ranger’s office at least five working days prior to the flight date. However, this may be waived in special circumstances. In no instance will a routine flight be authorized unless a request has been submitted and approved at least 24 hours prior to the actual flight time. All requests for routine flights should be prepared by the Project Manager.

If a Division Chief is uncertain as to whether an activity justifies use of aircraft. The Chief Ranger or the Park Aviation Manager should be consulted in making the determination.

G. Non-Routine/Emergency Flights

Whenever practical a Project Aviation Safety Plan should be completed for those missions that become protracted (Wildland Fire Use fires and extended searches), allowing Helicopter Managers and Flight Crew to provide additional discretionary time to adequately plan for and anticipate hazards and risk associated with missions. Final approval by the Chief Ranger is implied for emergency flights so long as the PAM or acting PAM and/or the Chief Ranger have been verbally briefed on the mission.

Emergency flights in wilderness do not require a written minimum requirement analysis, but any flights that do not involve an immediately life threatening situation, such as transportation of firefighters and supplies and materials for fire suppression efforts or extended search

operations, should be screened by the plans chief or incident commander to determine if the minimum requirement test has been met.

Non-routine flights are for emergencies and are exempted from the normal flight approval process. Because of their life threatening or health threatening nature, these types of flights cannot be scheduled in advance. They may occur at both improved and unimproved landing areas and isolated duty stations, or in the following instances:

- Administrative emergencies - some of which include life threatening situations, involve public health, park closure, property protection, and endangered species
- Law enforcement emergencies
- Fire suppression or monitoring of prescribed natural fires
- Medical evacuations (not to replace local medical helicopters)
- Search and rescue operations
- Homeland Security – infrastructure protection

Reference Pacific West Region Aviation Management Plan 10.6.1.2

Missions identified during the planning process as extreme or high risk which include short-haul, hoist, special landing techniques (STEP), aerial capture, eradication and tagging of animals (ACETA) should have stand-alone aviation plans or Standard Operating Procedures (SOP) (may be appendices to the park aviation management plan) that should be reviewed by Park and Regional Aviation Managers annually and approved by the Park Superintendent. These plans should specify the level of notification and approval needed for conducting extreme/high-risk missions (usually to the Chief Ranger level). Extended missions such as multi-day searches that will involve extended hours of low-level flying and possibly the addition of the above techniques (STEP, short-haul) should have daily briefings to the Chief Ranger or acting.

H. Special Use Activities

Special Use flight operations are operations that involve the utilization of airplanes and helicopters which are not point-to-point flight activities and which require special control measures due to their inherently higher risk. Special pilot qualifications and techniques, special aircraft equipment, and personal protective equipment (PPE) are required to minimize risk to personnel and property. These activities include but are not limited to:

- Wildland fire support
- Water/retardant application
- Low level flight (within 500' of the surface)
- External load - shortline 50' (helicopter)
- External load - longline >50' (helicopter)
- Emergency medical evacuations
- Law enforcement support for marijuana eradication
- Search and Rescue
- Resource reconnaissance
- Mountain flying
- Aerial observer
- Fire reconnaissance
- Rappel
- Short-haul
- Aerial ignition
- Law enforcement support for Hetch Hetchy Dam Security
- Winter flying and snow landings

I. Cost Analysis

For aircraft that will be procured as a flight service contract through the Aircraft Rental Agreement a best value determination will be completed by the Helitack Foreman/COR or the Park Aviation Manager. Instruction and forms are located in Appendix K.

J. Documentation Records and Reports

Aviation training records for park employees will be maintained by the Park Aviation Manager. These records will be updated on a yearly basis or as needed as training and qualifications change.

Record keeping associated with aviation activities will be in accordance with the requirements of Director's Order 19. Historical files will be kept with the Branch Chief of Fire and Aviation Management. These folders will contain the following:

- Project Aviation Safety Plans
- AMD-23 – revenue and non-revenue flights
- Manifests
- Load calculations
- Unit log
- Aviation planning checklist
- PPE exception waivers
- Annual wilderness landing documentation (see Appendix U)

1. AMD 23

Flight documents including AMD-23, AMD-2 will be completed in accordance with the AMD-23 Guide available from the AMD webpage. All completed forms will be reviewed by the Park Aviation Manager or Helitack Foreman before submitting to the park fiscal office for payment by AMD. A copy of each form will be retained in the project folder and kept with the Branch Chief of Fire and Aviation Management. For all revenue flights that have billings posted to an account other than fire, a copy of the AMD-23 will be transmitted to the Division Chief for which the flight was originally requested. This may ultimately be maintained by an office assistant for upward reporting.

AMD-23's and/or daily diaries will be completed for all government cooperator flights to include at least the following: date, mission type, case number, hours flown, approximate cost, agency and aircraft type. The purpose of this requirement is to capture administrative data on available use and cost.

