

Standard Operating Procedures



San Diego County Sheriff's Department *(December 2019)*



San Diego County Sheriff's Department

Aerial Support Detail

Standard Operating Procedures (S.O.P.)

This Standard Operating Procedures manual has been written to form guidelines for the functioning of the San Diego Sheriff's Aerial Support Detail. To members of the public and to outside agencies, the Sheriff's Aerial Support Detail is better known as A.S.T.R.E.A., an acronym for Aerial Support to Regional Enforcement Agencies. It is acceptable to use these terms interchangeably in department documents. Nothing in this manual is intended to interfere with good judgment on the part of Sheriff's Department aircrews, especially where safety is concerned. Any Aerial Support Detail crew member has the authority to deviate from these guidelines to the extent needed to meet an emergency or for safe operations.

This document is subordinate to the San Diego Sheriff's Department Manual of Policies and Procedures. All employees assigned to the Aerial Support Detail will read, adhere to, and be held accountable for the SOP's in this manual.

The Aerial Support Detail SOP manual addresses issues of Departmental interface, such as personnel matters, general operations, mishaps, and the Aerial Support Detail Reserve Deputy Sheriff's and Technical Volunteers as well as guidelines that are specific to aviation procedures.

In the interest of safe operations, all members of the Aerial Support Detail are encouraged to submit revisions or propose new sections to the procedures in this manual. Revisions to the SOP must be reviewed by the Safety Committee and then approved by the Aerial Support Detail Lieutenant.

MISSION STATEMENT

The primary mission of the Sheriff's Aerial Support Detail is to enhance safety by providing effective law enforcement, fire suppression, search and rescue and emergency service air support to public safety agencies throughout San Diego County.

A.S.T.R.E.A.

STANDARD OPERATING PROCEDURES

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SOP SECTIONS

1.0 PERSONNEL

All personnel transferred to the Aerial Support Detail will be assigned various tasks within the Unit. These tasks fall into two categories: primary and collateral assignments. Collateral duties assigned by the Unit Sergeant will be in addition to the primary assignment, and are delineated in this manual.

Newly assigned Sergeants and Lieutenants at ASTREA need to attend a Unit Managers Course that includes topics such as aviation safety, human factors, maintenance, personnel selection, leadership responsibilities, training, unit administration, budgeting, legal responsibilities of operating public aircraft, government contracting, and SOP development.

There are three main providers for such training: USC School of Engineering-Aviation Safety, Airborne Law Enforcement Association and Helicopter Association International.

ALEA and HAI have the additional benefit of expositions of equipment and technology, providing opportunities to network with others in the field.

Attending the first available training should be the main emphasis. Attending the other courses in the future as part of ongoing education and keeping abreast of changes in the industry can take place over a number of years.

1.1 Lieutenant

1. The Commander of the Sheriff's Aerial Support Detail is a Sheriff's Lieutenant, preferably with flight experience as a pilot or TFO. The Lieutenant is accountable to the Captain of the Emergency Services Division.
2. Duties:
 - a) Ensure safe operation of Sheriff's aircraft by unit personnel.
 - b) Responsible for fiscal management and accountability.
 - c) With input from subordinate personnel, develop achievable unit goals and objectives.
 - d) Responsible for the successful achievement of unit goals and objectives.
 - e) Liaison with other divisions and units of the Sheriff's Department.
 - f) Ensure that unit reports and staff work are completed in a timely and efficient manner.
 - g) Liaison with other government entities.
 - h) May fill in as a crew member when needed.

1.2 Sergeant Law Enforcement

1. The Law Enforcement Sergeant is a certificated pilot and is accountable to the Unit Lieutenant.
2. Duties:
 - a) Ensure safe operation of Sheriff's aircraft by unit personnel.
 - b) Submit proposals to the Unit Lieutenant for needed changes in the S.O.P.
 - c) Perform or arrange for flight proficiency check rides on crewmembers.
 - d) Schedule flight crews and special operations.
 - e) Respond to inquiries from the public and allied agencies.
 - f) Liaison with Gillespie Field Airport Manager.
 - g) Assist the Safety Officers with Accident/Mishap investigations.
 - h) Document and track "incident reports."
 - i) Assign in-house (Wednesday) training tasks to personnel.
 - j) Schedule all department required training: i.e. First Aid, CPT, etc.
 - k) Fill in as crew member when needed.
 - l) Review unit logs and reports.
 - m) Oversee regular updates to the "ASTREA Emergency Plan."

1.3 Sergeant Fire Program

1. The Fire Program Sergeant is a certificated Pilot and is accountable to the Unit Lieutenant.
2. Duties:
 - a) Ensure safe operation of Sheriff's aircraft by unit personnel.
 - b) Submit proposals to the Unit Lieutenant for needed changes in the S.O.P.
 - c) Ensure all crew members are current for the mission they are assigned and approved to perform.
 - d) Assist the Safety Officers with Accident/Mishap investigations.

- e) Assign collateral duties.
- f) Fill in as crew member when needed.
- g) Review unit logs and reports.
- h) Manage Reserve Deputies and Volunteers.
- i) Schedule Flight crews and special operations.
- j) Assign in-house (Wednesday) Training tasks to personnel.

1.4 Training Officers

1. The Training Officers are accountable to the Unit Sergeants.
2. Duties:
 - a) Develop and conduct ongoing flight training.
 - b) Maintain an up to date initial flight training syllabus.
 - c) Ensure that all F.A.A. requirements and designated unit training requirements are completed in a timely manner.
 - d) Conduct new Pilot mission/transition training.
 - e) Conduct recurrent Pilot training.
 - f) Conduct new tactical flight officer training.
 - g) Disseminate revisions to FARs, rotorcraft flight manuals and related Pilot training materials.
 - h) Liaison with FAA to ensure maximum compliance and cooperation develop and maintain reference library of various training manuals and aids.
 - i) Conduct mission specific training: Rescue, External Loads, Fire- fighting, Toe-Ins, and One-Skid.
 - j) Maintain a training file on each Pilot.
 - k) Coordinate unit training.
 - l) Monitor new pilot vendor training.
 - m) Complete a written proficiency review of trainees.

1.5 Night Vision Goggle Unit Trainers

1. Duties:
 - a) Train ASTREA personnel in the use of NVG's.
 - b) Perform Pilot emergency procedures training in accordance with the ASTREA S.O.P.
 - c) Maintain NVG training records.
2. The NVG Unit Trainer(s) will be trained to the Unit Trainer standards as set forth by Advanced Flight Training Systems or Bell Helicopter Training Academy.

Unit CFI's will be eligible to become NVG Trainers when the following conditions are met:

- 500 flight hours as PIC utilizing NVG's.
- Flight check with an outside agency/company, e.g. Advanced Flight Training Systems, Bell Helicopters Training Academy, or FAA certificated trainer.

1.6 Deputy Sheriff Pilot

1. The Pilot is accountable to the Unit Sergeants.
2. The Pilot in Command has the final authority regarding the operation or use of the aircraft on any mission.
3. Duties:
 - a) Ensure operations are conducted in compliance with FAR's departmental regulations and the Pilots' handbook.
 - b) Conduct daily preflight and post flight inspection of aircraft. This shall include refueling and cleaning of aircraft as required.
 - c) Maintain proficiency with specialized rescue equipment and techniques.
 - d) Maintain 90 day night currency per FAR 61.57.
 - e) Maintain NVG flight currency.
 - d) Maintain external load currency (if endorsed).
 - f) Possess a 2nd class medical certificate.

