

Appendix E

Aviation Plan

For the 2004 Fire Management Plan for Mojave National Preserve

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1.0 Background, Policy, Program Goals and Objectives

Mojave National Preserve, referred to as “the Preserve” in this document, utilizes fixed wing and rotary wing aircraft for a variety of management and administrative purposes: search and rescue (SAR) operations, fire detection and suppression, cultural and natural resources management, and the construction and maintenance of facilities.

The Preserve encompasses an area of approximately 1.6 million acres of rugged desert terrain in Southern California in San Bernardino County.

The Preserve currently utilizes a variety of aircraft including:

1. Light turbine helicopters on a call-as-needed basis.
2. Contracted single engine airplanes.
3. Single engine airtankers. (SEAT)
4. Military aircraft.
5. Fixed wing aircraft located at Death Valley National Park.

Helicopters are used primarily for law enforcement, resource management, and fire operations. Fixed wing aircraft are used primarily for fire detection and resource management purposes. Airtankers are used occasionally for fire suppression. Use of military aircraft is rare.

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). Agency policies that affect aircraft use are summarized in the National Park Service Management Policies (2001). The primary policy guidance for aviation management at Mojave National Preserve is NPS Directors Order/Reference Manual #60: Aviation Management. 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, and specific policies on aircraft use.

1.1 Introduction, Purpose of Aviation Management Plan

National Park Service (NPS) policy (Director’s Order #60: Aviation Management) requires that Aviation Management Plans be completed for all parks with significant administrative aviation operations. This plan is an action document for the professional level management of administrative aircraft use within the Preserve. It establishes guidelines and specific operational procedures for the use of aircraft on NPS business. It is designed to enhance safety, protect NPS resources and facilities, comply with the National Park Service Management policies, and insure that all use of aircraft considers efficiency, economy and effectiveness.

This plan applies only to aircraft on Department of Interior (DOI) business and is not meant to cover private, general, or commercial aviation operations in and around Mojave National Preserve.

1.2 Compliance with Preserve Legislative Mandates

By means of the California Desert Protection Act of 1994, Congress took action to “preserve and protect unrivaled scenic, geologic, and wildlife values” associated with the unique landscapes of the California Desert. This act specifically established Mojave National Preserve from lands formerly managed by the Bureau of Land Management as the “East Mojave National Scenic Area.” With subsequent land acquisitions, Mojave National Preserve now encompasses approximately 1.6 million acres representing a combination of Great Basin, Sonoran, and Mojave Desert ecosystems.

The 2001 General Management Plan summarizes the purpose of the Mojave National Preserve to:

- Preserve and protect the natural and scenic resources of the Mojave Desert, including transitional elements of the Sonoran and Great Basin Deserts.
- Preserve and protect cultural resources representing human use associated with Native American cultures and westward expansion.
- Provide opportunities for compatible outdoor recreation and promote understanding and appreciation of the California Desert.

Of the Preserve’s 1.6 million acres, almost half are congressionally designated Wilderness. The primary policy guidance for Wilderness management in the NPS is Director’s Order/Reference Manual #41: Wilderness Management. At Mojave National Preserve, additional guidance is found in the Desert Managers Group “Principles for Wilderness Management in the California Desert” and its annexes, including “Annex 5 – Principles for Fire Management within Wilderness Areas of the California Desert.” Most pertinent to this Aviation Plan are the following two Annex 5 principles:

- k. Helicopters and retardant aircraft may be used in initial attack and as reinforcement as deemed necessary by the Incident Commander. Helicopters may land on existing heliports, helispots, or unimproved sites in wilderness
- l. Entry into wilderness should be by walking, helicopters on unimproved helispots, rappelling, or smokejumping to the greatest extent practicable.

It is the policy of Mojave National Preserve to not use retardant but may use airtankers for water drops within the Preserve.

1.3 Use of the Parks

Visitor Safety

The 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 visitors and employees. The National Park Service will work

cooperatively with other federal, state, and local agencies, organizations, and individuals to carry out this responsibility.

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.

Search and Rescue

To provide for the protection and safety of park visitors, the National Park Service 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.

Individuals engaging in a high-risk recreational activity that requires a permit issued by the superintendent may, as a condition of the permit, be required to reimburse the National Park Service for subsequent search, rescue, or recovery efforts, or to provide qualified personnel to assume and carry out those responsibilities.