2. Safecom and AMIS

Incident reports and reports of hazards will be completed by any employee and will be routed to the PAM for quick correction. The Aviation Mishap Information System (AMIS) or Safecom system will be used to share information about hazards and incidents that could lead to an aircraft mishap. The system is not for airing dissatisfaction or making personal attacks. The system is primarily a maintenance tracking system. Secondly, human factors and system deficiencies should be reported. If an individual is unsure regarding whether or not to file the Safecom one should be submitted.

Safecom reports are normally filed as soon as possible after an incident or hazard is experienced, and after on-the-spot correction has been initiated. The reports are normally accomplished by completing the online form available at www.safecom.gov. A hard copy may also be completed and provided to the Aviation Manager or Air Operations Branch Director on a team should internet access not be available. These personnel will ensure that the Safecom is filed in the online system. During the process individuals should print a completed hard copy of the report as a back up. Safety personnel at AMD, WASO, and

the Regional Aviation Manager's office will receive an email notification of the report. The system allows for anonymous reporting. For those reports where the individual feels comfortable notifying the Aviation Manager about the report they filed, they should do so.

K. Issue Resolution

Occasionally an issue of mission priority will arise over simultaneous requests for helicopter use. Issue resolution regarding the prioritization of the exclusive use contract helicopter is initially accomplished through the Fire Duty Officer and the SAR Duty Officer. If conflicting priorities cannot be resolved through the joint duty officers, the issue will be elevated to the Branch Chief of Fire and Aviation or acting and the Deputy Chief Ranger. The Chief Ranger will have final authority over flight operations and mission priority.

L. Aviation Program Reviews

National (Aviation Management Directorate) Aviation Program reviews will occur every five years, the last one having been completed in June 2007. Copies of these reviews will be kept on file with the Park Aviation Manager and will also become part of the appendices to this document. This review can be found in Appendix I. Regional helibase inspections shall occur every other year in even years, the last one having been completed in 2006. Preparedness Reviews will occur every year prior to modules being able to support off-unit fire assignments.

The Park Aviation Manager will prepare an annual summary of flight activity and significant events, and forward a copy to the Park Superintendent and the Pacific West Regional Aviation Manager.

M. Aviation Management Plans

Several documents are available to employees for reference. There is a Regional Aviation Management Plan which describes a broad scope of activities throughout the Region. When unique situations pertain to individual parks they will be broadly described in the Regional Plan. The Yosemite Park Aviation Management Plan fulfills the requirement of DO-60 that each park with an aviation management program will produce, and make available, individual unit plans that further define operational missions at a local level.

N. Dispatching and Controlling Flights

Yosemite Emergency Communications Center (ECC) will be the primary contact for all flights originating inside or outside the park that will have a direct effect on the resources of the park.

1. Flight Following for Routine Flights

For flights outside the park boundaries, where normal radio communications are not possible, a flight plan will be filed with the Flight Service Station, and a copy will be given to the Yosemite ECC with the names of everyone on board.

Flight following inside the park boundary will be conducted by Yosemite ECC. Check-in intervals will be every 15 minutes unless another interval (not to exceed one hour) is agreed upon in advance.

Automated Flight Following (AFF) of aircraft may be accomplished through GPS tracking, if installed. The National Mobilization Guide, Chapter 20, provides overall guidance for the use of the AFF system (www.aff.gov).

The pilot will advise the ECC of the aircraft's departure and intended route (direction of travel compass heading and amount of fuel). It is not necessary for normal radio flight

following check-in as long as the tracking system is operational. Radio contact is still required to be established and maintained between the aircraft and park providing flight following for the purpose of verifying AFF system operation, contacting the aircraft for schedule/airspace updates, distress calls, logistic support, etc. Upon commencement of a flight, the dispatcher will confirm the system is operational with the pilot on the established frequency. Each 15 minutes of the flight the dispatcher will confirm system operation by checking the AFF display and logging the appropriate information. Should the aircraft AFF icon turn red the dispatcher will immediately attempt to establish radio contact to ascertain the aircraft position and condition. If the AFF fails, flight following will be accomplished in the normal manner by the dispatcher making radio contact with the aircraft every 15 minutes. Prior to landing/shutdown for more than 15 minutes, the pilot or flight manager must advise the dispatcher of location and anticipated time on the ground. A minimum of one hour check-in is required.