- g) Complete a biennial flight review per FAR 61.56.
- h) Perform Emergency Procedures flights (Inadvertent IMC/Unusual Attitude Recoveries) in an airframe(s) that they are certified to fly, at least once annually. These flights will be conducted at night with a Unit CFI.
- i) Maintain knowledge of TFO responsibilities and duties.
- j) Perform collateral duties as assigned.

1.7 Deputy Sheriff Tactical Flight Officer - TFO

1. The Tactical Flight Officer is accountable to the Unit Sergeants.
2. The TFO is responsible for the tactical decisions concerning assigned missions. The TFO will coordinate with the Pilot to ensure safe and effective usage of the aircraft.
3. Duties:
 - a) Share with the Pilot the responsibility for safe operation of aircraft during flight and on the ground.
 - b) Provide for the safety of ground personnel and passengers in and around the aircraft when it is operational.
 - c) Perform a daily inspection of all medical equipment in the helicopter.
 - d) Fulfill a role of navigator in the aircraft, and have an understanding of various maps and equipment available to assist in navigation.
 - e) Maintain proficiency in the following systems:
 1. Helicopter
 2. Communications
 3. Search and Rescue
 4. Night operations systems
 - f) Take charge of routine passenger safety, communication equipment, loading and unloading briefing.
 - g) Understand emergency airborne and ground procedures.
 - h) Properly operate the following ground support equipment:

1. Aircraft refueling vehicles
 2. In-ground fueling equipment
 3. Flight line fire suppression equipment
 4. Auxiliary power unit
 5. Flight-line vehicles
- i) "Hot" (engine-on) refueling procedures
 - j) Perform collateral duties as assigned
 - k) Maintain a FAA 2nd Class medical certificate
 - l) Maintain NVG currency
 - m) Maintain currency in those external load rescue techniques that they are trained to perform

1.8 Maintenance Officer (960 day rehire if authorized)

1. The Maintenance Officer is accountable to the Supervising Mechanic.
2. Duties:
 - a) Coordinate with the Facility Safety Officer to ensure that maintenance facilities are in compliance with OSHA, EPA, Haz-Mat and fire regulations.
 - b) Act as liaison with County Department of Purchasing in the purchase of aircraft parts and service. He shall monitor all transactions to ensure parts meet aviation specifications and standards. He will attempt to utilize available funds in the most economical basis. He will review available funds on a quarterly basis.
 - c) He shall act as the liaison with the Unit's Pilots and mechanics.
 - d) He shall review the maintenance contractor's parts requisitions, work orders and parts consumed.
 - e) He may be assigned to review the entries made by the maintenance contractor in the aircraft permanent records to ensure the maintenance provider has made the proper entries.
1. The Maintenance Officer may perform post-maintenance test flights at the direction of the Supervising Mechanic, ASTREA Sergeant or Lieutenant, if certified to do so.

2. Assist with accident investigation.
3. Assist with budgeting.
4. Maintains technical information library for all aircraft engines and helicopter accessories.
5. Maintains information library for parts and vendors.

1.9 Aviation Safety Officer

1. The Aviation Safety Officer is accountable to the Unit Lieutenant.
2. Duties:
 - a) Develop and maintain personal expertise in aviation safety.
 - b) Advise Unit Lieutenant on safety program management.
 - c) Conduct unit safety committee meetings as needed.
 - d) Monitor aerial patrol, training and maintenance safety.
 - e) Develop and promote an ongoing safety program to meet the goals of the Aerial Support Detail.
 - f) Ensure unit members are promptly informed regarding changes in safety procedures.
 - g) Evaluate and recommend changes in unit operations that will maximize safety.
 - h) Serve as a member of an accident investigation team as directed by the Unit Lieutenant.
3. The Aviation Safety Officer should attend an aviation safety curriculum, such as the "University of Southern California Aviation Safety Program."

1.10 Facility Safety Officer

1. The Facility Safety Officer is accountable to the Unit Lieutenant.
2. Duties:

- a) Assist the county hazardous specialist conduct the annual compliance inspection.
- b) Notify the operations officer of any deficiencies noted during the annual county inspection. Recommend ways to correct noted deficiencies.
- c) Review the “hazardous materials business plan” each calendar year and update the plan as needed.
- d) Conduct unit hazardous material training once each calendar year.
- e) Oversee the proper storage of hazardous material.
- f) Oversee the proper disposal of hazardous waste.
- g) Ensure ASTREA facilities are in compliance with OSHA, EPA, Haz-Mat and Fire regulations.
- h) Ensure inspections of facility fire suppression equipment are conducted as required.

1.11 Account Clerk Specialist

1. The Account Clerk is accountable to the Unit Sergeants and Unit Lieutenant.
2. Duties:
 - a) Maintain unit activity records
 - b) Maintain Fiscal management tool
 - c) Maintain petty cash
 - d) Oracle & budget monitoring
 - e) Kronos and payroll records
 - f) Maintain records of Pilots and Tactical Flight Officer flight time
 - g) Ensure necessary office supplies are available for all daily operations

1.12 Mechanics

1. The Director of Maintenance shall report to the ASTREA Lieutenant.

The Director of Maintenance (DOM) oversees all aspects of ASTREA's maintenance program, to include scheduling of aircraft inspections & sign-offs,

part sourcing, scheduling of mechanics, hiring & interviewing potential mechanics, purchasing of new aircraft and coordinating with the ASTREA Lieutenant on any maintenance related issues.

2. The Supervising Mechanic shall report to the Director of Maintenance.
 - a) The Supervising Mechanic is the first-line supervisor for ASTREA maintenance operations and has primary responsibility for completion and oversight of all airframe maintenance.
 - b) Advise the Director of Maintenance of impending inspections, maintenance, when work is to be done, and how long it will take
 - c) Assist with accident investigation
 - d) Assist with budgeting
 - e) The Supervising Mechanic has the primary responsibility to perform or oversee post-maintenance test flights. He may designate qualified maintenance personnel to perform this task.
3. The Helicopter Mechanic/Fuel Truck Drivers will report to the Supervising Mechanic
4. Duties:
 - a) Responsible for mechanical maintenance, repairs, and alterations of turbine powered helicopters
 - b) The Fuel Truck Driver is responsible for the fuel trucks and fueling sites.

1.13 Safety Committee

1. The Safety Committee shall be comprised of the following
 - a) Unit Lieutenant
 - b) Unit Sergeants
 - c) Aviation and Facility Safety Officers
 - d) Director of Maintenance
 - e) Training Officer(s), as appropriate
 - f) Any other person designated by the Unit Lieutenant
2. Duties:

- a) The Safety Committee will meet semi-annually. Additional Safety Committee meetings may be called as directed by the Unit Lieutenant or any member of the Safety Committee.
- b) Conduct post-mishap investigations as directed by the Unit Lieutenant or Sergeants.
- c) Review changes to ASTREA Standard Operating Procedures.
- d) Discuss recent Incident/Hazardous Operation Reports.
- f) Safety committee minutes will be discussed at the next ASTREA Team meeting.

1.14 ASTREA Reserves - Aero Squadron

The ASTREA Reserve Operations will be operationally administered by the Aerial Support Detail with administrative support from the Reserve Support Detail. It is comprised of reserve deputies who utilize their pilot licenses, pilot skills and aircraft to support the Sheriff's Department's mission.