Emergency Medical Services

The National Park Service 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.

1.4 Aircraft Use

A variety of aircraft types including military, commercial, general aviation, and aircraft used for NPS administrative purposes, fly over parks. 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 to interfere with their enjoyment by visitors.

Since the National Park Service has no direct authority or jurisdiction over airspace above parks, 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.

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, Office of Aircraft Services and the Federal Aviation Administration and to the Aviation Management Guideline (Director's Order #60).

1.5 Preserve Aviation Policy

It is the policy of Mojave National Preserve to use its aircraft for activities involving life or health-threatening emergencies, 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 Preserve goals. All administrative use of aircraft will comply with the policies and guidelines contained in the Departmental Manual 350-354, Director's Order/Reference Manual #60: Aviation Management; applicable Office of Aircraft Services (OAS) policies and the operational procedures outlined in this plan. *Everyone* is 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 Preserve resources and values, and visitor experiences. Heliports are located outside the Preserve at commercial facilities. Helipads and helispots are allowed within the Preserve under the following guidelines:

Outside of Wilderness

- Helipads may be established to meet Preserve or incident needs. Generally, the Hole-in-the-Wall Fire Center serves as the helipad for an incident and heliport operations are conducted from pre-existing commercial airport facilities located in nearby communities.
- Unimproved helispots (ie. natural openings) and helispots with minor improvements may be used as needed to meet emergency needs.
- Unimproved helispots and helispots with minor improvements may be used for authorized non-emergency aircraft landings if such use was addressed in an improved 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.

In Wilderness

Landing of aircraft is specifically prohibited in Wilderness by The Wilderness Act (16 U.S.C. 1133(c)), except for measures for 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, policy and the Desert Managers Group's "Principles for Wilderness Management in the California Desert" and its annexes, the following guidelines will apply to aircraft use in Wilderness in Mojave National Preserve:

- Heliports and helipads are not allowed in Wilderness.
- For fire management purposes, it is generally possible to use unimproved helispots in Wilderness and walk into the work site if such an unimproved helispot is available within a 15 minute walking distance. In such cases, minor improvements to create a closer helispot are not warranted.
- 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 helispots 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 or an improved helispot in Wilderness will be detailed in a Wilderness Minimum Requirement Analysis as well as an environmental compliance document (ie. the Environmental Assessment or Categorical Exclusion).
- 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.

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).

2.0 General Program Management and Operation

2.1 Organization and Responsibility

Major responsibilities for each of the following positions include, but are not limited to:

- **Superintendent:** Overall responsibility for aviation management in the Preserve lies with the Superintendent. The Superintendent is also responsible for managing aviation use within Departmental and Park Service policy, the Service's Aviation Guideline (DO #60) and all relevant legal requirements.
- **All Division Chiefs:** Division chiefs are responsible for ensuring that all work units in their Division are familiar with and abide by the policies and procedures contained in this plan.
- **Chief of Fire and Aviation:** This position is responsible for overall operational oversight of the Aviation Management Program. Ensures that an Aviation Management Program is adequately planned and implemented, and that the Aviation Management Plan is reviewed annually and revised as necessary. Responsible for ensuring that all Preserve divisions are familiar with the legal, policy, safety, fiscal and operational procedures outlined in this plan. Resolves disputes related to the denial of routine flight requests, as outlined in this plan. At Mojave National Preserve, the Chief Ranger is designated as the Chief of Fire and Aviation.
- **Fire and Aviation Manager:** Responsible for implementation of the plan and the day-to-day operation of the Aviation Management Program. Reviews plan annually, revising as necessary. May serve as COR or assign a designee for fixed wing and helicopter contracts. Negotiates and completes administrative requirements for contract aircraft and interagency agreements. Conducts an annual needs assessment of aviation related training. Coordinates and conducts training as needed. Reviews requests for routine use of aircraft. Approves/disapproves request based on Preserve policy contained in this plan. Tracks and reviews both routine and non-routine use of aircraft. Discusses perceived deviations from the policies and operational procedures contained in this plan with appropriate supervisor. Refers unresolved situations to Chief of Fire and Aviation for resolution. Procures aircraft for all routine use, and other non-routine use as requested. Reviews all OAS-23's for completeness and accuracy and insures prompt processing at the Preserve level. At Mojave National Preserve, the Fire Management Officer is designated as the Fire and Aviation Manager.
- **Fire Management Officer (FMO):** During periods of Very High or Extreme fire danger or during special events, may coordinate daily with the Aircraft Pilot.
- **Project Manager:** Plans and manages aircraft use according to applicable directives and polices. Develops and submits Special Use Aviation Plans and risk assessments.