2. Flight Following for Non-Routine/Emergency Flights

Wildland fire, emergency medical services, search and rescue missions during incipient stages, and covert and/or emergent law enforcement missions for all practical purposes will be considered non-routine flights. Helicopter Managers and/or Flight Managers have the ability to maintain local flight following so long as the manager has positive direct contact with the pilot every 15 minutes. This method of flight following can be completed by ground personnel that are not essential to the flight. The ground personnel become the essential link to Yosemite ECC should the helicopter need emergency assistance. Managers will inform Yosemite ECC that the aircraft they are managing will be “flight following locally”. Every hour the manager will contact Yosemite ECC to inform them “operations normal” when implementing local flight following protocols. When the aircraft is released from the park, the manager will release flight following back to the ECC until the aircraft makes positive contact with their respective dispatch center.

O. Overdue/Missing Aircraft

It will be the responsibility of the Yosemite Emergency Communications Center to implement the procedures for locating overdue aircraft on DOI business. If contact has not been made at the appropriate time, the ECC will continue contact efforts with the aircraft for the next 30 minutes and seek information from units along the intended route of flight. If no contact is made in this time period, the ECC will contact the Chief Ranger’s office immediately and initiate the actions in the Interagency Aviation Mishap Response Checklist and Guide. Further direction in the initiation of the search and rescue operation can be found in Appendix S, Standard Operating Procedures for emergency locator transmitters (ELTs) and personal locator beacons (PLBs).

V. AVIATION OPERATIONAL POLICY

The Park Aviation Manager or acting PAM will be the primary contact person for all activities related to aviation operations. These will include wildland fire aviation operations, search and rescue, medical evacuations, law enforcement, and resource management. Operational procedures for each of these activities will be discussed in chapter VII – Aviation Operations.

All aviation operations will have a designated person responsible for the execution of the operation and compliance with the policies and operational procedures contained in this plan. This person will be a qualified Helicopter Manager (fire or resource) or Flight Manager (Helicopter or Fixed-Wing).

A. Project Aviation Planning

Managers wishing to utilize aircraft in Yosemite National Park need to know and understand the time it will take to adequately plan for each routine mission request. The project manager

should anticipate at least 30 days prior to the requested flight in order to provide the most safe and efficient aircraft for the mission. Each project manager will initiate a Project Aviation Safety Plan in order to clearly describe the desired objectives. This will greatly assist the aviation staff in providing support to the mission.

During non-routine flights, helicopter managers should begin to use the “Green Amber Red” or GAR risk assessment model as part of their mission planning. A copy of this rapid assessment tool can be found in Appendix H.

B. Project Aviation Safety Plans (PASP)

Project Aviation Safety Plans deal mainly with aircraft operations and accident prevention, but will also identify what levels and types of aircraft sounds constitute acceptable impacts on park natural soundscapes, and a means to monitor these noise generating activities to preclude adversely affecting park soundscapes. This information is available from the various resource management planning documents that the PASP supports, and have included appropriate participation by the public; the application of scholarly, scientific, and technical information in the planning, evaluation, and decision-making processes. Each routine flight will have a completed Project Aviation Safety Plan prior to commencing operations. Questions regarding the writing and implementation of these plans should be directed to the Park Aviation Manager.

C. Overdue Aircraft

In the event that the dispatcher cannot locate the aircraft, the Interagency Aviation Mishap Response Guide and Checklist shall be put into action. Search and Rescue, other aircraft and any park service employee who has reason to believe an aircraft has crash-landed in the park should immediately notify the dispatch office. The Yosemite ECC will activate the Search and Rescue SOP for downed aircraft.

D. Search and Rescue of Lost/Missing Aircraft

Standard Operating Procedures can be found in Appendix S.

E. Aviation Documentation

For all flights conducted under the operational control of the NPS an AMD-23 will be completed to document the mission. When cooperator aircraft that is considered non-revenue is used, document in the comment section that the flight was a non-revenue flight. Submit these non-revenue forms to the Park Aviation Manager who will forward to AMD. A copy will be retained for the project folder with the Park Aviation Manager.

VI. AVIATION SAFETY PROGRAM AND DISCUSSION

Safety will be integrated into all phases of aviation operations to minimize risks to life and property. All employees who utilize aviation to accomplish mission objectives have a duty to know and understand how important it is to maintain the highest degree of integrity.

A. Safety Standards

The Aviation Safety program will be integrated into all phases of work. Because aviation operations are dynamic events, we work diligently to preplan all activities and use risk management to identify and manage risks associated with every activity. Risk management is a continual cycle of identifying risk, analyzing and developing mitigation measures, making risk/benefit decisions at the proper level, implement control measures, and continually

evaluate and readjusting as conditions change. Mishap trends indicate failures in basic principles.

B. Passenger Safety

A passenger should never be endangered by spinning rotors or propellers, yet some have lost their lives because they were not instructed in the correct way to approach or depart aircraft. The simplest way to avoid accidents of this sort is to have the rotors and propellers stopped before passengers are enplaned and deplaned. Since this is not always possible (especially with helicopters), it is often necessary to take on passengers or to deplane them while the engine, rotors, or propellers are at or near operational settings. If accidents are to be avoided, it is essential that all persons associated with aircraft operations be made aware of all possible hazards and instructed on how to avoid them.