A designated member of the Aerial Support Detail (ASTREA) will serve as a functional liaison between the Sheriff's Aero Squadron and ASTREA. The Liaison will address personnel duties and responsibilities, uniforms, communications, adherence to Federal Aviation Regulations.

1. Reserve and Volunteer personnel will be required to maintain
 - a) Commercial Pilots License and current medical certificate
 - b) Compliance with POST mandated training
 - c) Annual check-ride with the ASTREA Lieutenant or his/her designee
2. Duties:
 - a) Search and rescue
 - b) Surveillance
 - c) Aerial photography
 - d) Transportation
 - e) Emergency disaster damage assessment
 - f) ASTREA flight training

- g) Other appropriate activities as assigned

All ASTREA Aero Squadron missions will be authorized through the Aerial Support Detail Sergeants or Lieutenant.

1.15 Emergency Callback

All ASTREA personnel will be available via their home or cell phones for the purpose of emergency call back to duty.

1.16 Receiving Complaints

Complaints will be handled in a timely and courteous manner:

All complaints will be handled according to the San Diego Sheriff's Department Policy and Procedures 3.2. (Complaints against Sheriff's Employees).

2.0 AIRCRAFT MISHAP PROCEDURES and GROUNDING of AIRCREW

For definitions of accidents or incidents and related reporting requirements please see AIM section 7-6-2 "Aircraft Accidents and Incident Reporting" and FAR Part 830.2 "Definitions."

2.1 Non-Flight Related Aircraft Damage

Damage to Department aircraft resulting from a ground handling incident, malicious mischief or other circumstances deemed not a flying accident, shall be reported immediately to the Unit Lieutenant and/or the Unit Sergeant(s). As soon as practical, an incident report shall be documented in the ASTREA incident log.

2.2 Pilot or Tactical Flight Officer of Aircraft Involved in Incident

As soon as possible, the Unit Lieutenant and/or Unit Sergeant(s) should be notified of any off field landing resulting from a mechanical failure or mishap (i.e.: bird strike, chip light, etc.). As soon as practical, an incident report shall be documented in the ASTREA incident log.

2.3 Pilot or Tactical Flight Officer of Aircraft Involved in an accident – damages and/or injuries

1. Immediately, or as soon as practical, notify the Communications Center regarding
 - a) Any injuries to anyone related to the accident location
 - b) Extent of aircraft damage
 - c) Any related damage to property

2. Refer to Emergency Response Plan for specific assignments and notifications.
3. Submit an Incident Report and or Deputy's Report explaining the circumstances of the accident to a Unit Sergeant within 24 hours, if practical.

2.4 ASTREA Safety Committee

Review accident reports and make appropriate recommendations or suggest changes to promote safe flight and operational procedures.

2.5. Reports and Records

All reports and records pertinent to accidents involving Sheriff's aircraft will be filed and maintained at ASTREA.

No reports of disciplinary action resulting from aircraft accidents will be retained at the Aerial Support Detail.

2.6 Grounding of Aircrew

ASTREA personnel involved in any incident or accident, who suffer injuries which require medical attention, and/or prevents them from performing their duties, will be removed from flight status until medically and/or administratively cleared.

1. Administrative Grounding

The Aerial Support Detail Lieutenant or Sergeants in his/her absence may ground crewmembers for both aviation and non-aviation related circumstances when required.

Any such grounding will be immediately reported to the Emergency Services Division Captain.

Any deputy that fails to pass the required FAA flight physical shall notify a Unit Sergeant. If a deputy feels he is suffering from some condition that temporarily or permanently impairs his ability to fly he shall notify a Unit Sergeant. In the absence of a Unit Sergeant, the deputy may remove himself from flight status.

- a) Administrative Grounding of ASTREA personnel will be reviewed for cause every 14 days.
- b) Any grounding of ASTREA personnel continuing over 28 days, require the concurrence of the Emergency Services Division Captain.
- c) All grounding incidents will be properly and appropriately documented.

2. Return to Flight Status

Reinstatement of flight status is at the discretion of the Aerial Support Detail Lieutenant.

3.0 UNIFORMS

3.1 Uniforms for Helicopter Personnel

1. Departmental issued Nomex™ flight suits and gloves should be worn at all times while flying, except when otherwise approved by the Unit Sergeants or Lieutenant.
2. A black t-shirt, short or long sleeve, will be worn under the flight suit. Clothing worn under the Nomex flight suit should be made of cotton fabric.
3. Department issued baseball style cap with ASTREA logo.
4. Department issued Nomex™ or brown leather A2 style flight jacket may be worn at the discretion of the crewmember.
5. Approved black boots.
6. Department issued protective flight helmet shall be worn by unit members during all helicopter flight operations.
7. The wearing of body armor will be an option for the flight crew.
8. Department approved weapon, extra magazines, holster, gun belt, handcuffs, flashlight, radio, etc.
 - a) The Pilot may wear a WTU approved shoulder holster in place of the department issued gun belt.

3.2 Uniforms for Aero Squadron

The uniform for airplane crewmembers shall be the same as for helicopter personnel with two exceptions: the protective flight helmet and boots are optional.

At the direction of the Unit Sergeants, Unit members may wear appropriate civilian attire to meet the mission assigned.

4.0 GENERAL OPERATIONS

4.1 Briefing

1. Because of the shift structure of ASTREA, a traditional shift briefing is impractical. Therefore, each crew shall brief itself on all information pertinent to their upcoming shift. The information sources include, but are not limited to:
 - a) Weather
 - b) Weight & balance
 - c) Briefing board
 - d) Service request board
 - e) Mailbox
 - f) SD Sheriff E-mail
 - g) The morning report on the Sheriff's Web Page
 - h) Crew self-evaluation I.M.S.A.F.E. (Illness, Medication, Stress, Alcohol, Fatigue and Eating)
2. Fire pilots shall conduct a daily briefing with the assigned Cal Fire Captains and crew. The briefing should include, but not be limited to:
 - a) Load Calculations / Weight and Balance.
 - b) Scheduled missions/training.
 - c) Weather.
 - d) Recent fire activity.
 - e) Any fire/weather warnings or alerts.

4.2 Ground Handling of Aircraft

The movement of any aircraft shall be performed by at least two people.

4.3 Fueling

1. To prevent sparks generated by static electricity, a ground plug shall be used prior to removal of the fuel cap and until fuel cap is replaced.

2. Hot refueling (refueling with engine running) is a very hazardous operation and should only be done to facilitate a response to a high priority call; such as a traffic pursuit, in progress felonies, code cover requests and fires threatening life or property. The fuel hose will not be left unattended during a hot refueling. The pilot will remain at the aircraft controls and the TFO will hold the fuel nozzle at all times, unless fueling is done by ground personnel, who will hold the nozzle instead. Personnel conducting the refueling shall wear the appropriate personal protective equipment.
3. The person refueling shall remain in the immediate area of the aircraft in the event of an emergency.
4. Aircraft shall be refueled at the end of shift unless an upcoming event requires a lighter (low fuel) helicopter.

4.4 End of Shift

1. The Pilot shall clean the aircraft at the end of each shift.
2. The TFO shall complete all required forms by the end of shift.
3. At the end of the night shift the crew shall set the building alarms in the hangars and office, ensure all exterior gates and doors are secure and lock all fuel dispensing units.