Assigns fixed wing or helicopter managers to projects as per Directors Order/Reference Manual #60.

- **Project Coordinator:** A position designated by each Division Chief as the liaison to the aviation Project Manager for aviation operations. Division projects that require aircraft for routine Preserve operations must have an identified project coordinator who is responsible for the following:
 - Reviews and submits project changes to Aviation Operations
 - Coordinates training and briefing of all personnel involved in the operation with the Aircraft Pilot.
 - Insures implementation of a project plan and takes corrective action if necessary to insure compliance with the plan.

- **Incident Commanders:** Whenever an aircraft is used for a non-routine use (search and rescue, law enforcement emergency, fire suppression, medical evacuation etc.) There will be an Incident Commander for that incident. The Incident Commander is responsible for all non-routine aircraft use, whether fixed wing or rotary wing. In some cases, the Incident Commander may also serve as the Fixed Wing Flight Manager or Helibase/Helispot Manager, if so qualified. It is the Incident Commanders responsibility to:
 - Ensure that the aircraft is procured in compliance with this plan.
 - Ensure that the use of all aircraft is properly managed by qualified personnel.
 - Ensure that the aircraft and pilot are OAS certified for the intended use.
 - Ensure that all proper personal protective equipment (PPE), mission gear, survival gear and other equipment are carried on all flights. Deviations from established PPE use must be justified by the Incident Commander and approved by the Superintendent.
 - Ensures that all necessary forms and billing documents are properly completed (OAS-23) and forwarded to the Aviation Manager for review.

- **Flight Manager:** On all use of fixed wing aircraft, whether routine or non-routine, there will be a designated Flight Manager (Chief of Party), approved by the Aircraft Pilot. Although it is not a requirement that the Flight Manager actually participate in the flight, in most cases, he/she will simply be a member of the party making the flight. To serve as a designated Flight Manager, a person must attend the OAS Basic Aviation Safety Course and view the Flight Manager/Chief of Party video. The Fixed Wing Flight Manager must:
 - Be present at the airport at the time of embarking and disembarking passengers. The chief responsibility of the Flight Manager is to ensure the safety of all flight participants, particularly when moving in and around other aircraft. The Flight Manager must keep the group together and under control to avoid potential prop strike situations.
 - Ensure that the aircraft and pilot are OAS approved for the intended use.
 - Make sure that all passengers and the pilot are briefed on the purpose of the flight.

- Ensure that a flight plan is filed, or flight following procedures are followed.
 - Ensure that all passengers receive a proper safety briefing from the pilot, including the location of the fire extinguisher, first aid kit, and Emergency Locator Transmitter, ELT.
 - Ensure that the OAS-23 is properly completed prior to departing the airport and forwarded to the Aircraft Pilot for review.
- **Helicopter Manager:** A qualified Helibase or Helicopter Manager whether for routine or non-routine use, will manage all use of rotary winged aircraft. If the person requesting the flight (in the case of a routine use) or the Incident Commander (in the case of a non-routine flight) cannot provide a qualified Helibase/Helicopter Manager, the Fire and Aviation Manager will designate a qualified person. Helicopter Manager is responsible for:
 - Confirming the helicopter and pilot are OAS certified for the intended use.
 - Preparing the helibase, including providing an adequate safety zone, a fire extinguisher and wind indicator, taking necessary dust abatement measures, and maintaining communications with the pilot.
 - Ensuring that all passengers are wearing the required personal protective equipment. Deviations must be justified by the Incident Commander and approved by the Aircraft Pilot.
 - Ensuring that all passengers and pilot are properly briefed.
 - The safe loading and unloading of passengers.
 - Completing all necessary load calculations and passenger manifests.
 - Ensuring that all subsidiary helispots are properly prepared and staffed.
- **Project Helicopter Crewmember:** Serves as a trained member of a helicopter crew assisting the project manager in the performance and completion of helicopter missions. *Air crewmembers are required to be either onboard or attend to the loading and unloading of passengers and cargo at all landings and takeoffs. (ref. OPM-4, page 3)*
- **Passengers:** Those individuals who participate in point-to-point transportation and other non-special use missions. (ref. OPM-4) All passengers have a role in aircraft safety and are responsible for the following:
 - Following the instructions of the Flight Manager, Helibase/Helicopter Manager and the Pilot.
 - Advising the Pilot of hazards or unsafe conditions.
 - Wearing the proper PPE.
 - Securing loose gear in the cabin of the aircraft.
 - Wearing/carrying proper clothing for weather, etc.
 - Avoiding any action that may damage the aircraft.
 - Properly adjusting seat belts.
 - Completing the required paperwork.