C. Personal Protective Equipment (PPE)

Only point-to-point flights in fixed-wing aircraft have minimal requirement for PPE. All other special mission operations will have a project aviation plan that will address PPE requirements for that mission.

Air operations within Yosemite National Park necessitate flying in high mountainous terrain and frequently in windy valleys. Landings often occur in confined, unimproved helispots. Crew members and passengers are required to wear Personal Protective Equipment (PPE) on all special use flights. PPE consists of fire-retardant clothing (NOMEX), aviator's protective helmet (except in multi-engine airplanes), leather boots extending above the ankles, and flight gloves made completely of NOMEX or leather, or a combination of NOMEX and leather. The AMD Aviation Life Support Equipment (ALSE) contains additional information. In certain preapproved rescue circumstances, rescue helmets that provide head protection with improved hearing are allowed. Yosemite has been granted the exception waiver and is included in Appendix F.

Materials with low temperature melting characteristics, such as synthetics (nylon, dacron, polyester, etc.) and synthetic blends, are not approved.

D. Personal Protective Equipment (PPE) Exception Waivers

350 DM1.9 PPE Exceptions

The AMD Director may issue written authorization for exceptions to prescribed policy providing:

- The deviation is in the interest of the U.S. Government, and
- Aviation safety considerations are not compromised.

Exception waivers for PPE requirements have been delegated to selected regional directors. These conditions are limited to instances where protection for the individual after exiting the aircraft, such as specialized clothing for protection against cold temperatures for extended periods, is deemed more critical for personal safety than that provided by standard PPE. These waivers will be reviewed on a case-by-case basis. Copies of waivers must be provided to the NPS National Branch Chief of Aviation Management and National Business Center (NBC) Aviation Management Directorate.

A Memorandum was issued on May 17, 2007 by the Pacific West Regional Director that granted a PPE exception waiver for PPE requirements. Emergency responders have the ability to waive PPE requirements by wearing cold weather clothing when conditions are below 32 degrees at the rescue site and can waive the requirement of a flight helmet for a climbing helmet in situations that require shorthaul rescue operations. The exception waiver requires a briefing by the helicopter manager and written acknowledgement the exception waiver was

accepted by each employee prior to flight. This written documentation can be completed on an ICS 214 Unit Log form. The original signed copy acknowledging the exception waiver will be kept with each project file and a copy sent to the Regional Office Chief Ranger and the Regional Aviation Manager within three days of the flight.

Reference PWR Aviation Management Plan 6.2.1.1

PPE Waivers. The Regional Director has been delegated authority to approve waivers from the Department's PPE requirements for environmental conditions. Current waivers are posted on the NPS PWR Aviation Management website. Initiation for renewals of existing waivers should be initiated by the RAM. Waivers for other than environmental conditions need to be submitted through the Regional Director and NPS Director to AMD.

E. Aviation Life Support Equipment (ALSE)

Flight Managers must ensure that appropriate and adequate ALSE, including PPE, is aboard the aircraft or worn by the individual whenever participating in fixed or rotor-wing flights. Detailed information is contained in the ALSE Handbook found in Appendix E.

F. Aircraft Data Cards

Aircraft on contract to DOI will have a data card that indicates mission approval for specific contracts and an expiration date. These should be checked by the aircraft flight manager prior to each project or operation. Should the aircraft not have a data card, one will be requested from AMD prior to commencing the mission. Telephone verification and/or a faxed copy of the card from AMD are suitable evidence. Cooperators are provided an approval letter from AMD and should have a copy on the aircraft. If in doubt about the carding/approval of the aircraft, contact the Park Aviation Manager or the Regional Aviation Manager.

G. Manifests

All helicopter and flight managers that are responsible for the transportation of personnel, regardless of mission, will have a completed manifest prior to take-off. The manifest will include the name of the individual(s) and their flight weight. A copy of this manifest will remain with the last departure point of the aircraft. Copies of these manifests, will be maintained with the project folder and/or filed with the contract daily diaries.

H. Load Calculations

AMD Form 67, "Helicopter Load Calculation", will be used for rotary-wing aircraft. Fixed-wing aircraft will complete actual weight and balance per Aircraft Flight Manual or equivalent. File load calculations with contract daily diaries and/or the project folder. Cooperator and Military aircraft will have a performance planning document that meets the intent of load calculations.