5.0 TRAINING

5.1 Tactical Flight Officer (TFO) Training

1. TAD program

A TAD program allows ASTREA training officers/supervisors an opportunity to assess the deputy's ability to adapt to an airborne law enforcement environment without risking a permanent selection and impeding the feeder-type pilot program at ASTREA.

All deputies selected for an assignment to ASTREA will be in a temporary re-assignment position and must successfully complete a 30-day assessment period (two pay periods) before being permanently selected to a vacant position.

During the 30 day assessment period, a *Tactical Flight Officer TAD evaluation* form will be completed daily by the pilot and submitted to the law enforcement supervisor and Chief Pilot. All evaluation forms will remain in a training file for the appropriate retention periods. All TAD-TFO deputies should return to their respective commands prior to being selected as an ASTREA TFO.

New TFOs will be trained utilizing the TFO Training Manual, NVG Training Manual and supplemented by daily/ weekly evaluations.

TFOs in training will receive daily evaluations for the first month of daytime training and weekly evaluations for the next three months. Night training will consist of daily evaluations for the first month and weekly evaluations for the next two months.

Any pilot in the unit is recognized as a TFO trainer and as such can train, sign-off TFO training manuals and complete evaluations on the new TFO. NVG training of new TFO's will be completed by one of the designated Unit NVG Trainers (See section 7.0).

Once a new TFO successfully completes the ASTREA TFO training program and are signed off on all tasks required to fulfill the TFO duties, the ASTREA Lieutenant may then authorize that personnel to receive the ASTREA TFO pay premium (See Section 15.0, ASTREA Pay Premium).

5.2 Entry Level Helicopter Flight Training

Selection for pilot training is determined by a combination of expertise and experience as a TFO, the needs of the department and approval of the sergeants and lieutenant.

Typically, pilot training (private, commercial and CFI ratings) should be conducted at an outside vendor in order to obtain an unbiased evaluation of a deputies piloting ability. Vendor selection is at the discretion of the Lieutenant.

Vendor Training

At the discretion of the unit Lieutenant an entry level pilot trainee may be sent to a private vendor for primary flight training. All ASTREA specific maneuvers will be taught by unit CFI's and obtain 25 hours of transition flight training upon the pilot's return to the unit.

In House Training

1. Initial helicopter flight training will include ground instruction and flight instruction in accordance with FAR Part 61, the Commercial Helicopter Practical Test Standards and other related materials.
2. When a deputy begins flight training, they will be given a copy of the approved Helicopter Pilot (training) Syllabus and Pilot Manual, both produced by Jeppesen Sanderson Training Products. These will serve as the ground and flight training syllabus for ASTREA entry level helicopter flight training.
3. The Deputy must perform all flight maneuvers contained in the syllabus at the level of proficiency consistent with the guidelines contained in the FAA "Commercial Pilot, Rotorcraft /Helicopter Practical Test Standards."

4. Throughout the training, the Pilot trainee must consistently demonstrate an attitude of concern for safe operating procedures and ability to make sound decisions.
5. When conflicting opinions arise between ASTREA flight instructors regarding the qualifications and/or skills of a Pilot trainee, a check ride may be scheduled with a FAA designated check Pilot or an approved commercial training facility. The results of this assessment may be used by the ASTREA Sergeants and Lieutenant to render a decision in the matter.

5.3 Helicopter Flight Training Maneuvers at ASTREA

1. Whenever practical, in-house flight training should be conducted at controlled airports. The availability of fire/rescue resources should be considered.
2. Power recovery autorotation and hovering autos may be conducted provided the following conditions are met:
 - a) Pilot is endorsed by a Unit CFI.
 - b) To a location suitable to complete a successful touchdown autorotation in the event of an actual complete or partial power failure.
 - c) To a location easily accessible to emergency fire/rescue resources.
3. Toe-in landings, one-skid landings and confined area operations may be practiced at appropriate off-field locations with the approval of a unit CFI and an appropriate entry in the Advanced Maneuver Log.
4. External load training may be conducted by any endorsed Pilot once they meet the qualifications stipulated in SOP 9.0.
5. Mountain operations will include training in performance planning, flight profiles, density altitude, and pinnacle and ridgeline operations.
6. Night flight operations will include training in all aspects of night VFR unaided flight. New pilots will be required to accumulate 25 hours of nighttime PIC flight in helicopters prior to being trained in the usage of NVG's.

5.4 Advanced Maneuver Authorization

ASTREA personnel who have line pilot status as designated by the unit Lieutenant may be limited in their mission scope by the Advanced Maneuver Endorsement Log. Only those maneuvers/tasks which are specifically endorsed by a unit CFI on the Advanced Maneuver Endorsement Log may be performed.

5.5 Helicopter Pilot In-Service Training

1. Each Pilot upon completion of their first 100 hours as an ASTREA restricted pilot will undergo a flight proficiency check with a unit CFI.
2. Each Pilot will undergo an annual flight proficiency check under the supervision of a Unit CFI. This flight will be tentatively scheduled for January each calendar year. Records of the maneuvers and performance will be recorded and maintained in each Pilot's training file. In the event that the CFI finds the individual fails to meet standards, remedial training will be scheduled as soon as possible and the individual will be advised not to perform that particular maneuver until such time as he has successfully met the standard. The Unit Sergeants and Lieutenant will be notified of any Pilot deficiencies and any remedial actions to be undertaken.
3. Each Pilot will undergo semi-annual Emergency Procedures Training provided by an outside contract vendor (MD Helicopters, Bell Helicopters, or approved vendor, etc.). This training will be tentatively scheduled for May and November of each calendar year. This training will consist of a day session and a night session and focus on full touchdown autorotation and other emergency procedures.
3. All Cal Fire/USFS carded Pilots will participate in annual water drop proficiency checks tentatively scheduled for May of each calendar year. Records of these flights will be maintained in each Pilots training file.
4. In-service training will generally be presented at ASTREA crew meetings. Training sessions will usually alternate between Pilot re-currency topics and ASTREA mission training. All training will be assigned to unit members by the unit Sergeants.

5.6 Helicopter Pilot Designation

1. To be designated a Line Pilot of a San Diego Sheriff's patrol helicopter, a Deputy must:
 - a) Satisfactorily complete the required FAA testing and earn a Commercial Helicopter/Rotorcraft Pilot certification
 - b) Satisfactorily complete the required ASTREA helicopter Pilot training
 - c) Satisfactorily complete Emergency Procedures/Transition training conducted at an approved training facility
 - d) Satisfactorily complete a comprehensive proficiency check flight by a Unit CFI
 - e) Have the approval of the ASTREA Lieutenant