2.2 Staffing Needs/Training and Qualifications to Manage the Program

In order for the Preserve's overall aviation program to be well managed and to operate both safely and effectively, there are several formal qualifications that should be present in the Preserve.

The Aircraft Pilot should be trained in Aviation Management and well versed in every aspect of the Preserve's aviation operations. The individual will attend appropriate aviation management briefings or meetings.

The Preserve should maintain at least one (1) qualified Helibase Manager, one (1) Helispot Manager. Due to the highly technical nature of the helicopter techniques utilized, the Preserve should be represented on a regular basis at OAS meetings regarding these techniques and at periodic Helicopter Operation Specialist (HOS) workshops.

All Division Chiefs whose division has a significant aviation workload will attend the DOI Aviation Management Training for Supervisors (M3) offered by the Office of Aircraft Services or complete the required Interagency Aviation Training program modules every three (3) years, see OPM-4.

Aviation users other than occasional, general use, flyers are required to attend the OAS Basic Aviation Safety course and complete the refresher course every 3 years.

2.3 Flight Approval Process

Routine Flights

"Routine flights" are defined as those that can be scheduled in advance and also meet the other requirements of this section. If a routine flight does not take place, there will be no significant threat to life, property, Preserve resources or services. An alternate flight at a later time can be scheduled.

Examples of "routine flights" are activities such as NPS and non-NPS research, helicopter training activities, special use and filming permits, animal surveys, visitor use surveys, hydrologic surveys, routine utility maintenance performed by utility companies, concessions activities, VIP orientation, non-emergency personnel transports, administrative uses, contract work and other similar operations.

All requests for routine flights should be prepared by the individual responsible for the project and scheduled through the Aviation Manager. The person requesting the flight should determine the date of the flight, time and location of flight origin, duration or destination, nature of flight, cargo to be carried, and the appropriate account number to be charged.

Non-Routine (Emergency) Flights

"Non-routine" flights are for emergencies only. Because of their potentially life or property threatening nature, these types of flights cannot be scheduled in advance and will often occur in

both approved and primitive landing zones. The following projects meets the intent of the “non-routine” definition, i.e., automatic approval is given to use aircraft in the following instances:

- Administrative Emergencies: Some of which include life threatening situations, involve public health, Preserve closure, Property protection (gross damage as from flooding or high winds), Endangered species and dignitary protection.
- Search and Rescue Operations.
- Emergency Fire Activities.
- Law Enforcement Emergencies.
- Medical Evacuations.

Flights to accomplish activities meeting the non-routine definition are automatically approved. Incident Commanders remain responsible for ensuring that the aircraft and pilot are OAS approved for the intended use and that the use of the aircraft is properly managed by qualified personnel as specified in this plan.

Incident Commanders should procure aircraft services for non-routine uses in the following manner:

- All non-routine aircraft services should be requested first through the Chief of Fire and Aviation. Once approved, aircraft services should be arranged through the Fire and Aviation Manager.
- Completed OAS-23’s related to non-routine aircraft use should be forwarded to the Helicopter Manager or designee for review.

2.4 Records and Reports

Accident and Incident Reporting

The Aircraft Pre-Accident Plan contains the current notifications and contact procedures for initial response to aircraft incidents; copies to the Chief of Fire and Aviation, the Chief Ranger, FICC Communications Center.