I. Communications

The following frequencies are used at Yosemite National Park:

Name/Location	TX Freq	RX Freq	Tone	Narrow/Wide Band
Air Guard	168.6250	168.6250	110.9	Narrow
National Flight Following	168.6500	168.6500	NA	Narrow
YNP Air-to-Ground	168.5625	168.5625	N/A	
Fire Repeat	171.800	172.775	1 – 5	Wide
YNP Park Net	172.025	172.650		
Valley Net - simplex	166.300	166.300	NA	

J. Pilot Authority

The pilot of the aircraft will have the final say as to whether an aspect of the flight operation can be safely performed.

K. Pilot Duty Limitations

Pilot flight time and duty time limitations are outlined in DM 351 3.5A. Daily and cumulative flight and duty hours will be monitored, tracked, and documented on all contract and rental pilots. Aircraft managers, pilots and/or dispatchers will maintain flight and duty logs. Safecom reports will be completed and forwarded on all flight and duty infractions. During periods of prolonged heavy aircraft use (intense fire activity) flight and duty may be further limited at management discretion.

L. Near Miss/Bird Strikes

Bird and other wildlife strikes are reported on FAA Form 5200-7. NMACs are reported on FAA Form 8020-21, (“Preliminary Near Midair Collision Report,”) to the FAA. The 5200-7 is available online and the 8020-21 is in Chapter 8 of the Interagency Airspace Coordination Guide.

M. Transporting Hazardous Material Guidelines

Reference 351 DM 1 Aviation Fuel Handling Handbook in Appendix E. Transport is allowed in accordance with the special permit granted DOI by the Department of Transportation, provided activities are conducted as stipulated in the Aviation Transport of Hazardous Materials Handbook. A current copy of that special permit and other documents as stated in the special permit must be in the aircraft and at the place of loading when utilizing the special permit.

- All involved employees must have completed the mandatory HazMat training.
- Written notification to the pilot of the carriage of HazMat is required.
- No amount of incapacitating aerosol such as pepper spray, mace, etc., may be carried internally in an aircraft unless it is secured in a sealed non-porous container (i.e., ammo can), except for law enforcement officers in accordance with the Aviation Transport of Hazardous Materials Handbook.

Small arms ammunition

Includes ammunition for pistols, rifles, shotguns, and similar firing devices.

Control Measures: To transport small arms ammunition in aircraft, one of the following conditions must be met:

1. A person who is required to carry a firearm while performing official Government business may carry ammunition for small arms in a readily accessible manner.
2. Loaded weapons will be transported in aircraft only when the mission dictates their use in flight or soon after landing.

3. Small arms ammunition may be carried on aircraft if contained in original package, box, pack, or manufactured container designed for transporting ammunition.
4. Hazard communication marking is not required for small arms ammunition.

Compatibility Restrictions: Small arms ammunitions must not be stored next to or in contact with compressed gases, flammable liquids, or corrosives.

The Contractor may be required to transport hazardous materials. Such transportation must be in accordance with 49 CFR, DOT-SP9198, and the USFS/DOI Interagency Aviation Transport of Hazardous Materials Handbook/Guide. A copy of the current permit, DOI Handbook, and DOT Emergency Response Guidebook (ERG) must be carried aboard each aircraft transporting hazardous materials.

The Contractor must ensure that each employee who may perform a function subject to this DOT permit receives required training which can only be satisfied by completing Interagency Aviation Training (IAT) Module A-110, Aviation Transportation of Hazardous Materials. The training can be completed online at <http://www.iat.gov>. The Contractor must document this training in the employee's records and make the training certificate available to the government when requested.

Note: The DOT permit and the DOI handbook are available online at <http://www.nbc.gov/amd>. The Contractor is responsible for obtaining the DOT Emergency Response Guidebook.

N. Smoking

Smoking in and around aircraft (operating or shutdown) or during fueling operations is strictly prohibited. All other persons standing in the vicinity of rotor or propeller wash should not smoke because of the hazards of windblown ashes or embers.

O. Fuel Reserves

No person may begin a flight in an airplane under day VFR (visual flight rules) conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, fly after that for at least 30 minutes. No person may begin a flight in a helicopter under day VFR conditions under the same set of requirements as stated above unless there is 20 minutes of fuel to fly at normal cruising speed after passing the first point of intended landing (FAR 91.151).

P. Pilot Briefings

The Helicopter/Flight Manager will brief pilots on agency expectations with regard to acceptable risk and assure the pilot that a conservative response to challenge will be supported by management. Because there is a shared role between the helicopter/flight manager and the pilot for accomplishment of the mission, these roles will be discussed and agreed on during the briefing. All parties (Fire, SAR, Law, Medic, Project) involved shall ensure a mission briefing is completed and an after action review will be documented and become part of the daily diary and/or project folder. A chronological sequence is preferred in order to keep these briefings organized. For routine flights a Project Aviation Safety Plan will be completed and reviewed with the pilot(s).