2. Pilot-In-Command requirements for Bell 407:
 - a) Completion of 500 pilot-in-command hours as an ASTREA pilot.
 - b) Completion of the Bell 407 pilot transition course, which will include a minimum of five flight hours under instruction with a Bell factory pilot.
 - c) 25 hours of daytime pilot-in-command flight hours are required prior to night flight.
3. Pilot-In-Command requirements for Bell 407GX:
 - a) Prior to daytime patrol in the Bell 407GX, 5 hours of daytime pilot-in-command with a unit CFI certified to fly the Bell 407GX, with dual flight controls installed and one cross country flight, with landings at a minimum of two designated airports and one segment consisting of a straight-line distance of 50 nautical miles from the original point of departure. In addition, pilots must complete the training as outlined in the ASTREA night training manual for the Bell 407GX. Prior to night patrol flights, pilots must have a minimum of 25 daytime PIC hours, one night time orientation flight and one unusual attitude recovery training flight with a unit NVG CFI, certified in the Bell 407GX.
 - b) Non-certified Bell 407 pilots are required to complete a Bell 407GX pilot transition course, which will include a minimum of five flight hours under the instruction of a Bell factory pilot. Prior to daytime patrol in the Bell 407GX, 5 hours of daytime pilot-in-command with a unit CFI certified to fly the Bell 407GX, with dual flight controls installed and one cross country flight, with landings at a minimum of two designated airports and one segment consisting of a straight-line distance of 50 nautical miles from the original point of departure. In addition, pilots must complete the training as outlined in the ASTREA night training manual for the Bell 407GX. Prior to night patrol flights, pilots must have a minimum of 25 daytime PIC hours, one nighttime orientation flight and one unusual attitude recovery training flight with a unit NVG CFI, certified in the Bell 407GX.
 - c) 50 hours of daytime pilot-in-command flight hours are required prior to attending the GX night transition course.
4. To be a designated pilot of a San Diego Sheriff's Bell 205A1++ helicopter, performing fire/rescue operations with assigned Cal-Fire personnel on board, a deputy must:
 - a) Have accumulated 2,000 hours as helicopter PIC
 - b) Have accumulated 100 hours in "Type II" helicopter weight class
 - c) Satisfactorily complete the ASTREA Bell 205A1++ Transition Training

- d) Satisfactorily complete a proficiency check flight by a unit CFI or his designee
- e) Satisfactorily complete a Cal Fire/USFS check flight
- f) Have the approval of the ASTREA Lieutenant

The ASTREA Lieutenant may approve qualified ASTREA Pilots to perform tactical or law enforcement missions in lieu of the hours listed in Section (b) of this section.

- 5. The following are the minimum training hours required to qualify as a “Pilot in Command” of a San Diego Sheriff’s helicopter. This is intended for those deputies who may possess a Commercial Pilot certificate prior to being selected for Pilot training.
 - a) For those who may possess a Commercial Pilot certificate for an airplane and wish to “add on” the Rotorcraft certificate, they will need to meet the minimum hours required in 61.129 c of the Federal Aviation Regulations.
 - b) For those who may already possess a Commercial Pilot/Helicopter certificate, they must complete a Flight Review and transition training with an ASTREA CFI demonstrating proficiency. If needed, they must complete an MD500D/E, MD530F, Bell 407 or Bell 205 transition course from an approved vendor.

6.0 FLIGHT OPERATIONS

The controls of San Diego County Sheriff’s Department aircraft will not be operated by any person not assigned to ASTREA (on a permanent or TAD basis) without permission of the unit Lieutenant. Violation of this policy may be reason for immediate grounding of the Pilot in Command pending further investigation.

All requests for special services shall be directed to the Sergeants of the Aerial Support Detail. They shall determine the justification for use of the aircraft and then notify the flight crew of the activity and the service needed. Examples of these flights include but are not limited to:

- Surveillance
- Special area patrols
- Aerial photography
- Public Relations Demonstrations
- Familiarization Flights
- Special Project Flights

6.1 Familiarization Flights

Members of the department may accompany ASTREA flight crews for the purpose of observing flight operations and/or a beat orientation flight, if they have the permission of their supervisor and the unit lieutenant or sergeant.

Requests by peace officers from outside county agencies for beat familiarization flights should be made in advance with approval of a Unit Sergeant.

However, the Pilot in Command has the authority to conduct familiarization flights for on-duty patrol sworn peace officers.

All persons flying with an ASTREA crew must be given a safety brief prior to the flight.

Non-departmental persons flying with an ASTREA crew must read and sign the "Request for Participation and Waiver of Liability" form prior to the flight. Those persons that ride on a regular basis may be allowed to sign one form for that calendar year which will be kept on file at ASTREA Base.

6.2 Out of County Responses

Flights will normally terminate at the county line. In some circumstances, the urgency of the event may require immediate action by the flight crew. Examples may include pursuits, crimes in progress, photographs of a crime scene, or the transportation of equipment or persons to the scene of some event. Any flights out of the county due to exigent circumstances should have the Sheriff's Communications Center notification and notification of the Unit Lieutenant, as soon as possible. Flights such as surveillance (marijuana flights) or training flights require the Sheriff's Communications Center notification prior to leaving the County.

Permission from the Office of the Sheriff shall be obtained before any flight into Mexico.

6.3 Crew Composition

1. Patrol Helicopters

Crew composition for law enforcement flights in patrol helicopters is one pilot and one tactical flight officer. Exceptions to this may be:

- a) Training flights
- b) Photo flights
- c) Aircraft ferry flights
- d) External load operations (long line, MD500 Bambi Bucket)

2. Fire helicopters

Due to the complexity of the mission, ASTREA Bell 205 helicopter pilots will not generally fly firefighting missions without a second crew member in the aircraft.

Crew composition for firefighting missions will normally consist of the Pilot and one of the following:

- a) ASTREA 205 Pilot
- b) Cal Fire Captain

Crew composition for law enforcement missions in Bell 205 helicopters will consist of the Pilot and one of the following:

- a) ASTREA 205 Pilot
- b) ASTREA Patrol Pilot
- c) ASTREA TFO
- d) Cal Fire Captain

6.4 Crew Resource Management

1. Pilot Authority:

- a) The Pilot in Command (PIC) is responsible for, and has the final authority, in the safe operation of the aircraft
- b) The PIC has the authority to refuse compliance with any order of a superior officer whenever weather, aircraft, crewmember or flying conditions could, or would be hazardous to the safety of the flight or is in violation of any Federal Aviation Regulation.
- c) The PIC may deviate from any rule in this manual in the event of an emergency to meet the demands of that emergency.

2. Tactical Flight Officer/205 Flight Officer:

- a) The TFO is responsible to use advocacy and assertion when they feel uncomfortable or unsafe.
- b) The TFO needs to be aware of the Pilot's workload and the crew should have discussed how and when the TFO should assist when appropriate.
- c) During all helicopter landings, the TFO will visually check the clearance of the tail rotor for any obstacles, and report the status to the pilot. During flight, the TFO will verbally report to the pilot any potential obstacles, such as wires or tall antennas that he sees near the path of the flight.
- d) Assist the Pilot with Load Calculations and manifesting of passengers as

necessary.

- e) Provide "Flight Following" information to Monte Vista ECC or Station M every 15 minutes.

If no other Cal-Fire Helitack personnel are on board:

- a) Conduct passenger briefings and ensure the safety and control of all persons on or near the aircraft.
- b) Ensure the proper loading and securing of any cargo placed aboard the aircraft.

6.5 Flight Regulations

Flight regulations are regulatory provisions that have been adopted to ensure safe and effective flight operations.

1. All crews will plan their flights to terminate in compliance with FAR Part 91.151 (20 minute fuel reserve).

All crews shall land their aircraft:

- a) Upon illumination of their "low fuel" warning light, or
 - b) Whenever either crewmember feels that fuel exhaustion is of immediate concern
 - c) In any case the flight should generally be no longer than 3 hours as measured by the engine Hobbs, not the maintenance Hobbs
2. During normal operations, all ASTREA personnel will be given a minimum of 8 hours of uninterrupted crew rest between duty cycles.
 3. No crewmember may accrue more than 8 hours of flight time during a single shift without the permission of either the Unit Lieutenant or a Unit Sergeant. The Unit Lieutenant or a Unit Sergeant will not normally allow any crewmember to fly more than 10 hours during a single shift.
 4. No flight crewmember will work a shift in excess of 14.5 hrs. This shift length restriction starts when departmental work begins, whether at ASTREA or any other Sheriff's facility. Except in unusual circumstances, a double-back for a flight crew will not be permissible.
 5. Any Pilot who has not flown for the past 30 days will require a flight proficiency check with any Unit CFI, prior to being assigned as PIC.
 6. 205 Pilots assigned to work Cal Fire or USFS controlled fires will abide by the duty hours put in place by each agency. Generally, that will be seven hours flight

time for Cal Fire and eight hours flight time for USFS and ten hours crew rest between shifts.