An aircraft accident (as defined by OAS) is an “unplanned event that does substantial damage or causes serious injury when associated with the operation of applicable aircraft, occurring between the time the engine(s) is (are) started or rotors turning for the purpose of commencing flight, until the aircraft comes to rest with engines and propellers or rotors stopped, and the brakes set or wheel chocks in place and all persons have disembarked.” When an aircraft accident has occurred, it is imperative that the crash site be preserved much the same way a crime scene is protected. After necessary EMS activities are concluded, the accident site will be defined and a perimeter established with flagging or evidence tape. NPS personnel must make sure that everything inside the flagging remains exactly as it was found until trained aviation accident investigators arrive on the scene. This is crucial to the investigation.

An aircraft incident or malfunction (as defined by OAS) is an “unplanned event that does damage which is less than aircraft accident criteria, or incurs injury requiring first aid and/or medical attention. It is a situation involving an aircraft and/or personnel which results in deviation from standard aircraft operational procedures and has the potential of resulting in an

accident.” Examples of incidents are precautionary or forced landings (with minimal damage/injury), engine problems, bird strikes which damage some component of the aircraft, smoke in the cockpit, jettisoning or loss of cargo, and flying outside of daylight flight restrictions.

The Chief Ranger will be notified immediately when either type of mishap occurs. Full reporting to the Office of Aircraft Services will occur, in full compliance with the OAS form 34 (SAFECOM) system.

The OAS Safety Office will be notified immediately by the most expeditious means available when an aircraft accident occurs, and when an aircraft is declared missing. The phone number is 1-888-4-mishap.

Within three (3) working days after an aircraft accident/incident, a SAFECOM will be completed by the pilot or the supervisor and mailed to the OAS Safety Office. It will be the responsibility of the user bureau or office to insure that proper internal notification has been made. One copy of the OAS-34 will be retained in the originating office, or as directed by the bureaus or offices.

In addition, pilot cooperation is requested in reporting near mid-air collisions and all bird strikes. A near mid-air collision should be reported to NTSB on Form ARC 277. Additional actions are required to report the incident to the FAA. That is, NTSB will probably not inform the FAA about the near mid-air, the pilot will have to do that. Telephone calls or radio reports are not sufficient action to ensure an investigation will occur. The pilot must submit a letter to the nearest FSDO (Flight Standards District Office) giving them all the information he has concerning the mishap. Bird strikes should be reported on FAA Form 5200-7, “Bird Strike/Incident Report”) available at all FSDOs.

Daily Flight Reports

The Aircraft Use Report (OAS-23) will be used to record all flights where payment is required. Payment will be charged to the account number provided. The Flight or Helicopter Manager receives all OAS-23s for review and processing.

3.0 Policies and Aviation Operations Procedures

3.1 Responsibility for Actual Aircraft Operations

All aviation operations within Mojave National Preserve will have a designated person, responsible for the execution of the operation and compliance with the policies and operational procedures contained in the plan. This person will be a qualified Helibase Manager (in the case of Helicopters) and a Flight Manager (in the case of airplanes). On non-routine (emergency) operations, this person will be the Incident Commander, regardless of aircraft used.

3.2 General Policies

All aviation operations will comply with:

- U. S. Department of the Interior/Office of Aircraft Services Aviation Policy, Departmental Manuals (DM 350 through 354, and Operational Procedures Memoranda (opms), Director's Order/Reference Manual #60: Aviation Management, and other applicable OAS Handbooks.
- Mojave National Preserve's Aircraft Flight Following Procedures.
- Low-Flying Aircraft, Interagency Agreement between NPS, FWS and FAA.
- FAA Advisory Circular No 91-36C entitled "Visual Flight Rules (VFR) Flight near Noise Sensitive Areas".
- Title 41, Section 114-38.5003 as it pertains to the use of motor vehicles (aircraft) by employees other than while on official, and Departmental Rules 20.735-15, which address misuse of government vehicles or aircraft. These rules state, in part, "Employees shall not willfully use or authorize the use of a Government-owned or leased passenger motor vehicle (aircraft) for other than official purposes. Violation of this provision shall automatically result in suspension from duty without compensation for not less than one month".
- Interagency Helicopter Operational Guide, January 2002 (NFES 1885).
- Hazard Pay and Environmental Differential for Aircraft Flights.

3.3 General Operational Guidelines for Helicopters and Airplanes

Safety

Safety will be integrated into all phases of air work. Personnel involved in air operations activities will be instructed in the following safety requirements:

- Passenger safety. A properly briefed passenger should never be endangered by spinning rotors or propellers, yet some have lost their lives because they were not told 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.