Q. Pre-Flight Briefings

Prior to each flight, the passenger(s) will receive a safety briefing to include procedures for proper boarding, use of personal protective equipment, and safety in flight and in the event of an unplanned landing. This briefing may be given by one of the following personnel: pilot, helicopter manager, or a helicopter crewmember.

R. Known Flight Hazard Maps

These maps will be maintained and kept current through an annual review process. All hazard maps will become part of Appendix H. A date will be placed on each map indicating the date of review and the name of the reviewer. They will cover the entire park and the information will be made available to other heliport/helisport and flight managers upon request. Pilots new to the area will be fully briefed by managers concerning hazards to flight. At this same time, pilots will also be made aware of noise sensitive or flight-free areas and furnished kneeboard size (5 ½" X 8 ½") maps for the planned flight area.

S. Air Space Restrictions

Any temporary flight restrictions (TFR) will be in accordance with the guidance provided by the Interagency Airspace Coordination Guide. Pilots will be allowed access and time necessary to check Notice to Airmen (NOTAM) information. This will require phone and/or Internet access.

VII. AVIATION OPERATIONS

A. Flight Operations

Except where exempted, all aircraft operations will be carried out in accordance with Department, Bureau, and FAA regulations. All employees involved in aircraft operations will be trained and fully qualified in their assigned position. The appropriate handbooks, guides, preferred technical and operational procedures should be reviewed and utilized prior to a specific aviation operation or project.

B. Helicopter Operations

Helicopter operations, both wildland fire and resource management support, are performed in compliance with the Interagency Helicopter Operations Guide.

C. Low Level Flights

All low level flights will be performed in accordance with Directors Order/Reference Manual 60 Aviation Management. All fixed-wing/helicopter low level flights must be made in accordance with a current plan of operation. Low level flight will be restricted to that which is necessary to accomplish the mission and will always be preceded by a high reconnaissance of the area. During fire management operations air tankers, lead planes, aerial supervision modules will often fly low level to accomplish mission objectives. This will be at the pilot's discretion to ensure safety of the pilot and aircraft.

D. Wildland Fire

The most significant use of aircraft in Yosemite National Park is utilized by the Fire Management Organization. The missions vary greatly from small initial attack fires to large incidents throughout the Western United States. Due to the nature of the all-risk utility of the contact helicopter, the exclusive-use helicopter will provide immediate support to adjacent cooperators on initial attack and, in some instances extended attack, when life and property are threatened. The helicopter will be released back to the park when the emergent threat has been mitigated. At times of peak demand, the helicopter may only be available locally for assignments. This determination will be made by the Park Aviation Officer and the Chief Ranger.

The Sierra Nevada has a high incidence of lightning fires. Over the past 30 years in Yosemite National Park, lightning has started an average of 55 fires, or 83 fires per million burnable acres each year (NPS 1990). Tens of thousands of acres have burned in some

years, while in other years only a few acres have burned. It is conservatively estimated that an average of 16,000 acres per year may have burned under natural conditions in the park. This average is equivalent to 2.4% of the park's burnable vegetation every year. Yosemite's Fire Management Plan allows for various types of fire throughout the year. Utilization of aviation assets to manage a complex fire program is vital to the health and safety of firefighters and the general public.

The missions will include the transportation of firefighters to wildland fires, prescribed fires (non-wilderness only), and wildland fire use fires. The helicopter may also be used to support fireline personnel through the use of longline cargo delivery and water dropping retardant from bucket operations. Aerial ignition operations are approved only when the pilot, aircraft, and helitack personnel are qualified and trained for either Plastic Spear Dispenser or Helitorch Operations. The pilot and aircraft must be carded for the specific mission and the personnel to support the operation must be REDCARDed for the intended device.

The Yosemite exclusive-use helicopter and module will be available from mid-May until approximately mid-October at Crane Flat Helibase. The aircraft, pilot, and module will be fully trained and interagency carded to perform personnel transport, vertical reference longline cargo missions, water bucket missions, heli-rappel operations for both fire and search and rescue, short haul (patient extrication), and aerial ignition by both plastic sphere dispenser and helitorch operations. The module is qualified for multi-helicopter, helibase management and call-when-needed (CWN) helicopter management. The module assigned to the aircraft provides seven day per week coverage, and when the helicopter is dispatched to an off-park assignment will arrive with a minimum configuration of a helicopter manager (fire), squad boss and three firefighters. A squad boss, will follow in the helicopter support truck.

The aircraft and module are available for dispatch in all of Mariposa, Tuolumne, and Mono Counties, and east of Highway 99 in Merced County. In Madera County the aircraft is available east of Highway 99, north of State Route 145 to Millerton Reservoir, and north of the San Joaquin River.

If a life-threatening emergency arises within the park and there is no other aircraft available with the same capabilities to perform the mission safely, the park may request that the aircraft return to the home unit. If this happens, the Yosemite ECC will notify the involved agency ECC office and make arrangements for the aircraft to be released.