7. Either crewmember may request relief, based on crew rest, fatigue and or aggregate flight time.
8. The Unit Lieutenant or Sergeants has the responsibility of monitoring crew rest, fatigue, and aggregate flight time. The Unit Lieutenant or Sergeants may relieve a crew from duty based on their observations and opinions.
9. The twenty-four hour period starts from the beginning of the shift and is independent of standard time.
10. Generally, aircraft should not be left unattended while the engine is running.
11. Aircraft not so equipped may not be operated into any known icing conditions.
12. All airplane cross-country flights during the hours of darkness will be conducted as if flying in IFR conditions and an IFR flight plan will be filed. In VFR conditions, all flights wherein the destination is over 100 nautical miles will require that a VFR flight plan be filed with the appropriate FSS. Exceptions may only be approved by the sergeants or lieutenant.
13. A Pilot may not continue VFR flights outside of controlled air space if visibility is known or forecast to be less than two miles.
14. Night flying into mountainous or steep terrain is generally prohibited unless NVG's are utilized. The communities of Jamul, Alpine, Ramona, and Valley Center are generally excluded from this prohibition.
15. Newly assigned TFOs may not work during the hours of darkness until cleared by the sergeants after having received NVG training. Prior to NVG training the TFO must gain 4 months or 150 hours of flight time.
16. Night vision goggle operations are described in SOP Section 7.0.

6.6 Post Maintenance Check Flights

1. Only Pilots with more than 1000 flight hours in helicopters will fly post-maintenance test flights
2. Pilots conducting maintenance test flights shall receive a thorough briefing from the mechanics covering the areas of required testing prior to the operational check flights.
3. In those instances where a unit aircraft has been maintained, rebuilt, or modified in a manner that may have appreciably altered its operation in flight, the

maintenance technician shall specify in the corrective action column of the aircraft maintenance log that an operational check flight is required.

The specific reason for conducting the operational check flight for example: "removed and replaced red pitch change link, post maintenance test flight required for main rotor track and balance." The aircraft will not be considered serviceable for flight until the pilot that performed the post maintenance test flight notes in the corrective action column that he has performed the operational check flight.

5. The Pilot performing the post maintenance test flight may require the assistance of a maintenance technician to accompany him on the post maintenance test flight, acting as a crewmember for the duration of the operational check flight. Ref. FAR 91.407B.

6.7 Operational Hazard Reports

ASTREA personnel who experience, witness, or by any other means learn about an unsafe situation involving Sheriff's aircraft shall complete an Operational Hazard Report and submit it to the Aviation Safety Officer or Facility Safety Officer. The unsafe situation could involve the acts of other pilots, air traffic controllers, and airport personnel, officers, deputies, or other persons on the ground, maintenance personnel, or other ASTREA employees.

Upon receipt of an Operational Hazard Report, the Unit Sergeants shall evaluate (and investigate, if necessary) the claims, make recommendations, and forward the report to the Safety Officers for action, if necessary.

The report will then be forwarded to the Unit Lieutenant for review, filing, and purging after two years.

6.8 Accident/Incident Reports

The ASTREA Unit Lieutenant will be made aware of those aspects of aviation operations that directly affect such operations, such as material failures, breakage, maintenance, human factors, weather, scheduling, and risk assessment. Accordingly, an Incident Reporting plan shall be in effect, and participation in the plan is mandatory. Examples of instances that are appropriate for Incident Reports include any precautionary landings and equipment failures.

Upon receipt of an Incident/Accident Report the Unit Sergeants shall evaluate (and investigate, if necessary) the claims, make recommendations, and forward the report to the Safety Officer for action, if necessary.

6.9 Vehicle Pursuits

All vehicle pursuits shall be handled in accordance with Sheriff's Department Policy and Procedures section 6.43 and the Multiple Aircraft Pursuit Policy letter of agreement. Whenever possible, all vehicle pursuits and/or response to critical incidents should be recorded using the onboard video/downlink equipment.

6.10 Weather Minimums

1. Flights should be conducted under basic VFR weather minimums for operations in controlled airspace and shall conform to those minimums outlined in FAR 91.155 and 91.157.
2. For airplane flights, when weather forecasts indicate that the major segment of an assigned mission will be flown in Instrument Meteorological Conditions (IMC), two Pilots will be assigned, unless there is a fully functioning autopilot. The Pilot in Command may not depart IFR unless weather conditions at the point of departure are at or above the prescribed weather minimums for IFR takeoff for that airport. In no case shall a Pilot depart when visibility at the point of departure is reported to be one-half mile or less and/or presented with a ceiling less than 300 feet. The Pilot will not begin a flight if forecasts indicate that the destination will be below landing minimums upon arrival. When arriving at a location, if weather reports indicate that the airport is below landing minimum, an approach shall not be initiated.

7.0 NIGHT VISION GOGGLE OPERATIONS

7.1 General

1. Night vision goggles, hereafter "NVG's", are capable of greatly enhancing the safety of a given night mission by providing the crew with visual information that would otherwise not be available. There is however, the possibility of increased susceptibility to disorientation due to the inherent limitations of NVG's. NVG's should therefore be used to supplement missions that would otherwise be flown conventionally (unaided).
2. NVG's should not be used to expand mission capabilities by venturing into conditions where conventional measures are not sufficient to conduct safe flight.

7.2 Training/Qualifications

1. NVG training can be performed by any of the following individuals:
 - Outside contract NVG trainer
 - ASTREA approved industry recognized NVG expert
 - ASTREA NVG Unit Trainer(s)

2. NVG Unit Trainer Qualifications

- 1500 hours total time PIC Rotorcraft
- 50 hours at night, unaided PIC Rotorcraft
- 500 hours of NVG time PIC Rotorcraft
- CFI-Rotorcraft
- Satisfactorily complete an evaluation by one of the following:
 - Outside NVG vendor
 - ASTREA NVG Unit Trainer(s)
 - FAA

3. Pilot NVG Qualifications

New Pilots will not be trained in the usage of NVG's until such time as they have accumulated 25 hours of PIC time in an unaided night flight environment, in helicopters

- 500 hours total time PIC Rotorcraft
- 25 hours at night, unaided PIC Rotorcraft
- Completion of Tactical Flight Officer NVG program
- NVG Pilot program
 - Phase #1- 6 Hours
 - Phase #2 - 10 Hours
 - Phase #3 - 10 Hours

4. Tactical Flight Officer Qualifications

- 150 hours daytime or 4 months daytime in ASTREA
- NVG Tactical Flight Officer program
 - Phase #1- 6 Hours
 - Phase #2 - 10 Hours
 - Phase #3 - 10 Hours

5. Bell 407 Night Transition Requirements

- PIC will have attended the Bell 407 transition school
- Complete 25 daytime hours in the Bell 407 at ASTREA
- Complete one hour NVG currency flight with ASTREA NVG Unit Trainer

7.3 Currency

1. Currency requirements will be set according to the following schedule in which the qualified crewmember will have flown 1 hour and completed the minimum NVG tasks established by the Unit Trainer. If the previously rated crewmember exceeds this schedule, he or she must complete an NVG flight with a Unit Trainer or his designee in order to re-establish night vision goggle currency.