- **Flight 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. It is impossible to cover, in this policy, each and every type of operation or training matter related to aircraft.

Aircraft Data Cards

No aircraft will be used on NPS business unless a current aircraft data card (USDA Form 5700-4 or USDI/OAS Form 36A, B or C) is displayed. NOTE: USDA (U.S. Department of Agriculture) and USDI (U.S Department of the Interior) cards are interchangeable, i.e., aircraft carded under one agency can be used by the other.

Pilot Qualification Cards

All pilots flying aircraft on official DOI business will carry a current Pilot Qualification Card or DOI/OAS Form 30A, B or C.

Personal Protective Equipment (Special Requirements):

All personnel on board helicopters, or airplanes involved in special use missions, will be clothed and protected per DOI standards. PPE is suggested for point-to-point administrative flights above 500 feet. It is policy that employees do not wear nylon or other easily melted materials beneath protective clothing. To do so defeats the purpose of the flame resistant garments. It is the responsibility of each crewmember, passenger to comply with these regulations. Flight Managers are responsible for enforcing this section.

Flight Manifest

All passengers on both fixed wing and rotary winged flights will be properly manifested prior to the initiation of the mission.

Load Calculations

OAS Form 67, "Helicopter Load Calculation" will be used for rotary-wing aircraft. Locally, a blanket form may be used due to limited temperature/altitude changes that occur. Fixed wing aircraft will complete actual weight and balance per AFM or equivalent.

Flight Plans/Flight Following

Flight plans and flight following will be in accordance with 351 Departmental Manual 1.4. All administrative aircraft flights within the Preserve will be conducted under a formal flight plan, submitted to either FICC Communications Center, or Hole in the Wall Dispatch (only when activated during incidents), or the FAA from where the flight originated or was approved. The flight following protocol requires position reports of every 15 minutes. This is mandatory.

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. All passengers also have the discretion of vetoing a trip or canceling the current flight if it becomes obvious that the mission cannot be successfully or safely completed.

Single-Engine Night Flights

Are not authorized.

Instrument Flight

Not applicable at this time.

Low Level Flight

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.

Transporting Explosives and Flammables

Guidelines contained in the DOI's "Transportation of Hazardous Materials Handbook" will be followed.

Smoking

It is the policy of Mojave National Preserve that 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.

Transportation of Dogs and Other Animals

Transportation will be done as situations dictate. Example, SAR operations with dog-handler team being deployed during a search. 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.

Fuel Reserves

No person may begin a flight in airplane under day VFR 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)

Flight Hazard Maps

These maps will be maintained and kept current in the Hole-in-the-Wall Fire Center. They will cover the entire Preserve and the information will be made available to other heliport/helispot flight managers upon request. Pilots new to the area will be fully briefed by managers

concerning these hazards to flight. At this same time, pilots will also be made aware of noise sensitive or flight-free areas.

Pilot Briefings

All new contract/rental pilots will be briefed as soon as possible after the contract is activated. This briefing will cover local communications systems (Preserve, FAA and other commonly agreed-upon frequencies and procedures), navigation aids, flight hazards, legal descriptions and prominent landmarks. Payment procedures and administrative duties (record keeping, maintenance scheduling, etc.), safety and emergency procedures (emergency fields/helisports and emergency equipment available), and dispatching procedures (flight scheduling and reporting during flights). Daily briefings for experienced pilots can consist simply of the day's weather and flights as known at that time. Initial briefing should be performed by the Aviation Manager.

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 Preserve administrative flight.

Aircraft Operators

Operators on Preserve business, unless directed otherwise, will comply with the requirements and guidelines in this document as well as all portions of the procurement document under which they were hired.

3.4 Specific Helicopter Guidelines

Authorized Landing Zones

There is one approved designated landing areas for helicopters in the Preserve, at the Hole-in-the-Wall Fire Center. All other landing sites will be considered off field and unimproved. Landing and taking off at these unimproved field sites will be at the pilot's discretion

Personal Protective Equipment

PPE will be worn on all helicopter flights. Exceptions may include point-to-point flights above 500 feet).

Load Calculations and Loading

Written load calculations will be performed on all helicopter missions within the Preserve. The pilot has the responsibility for loading manifested personnel and cargo.

Enplaning/Deplaning

The Pilot must brief passengers on the aspects of safety and operation prior to boarding aircraft.