During times of conflicting mission assignments a back-up ship may be called in to replace the contract helicopter. During times of high, very high, and extreme fire danger the back-up ship may be paid for by current year appropriated funds from either FIREPRO or ONPS. This decision will be made by the Park Aviation Manager or acting with concurrence from the Chief Ranger to allow for the helicopter to be released for extended periods of time.

E. Search and Rescue Missions

To provide for the protection and safety of park visitors, Yosemite National Park will make reasonable efforts to search for lost persons and to rescue sick, injured, or stranded persons. This responsibility may be fulfilled by National Park Service staff or by qualified search and rescue organizations or agencies that are capable of responding effectively to life-threatening emergencies pursuant to the terms of a cooperative agreement. Deceased persons will be evacuated unless the level of risk to the rescue party is determined to be unwarranted. Search managers and superintendents will jointly determine when to terminate a search.

1. Transportation of Dogs

Reference IHOG CH 17-4 Transport of Canines.

All canines shall be either muzzled and secured to a hard point or contained in a restrained portable carrier. Canines shall be transported in the rear of the helicopter and accompanied by a handler.

Examples where dogs may be needed to accomplish a mission include search and rescue and law enforcement operations. The utilization of dogs for mission accomplishment will be accompanied by a dog-handler team that has been briefed on the mission request. Animals will be muzzled, leashed, or caged, and attended while in the aircraft. Any animal that has been sedated will have their paws bound. Owners or attendants are responsible for removing litter from aircraft after such transports. Owners are encouraged to enclose animals in standard airplane pet carriers, if available.

F. Emergency Medical Services Missions

Yosemite National Park will make reasonable efforts to provide appropriate emergency medical services for persons who become ill or injured. An emergency medical service program will be maintained to provide emergency pre-hospital care, which may range from minor first aid to basic life support in various environmental settings. Transportation will be provided by qualified emergency medical services in local communities. Each superintendent will complete an emergency medical needs assessment and will develop and implement a program to meet those needs, in accordance with the Directors Order/Reference Manual 51: Emergency Medical Services.

G. Hoist Operations with California Highway Patrol

Every year the park Search and Rescue (SAR) branch will conduct hoist training with the California Highway Patrol. The utilization of this resource is essential to the SAR mission when the contract helicopter is unavailable or on a fire assignment. A regional MOU has been established and approved along with standard operating procedures for this unique operation. Refer to Appendix V "Yosemite CHP Cooperation" for further direction and guidance.

H. Law Enforcement Missions

Throughout the year there will be the need to utilize various aviation assets to achieve the Park Service Law Enforcement mission. This can range from apprehending criminals to surveillance and reconnaissance missions to scouting for marijuana gardens. Depending on the mission, the utilization of aircraft may be considered routine and should follow mission planning requirements by completing a Project Aviation Safety Plan. If the situation is emergent in nature or undercover, the flight may be considered non-routine. A mission briefing between the pilot, helicopter manager and law enforcement personnel will occur prior to flight. The pilot's decisions and judgment are final. No agency employee shall explicitly or implicitly ask or require a pilot to perform any mission or flight maneuver which compromises flight safety (Reference IHOG Chap 2, Sec 3F).

Law enforcement is characterized by high risks and inherent dangers to enforcement officers. There are high public expectations that law enforcement activities will be performed in a lawful and professional manner. Only employees who meet the standards prescribed by, and who are designated by, the Secretary of the Interior may perform law enforcement duties.

Law enforcement aviation missions may be accomplished utilizing agency-owned, contracted, rented, other-government agency, or military helicopters. There are numerous agreements between agencies and the military for utilizing the latter's aircraft and pilots. When planning law enforcement aviation missions, the Park Aviation Manager shall be consulted to ensure compliance with guidelines and procedures and to assist in planning

safe, effective operations. Specialized law enforcement aviation operations are often conducted in coordination with other-agency law enforcement personnel and aircraft. They may include but are not limited to:

- Counter-narcotics operations
- Surveillance of suspects or locations
- Warrant service
- Reconnaissance
- Fire investigation
- Seizure and removal of evidence, contraband, and other property

The Interagency Helicopter Operations Guide notes that provisions in the contract or rental procurement document may prohibit use of a vendor helicopter for high-risk law enforcement missions.

Aviation operational limitations are effective in preventing aircraft mishaps, but may amplify a threat or hazard that the law officer may face. Planning and risk management have proven effective in reducing the number and severity of aircraft accidents and should be practiced on all law enforcement missions. Oversight for high risk law enforcement missions utilizing aviation assets is the responsibility of the Chief Ranger who should use the expertise of the Park and Regional Aviation Managers at every opportunity.