Additionally, crewmembers will maintain night unaided currency in accordance with FAR 61.57(b).

- 0 – 300 hrs. every 30 days
- 301- up hrs. every 60 days

2. Crewmembers who conduct monthly NVG currency flights will complete the minimum task forms provided by the Unit Trainer for review and filing. These tasks are to be performed to the standards contained in the NVG Training Syllabus.
3. In addition to the above listed monthly currency, all Pilots must take an “Emergency Procedure” (Inadvertent IMC/Unusual Attitude Recoveries/NVG Failures) in March and November.

If the previously qualified NVG Pilot exceeds this schedule, he will be considered non-current for NVG flight until such time as he has taken an “EP” re-currency flight with an ASTREA NVG Unit Trainer(s).

Rising to the next currency level will not be permitted during a prior currency requirement.

4. Upon completion of “Phase 3 Training”, Pilots require semiannual check flights for the first year and thereafter, annual check flights. Check flights will be conducted by the Unit Trainer or his designee. Both Pilots and TFO's are required to take an annual NVG academic test.

7.4 Preflight and Mission Planning

1. In addition to the normal day time briefing, night shift Pilots will complete the risk assessment form.
2. The crew for patrol flights utilizing NVG 's should normally consist of two NVG qualified and current crewmembers, with both crewmembers utilizing NVG's at the same time. The following exceptions will apply:
 - a) If necessary due to operational needs or an NVG failure, the crew may make the decision to operate with the TFO in a temporary visually unaided capacity, as long as both crewmembers feel it is safe to do so.
 - b) Flights, other than patrol flights may be flown without the second qualified NVG crewmember, if in the Pilot's opinion the flight will be safe to complete. This type of flight will be flown “improved landing zone to improved landing zone” and at a minimum altitude of 1,000' AGL in the backcountry and 500' AGL in other areas. An example of this would be an aircraft reposition flight or equipment shuttle.
3. Aircraft used for NVG flights must have night vision compatible lighting. Additionally, the aircraft must have a working turn and bank indicator, a working

radar altimeter, and a working attitude gyro in addition to the required equipment specified by the "Equipment List."

7.5 Backcountry Missions

1. Backcountry missions are those missions, which are conducted east of the communities of Jamul, Alpine, Ramona and Valley Center.
2. Backcountry weather minimums are 1000' ceilings and 3 miles visibility in the intended operating area(s).
3. Backcountry lunar limitations are as follows:

Pilot

Prior to completion of "NVG Phase 3 Training" and 50 hours of NVG use no backcountry flight (unless with Unit Trainer or his designee)

- 50 hours NVG use High moonlight level shown on SLAP program
- 75 hours NVG use Low moonlight level shown on SLAP program
- 125 hours NVG use Moon below horizon

Tactical Flight Officer

Prior to completion of "NVG Phase 3 Training" and 30 hours of NVG use no backcountry flight (unless with Unit Trainer or his designee)

- 30 hours NVG use High moonlight level shown on SLAP program
- 40 hours NVG use Low moonlight level shown on SLAP program
- 75 hours NVG use Moon below horizon

4. Backcountry landings at other than prepared landing sites (Backcountry Airfields, Sycamore Canyon, Tule Springs, and Guejito Ranch) are prohibited until such time as the Pilot has completed an annual evaluation/off field and confined area training conducted by:
 - Outside contract NVG trainer
 - ASTREA approved industry recognized NVG expert
 - ASTREA NVG Unit Trainer(s)
5. Once the above are completed a Pilot may make off-field/confined area landings anywhere in the county he deems safe.

7.6 Operations

1. Maximum NVG usage during shift.

- Prior to completion of “Phase 3 Training” 3 hours
 - Phase 3 Training complete 4 hours
 - 100 hours NVG usage 5 hours
 - 200 hours NVG usage 6 hours
2. NVG flights will be conducted at a minimum altitude of 500’ above ground level during the en route phase of flight.
 3. Weather minimums for the coastal areas, including the communities of Ramona, Alpine, Valley Center and Jamul are 1000’ ceilings and 3 miles visibility.
 4. Passengers may be carried on non-training NVG flights with the permission of the unit lieutenant. No passengers are allowed on NVG training flights.
 5. Bank angles while operating with NVG’s in excess of 30 degrees greatly increase the possibility of disorientation and should be avoided.
 6. Due to both limited “field of view” and “depth perception”: altitude, ground speed, rate of closure and rate of descent are difficult to estimate at night on NVG’s. To avoid abrupt power changes at low altitudes, the rate of descent and rate of closure during the final 100 feet should be slower than during the day.

7.7 Prior NVG Hours

Any prior NVG hours flown, either Military or another Agency, will be credited towards ASTREA NVG hours.

8.0 SEARCH and RESCUE OPERATIONS

8.1 General Procedure

Upon arriving in the area the crew should contact the Incident Commander for a mission. If the search is in the early stages and there is no Incident Commander the crew should use their judgment as to where to begin the search. If there is a command post the crew should consider landing to obtain a briefing from the Incident Commander or his designee.

8.2 Patient Transport

1. ASTREA helicopters, with the exception of the fire/rescue Bell 205's are classified as Auxiliary Rescue Aircraft by San Diego County Emergency Medical Services Air Medical Plan. Generally, ASTREA aircraft will not be used to conduct routine medical transports.

2. All ASTREA crewmembers will assert their responsibility for the safety of flight. ASTREA deputies will always make the final determination as to who will attend to the patient during the flight to a medevac helicopter or waiting ambulance.
3. If someone other than a crewmember attends to the patient during the flight the TFO shall give a safety briefing. The safety briefing should include the use of the ICS system and other available equipment.
4. ASTREA fire/rescue helicopters (Copter 10, 11 and 12) are classified as Basic Life Support (BLS) by the San Diego County Emergency Medical Services Air Medical Plan.
5. In order to conduct medical transports of patients, a Cal Fire Emergency Medical Technician (EMT) must be onboard to attend to the patient. Medical transport should only be utilized when there is not a higher level of care available or the onboard EMT determines medical transport is in the best interest of the patient.

8.3 Hoist Operations

1. General Procedure

Every rescue is unique. No attempt is made in this section to dictate how a crew shall react at any rescue situation.

A quick response is essential; however, "**Risk vs. Benefit**" will always be a primary consideration.

No one should be allowed to act as a system operator or rescue specialist in a hoist rescue situation unless that individual has been trained in those techniques.

2. Training

Those pilots, TFOs and crew chiefs who are trained and qualified to perform hoist rescues shall participate in refresher training on a quarterly basis. This training shall include: hoist techniques, limitations, correct rigging of the aircraft, emergency corrective action and performing the evolution to the satisfaction of a Unit hoist instructors.

3. Pilot

A pilot will not be considered for hoist operation training until he has met the minimum requirements to fly the Bell 205's and is considered competent in this aircraft by a Unit CFI.

4. Tactical Flight Officer

There is no minimum hour requirement before a TFO/crew chief can participate in any external load or hoist rescue training.