External Loads

All external loads will be flown by a pilot appropriately carded. All parts of the flight will be in accordance with OAS procedures. External loads will be carefully prepared under the supervision of the pilot or a qualified helicopter crew person.

Fuel Storage and handling

All aspects of fuel storage and handling will be in compliance with NPS and OAS guidelines.

General Project Work

The same requirements will be in effect as when performing any other flight. Administrative, maintenance or other project flights will either have personnel on board who are skilled in working with helicopters, or the pilot will perform the task of personnel loading/unloading safety. The ultimate goal is for all operations on the ground and in the air to be conducted in the safest possible manner.

Wildland fire Initial Attack Transportation and Support

The helicopter may be used by firefighting crews in support of suppression activities. Landing zones may be in remote areas.

Search and Rescue

The helicopter may be used to support SAR incidents. Landing zones may be in remote areas.

Helirappel, Short Haul, Insertion

Not applicable at this time.

Wind Indicators

Standard international orange windsocks will be provided at all permanent helibases. At temporary helispots, hand signals, flagging, smoke, or radio instructions may be sufficient. When possible, windsocks are preferred.

Arrests/Law enforcement Transports

Arrests and law enforcement transport requiring the use of the helicopter will comply with this document and established NPS law enforcement guidelines.

3.5 Specific Airplane Guidelines

Personal Protective Equipment

Full personal protective equipment (PPE) is required for all special use fixed-winged flight operations. Example, flying below 500 feet above ground level.

Enplaning/Deplaning

On single-engine airplanes, the engine will not be started until passengers are aboard and the doors are closed. At the completion of the flight, the engine will be shut down, propeller stopped and all switches off before cabin doors are opened for passenger off-loading.

Reconnaissance Flights

These requests will be made to the Aircraft Pilot, utilizing the standard flight approval process. Some incidents (as SARS or wildland fires) may be categorized as emergencies and the non-routine flight request procedures can be followed. All detection flights will adhere to the flight following protocol as established under Section III – Aviation Operations (Policies and Procedures, General Operational Guidelines).

Retardant, smokejumpers, paracargo, lead plane, air attack and infrared flights

When necessary, these special types of aerial activity may be ordered by the Fire Management Office.

4.0 Emergency Procedures

4.1 Overdue Aircraft

In the event that the Dispatcher cannot contact the aircraft, the Aviation Accident Emergency plan shall be put into operation.

4.2 Search and Rescue Operations for DOI Aircraft

The Federal Interagency Communications Center in San Bernardino (FICC) will be responsible for initiating searches for missing Mojave National Preserve controlled aircraft. The search will be coordinated by the Mojave National Preserve Chief Ranger (or designee) and the Federal Aviation Administration. The Civil Air Patrol may be involved, as well as the National Transportation Safety Board (NTSB). In extended search situations, a SAR Overhead Team may be established. In that case, the SAR Air Operations Officer will coordinate aviation-related matters for the search.

Any National Park Service employee who has reason to believe an aircraft has crash-landed in the Preserve should immediately notify the FICC dispatch office.

The FICC dispatcher shall put the Aviation Emergency Plan into operation.

4.3 Search and Rescue, Other Aircraft

Any Park Service employee who has reason to believe an aircraft has crash-landed in the Preserve should immediately notify the FICC dispatch office.

4.4 Procedures for Requesting Airspace Restrictions

Procedures for restricting airspace over the Preserve during emergency operations are contained in OAS OPM 95-2. A 91-137-airspace restriction will be requested by the FICC dispatch office.

5.0 Program Coordination, Evaluation, and Development

5.1 Interagency Coordination within the Southern California Area

The operational requirements and management guidelines discussed in this document will be followed. Payments will be based on information recorded daily on the Aircraft Use Report (OAS-23). At the end of the mission, completed forms will be sent to the Aviation Manager. The forms will be examined, then submitted for payment.

5.2 Critiques and Annual Plan Review

Critiques of individual aviation operations will be held as needed. These critiques will be called by the Chief Ranger, Fire Management Officer or, recommended by the Incident Commander at an after action review, or by any member of the NPS staff through the normal chain-of-command.

The Aviation Management Plan will be reviewed annually, and revised as necessary.

5.3 Preparers

This Aviation Plan was prepared by:

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