The current contract provisions for the Yosemite NP exclusive-use contract states the helicopter may be used for law enforcement limited to non-threatening surveillance and reconnaissance, and other administrative and related resource activities. This means that the exclusive-use contract helicopter will not be used for high risk or threatening mission profiles. The use of the helicopter to perform surveillance and reconnaissance at or above 500' AGL is implied to be within the scope of the existing contract language.

When a law enforcement mission can be anticipated, every opportunity to develop and implement a project aviation safety plan can and should be completed.

Should contract language become ambiguous, the COR should contact the COTR and the Park Aviation Manager or Regional Aviation Manager for direction and clarification.

Reference IHOG Chapter 16 pg 16-5B

All transport of hazardous materials during law enforcement operations shall follow the procedures of the agency's Hazardous Materials Transport Handbook. The following are recommended procedures during tactical or emergency operations. When law enforcement personnel carry firearms in the helicopter, the following safety precautions shall be taken:

- Brief pilots on weapon's type(s) and safety policy
- Long guns (shotguns, rifles, etc.) shall not have a round in the chamber and shall be under the control of the law enforcement officer
- Hand guns may be loaded and shall be holstered
- Fully automatic weapons shall have an empty chamber and the bolt locked in safe position
- All weapons shall be pointed in a safe direction as determined by the pilot during the preflight briefing
- Emergency situations may necessitate carrying weapons with a round chambered. This shall be determined by the law enforcement officer in charge in consultation with the pilot, and shall follow all agency guidelines and requirements

I. Prisoner Transport

All prisoners shall be appropriately restrained for the entire flight. Additional information regarding acceptable restraints is found in RM-09, Law Enforcement Program, Chapter 6-4.

J. Short-haul Missions

Refer to appendix Q for “Yosemite Short-haul Operations” that will address standard operating procedures for short-haul operations in Yosemite National Park.

K. Rappel Missions

Refer to Appendix P for “Yosemite Heli-rappel Operations” that will address standard operating procedures for rappel operations in Yosemite National Park.

L. Wilderness and Trail Support

The aviation assets utilized to support trail crews is limited. For the most part this will be limited to camp resupply, removal of human waste at the High Sierra Camps, and trail material that cannot be packed in due to bulk or weight. It may also involve using heavy helicopters to fly in beams or other construction material. These missions will be considered routine and a project aviation safety plan will be completed for all types of these flights and will be approved by the Chief Ranger. A minimum requirement analysis will be prepared and approved by the Wilderness Manager, Chief Ranger, and Superintendent. Project planning should occur at least 30 days prior to the requested time in order to assure the contract aircraft is available and to determine whether a backup helicopter will be needed. The initial request should be directed to the Park Aviation Manager.

VIII. AVIATION SECURITY

Yosemite aviation security will be coordinated with the park’s law enforcement program. The policies and procedures established herein are intended to supplement the minimum physical security standards detailed in 444 DM 1, Physical Protection and Building Security. This template provides the following for units that have improved aviation facilities. See 352 DM 10 for definitions. Yosemite National Park does not have improved aviation sites or facilities and is not required to implement the facility security plan. As per the Yosemite Exclusive Use Contract, refer to the contract specifications found in section *B21 Security of Aircraft and Equipment*. This can be found in Appendix K.

APPENDICES

The following appendices are ordered so that broad scope documents are found at the beginning and specific park documents are found toward the end of the appendices. A yearly review of this Park Aviation Management Plan will identify additional needs for supporting documentation.

Appendix A – Departmental Manuals 350 – 354

Appendix B – Operational Procedures Memoranda

Appendix C – Directors Order 60 and Reference Manual 60 for Aviation Management

Appendix D – Agreements and MOUs

Appendix E – Reference Documents

Appendix F – Personal Protective Equipment Exemptions

Appendix G – Mishap Response Guide

Appendix H – Project Aviation Safety Plans

Appendix I – Yosemite Aviation Reviews

Appendix J – Yosemite Landing Areas

Appendix K – Yosemite Aviation Contract Documents

Appendix L – Yosemite Aviation Training and Qualifications

Appendix M – Yosemite Helibase Operations Plan

Appendix N – Yosemite Aerial Ignition Operations Plan

Appendix O – Yosemite Aviation Communications Plan

Appendix P – Yosemite Rappel Program

Appendix Q – Yosemite Short Haul Program

Appendix R – Wildland Fire Support

Appendix S – Yosemite Search and Rescue Support

Appendix T – Yosemite Law Enforcement Support

Appendix U – Yosemite Wilderness and Trails Support

Appendix V – Yosemite NP and California Highway Patrol Cooperation

Appendix W – Yosemite NP and California National Guard Cooperation

Appendix X – Yosemite NP and California Against Marijuana Production Cooperation

Appendix Y – Yosemite NP Med Flight Coordination