The TFO/crew chief shall perform at least four (4) hoist evolutions without error prior to a Unit hoist instructor considering him fully competent to perform future missions.

5. Currency

Pilots authorized to fly hoist rescue missions must fly a minimum of two hoist missions (actual or training) per quarter. If the pilot fails to maintain this currency, he shall be considered non-current for the mission until such time as he has performed 2 hoist operations to the satisfaction of a Unit hoist instructor.

System Operators must participate in two hoist missions (actual or training) per quarter. If the crew member fails to maintain this currency, he shall be considered non-current for the mission until such time as he has performed 2 hoist operations to the satisfaction of a hoist trainer.

Rescue Specialists must participate in one hoist mission (actual or training) per quarter. If the crew member fails to maintain this currency, he shall be considered non-current for the mission until such time as he has performed 1 hoist operations to the satisfaction of a hoist trainer.

6. Additional Rescuers

If circumstances dictate the need to hoist untrained rescue personnel, it is recommended that a qualified rescuer be at both the LZ and the rescue site to ensure the use of proper equipment and attachment.

7. Upon termination of the operation, the crew shall clean, inspect and store the equipment used log any hoist usage in the hoist log and perform a cable inspection.

9.0 EXTERNAL LOAD OPERATIONS

9.1 General Procedures

1. No pilot will train in or perform any external load operation (long-line) in any MD500 series or the Bell 407 aircraft until 500 hours of flight time in helicopters with 50 hours in make and:

- a) Upon meeting the above flight requirement a pilot may train in external load operations (long-line) providing he is in a dual controlled aircraft with a CFI or his designee
 - b) Once the pilot has attended and successfully completed the External Load Course provided by Western Helicopters he will be approved to perform external load missions (long-line)
 - c) If attendance at Western Helicopters is not possible, the following time requirements must be met prior to being approved for external load missions (long-line): 2 hours with a CFI or his designee and an additional 2 hours solo.
 - d) Additional training will be required for Bambi Bucket
2. No Pilot will train in or perform any external load operations (long-line, Bambi Bucket) in any Bell 205 series aircraft until the pilot has acquired 2000 hours of flight time in helicopters with 100 hours in make.
 3. The pilot shall compute the aircraft weight and balance prior to any external load mission and ensure the mission can be safely completed.
 4. The flight crew should participate in a safety briefing prior to beginning the mission. All personnel shall be briefed on the crew's plan of action as well as general helicopter safety issues, including the need to restrict radio traffic during the mission.
 5. Prior to any external load operation the crew shall check all equipment to be used during the operation including both the manual and electric hook releases.
 6. Upon termination of the operation, the crew shall clean, inspect and store the equipment used.

10.0 FIRE SUPPRESSION

10.1 General Procedure

1. All crews responding to a fire shall adhere to the Fire Traffic Area rules established by Cal Fire and USFS.
2. ASTREA pilots assigned to fire suppression for Cal Fire or USFS must have in their possession a valid Interagency Pilot Qualification Card and must not perform missions other than those endorsed on that card.

3. Due to the risks associated with using the ocean as a water source for filling Simplex tanks or Bambi Buckets, ASTREA crews must do a comprehensive risk analysis before doing so keeping in mind: ocean currents and swell activity.
4. Firefighting retardant is corrosive and may damage the aircraft or Simplex tank mechanism. Generally, retardants will not be used by ASTREA crews.
5. Helispot water point operations-----For Future Use.

10.2 Training Qualifications

1. Prior to making water drops on any actual mission, the pilot must have attended Fire Suppression Training provided by ASTREA or Cal Fire and must be endorsed to do so by a Unit CFI.
 - CAL FIRE Carding/Bambi Bucket drops 2000 PIC Rotorcraft

10.3 Currency

1. Once approved for fire missions and to maintain currency:
 - ASTREA pilots must make a minimum of ten (10) water drops per year in the Bell 407.
 - ASTREA fire pilots must make five (5) water drops per quarter to maintain their currency in the Bell 205.

11.0 TOE-IN, ONE-SKID OPERATIONS

11.1 General Procedure

1. The pilot can remove any aircraft door as he deems essential for the safe completion of the mission. It should be noted that removing any door submits the aircraft to a higher risk of cabin-generated foreign object damage.
2. All personnel, including the person to be deployed or recovered, if possible, shall be briefed on the crew's plan of action for the event. There should be a safety briefing whenever possible.
3. All personnel involved should be advised of the need to restrict radio traffic with the crew during the rescue.

11.2 Training/Qualifications

1. Toe-Ins / One-Skid Requirements

- 500 PIC rotorcraft
- 100 PIC in type of aircraft

All pilots endorsed to perform toe-in and one-skid landings must demonstrate proficiency annually.

Training with allied agencies should be conducted when appropriate. However an event may arise in which personnel on scene have not attended any prior training. Those on scene may assist with the event if the crew has given them a general safety briefing and is comfortable that they can safely complete the mission assigned.

12.0 DISASTER OPERATIONS

12.1 Station Emergency Plan

1. Each deputy shall periodically review the plan.
2. A copy of the plan shall be stored in a visible and accessible location.
3. The law enforcement sergeant shall review the plan and make sure it is updated regularly.

12.2 Emergency Status

1. When events occur that may require a full unit response, the unit lieutenant or a unit sergeant may put the unit into emergency status.
2. Deputies will report to ASTREA base unless directed to their designated pick-up location.
3. When the first crew arrives at ASTREA:

Step 1. Contact the unit lieutenant or unit sergeants.

Step 2. If unable to contact the unit supervisors, assess situation and determine if more crews will be needed.

Step 3. If additional crews are needed, determine if they are enroute or need pick up.

Step 4. Should pick up of crew or command staff be necessary, the pick-up locations are in the station emergency plan.

Step 5. When the 2nd crew arrives, they will continue organizing the ASTREA response. The first crew will go in service and make themselves available for calls.

Step 6. The 2nd crew should evaluate the need for mechanics and fuel truck drivers. Clerical staff could be utilized to scribe for the event.

Step 7. As additional deputies arrive at the base they shall suit up, preflight and be available for missions as directed by the Sheriff's Communications Center.

In lieu of other direction, the Unit's responsibilities are listed in the Sheriff's Emergency Operations Manual, Section 5.6

13.0 VIDEO RECORDING / COPYING / REQUEST PROCEDURES

13.1 General Procedure

The purpose of this policy is to identify the procedure for handling recorded video obtained from law enforcement, search and rescue, and fire missions. This policy will also address the procedure for copying and releasing recorded video. It is not the intent of ASTREA to maintain copies of recorded video.

13.2 Video Recording

When practical, aircrews should make every effort to record video of all calls for service that are critical in nature and may be of some evidentiary value for future criminal prosecution or training.

13.3 Sharing Video Files / Evidence Procedure:

1. Under no circumstances will a video copy be released to the media. All media request will be forwarded to the San Diego Sheriff's Department Public Relations Unit via an ASTREA sergeant or above. Representatives of the Sheriff's Public Relations Unit are the only persons authorized to release video to the media.
2. Unauthorized copies of recorded video are a violation of unit policy and anyone found in possession of such will be subject to discipline.
3. Step by step instructions on sharing videos can be found on the Sheriff's Astrea V: Drive.

Sharing files within the San Diego Sheriff's Department:

Step 1 - Videos will be downloaded from the helicopter's memory card to a desktop computer.

Step 2 - Save the video into the V: drive COMMANDER VIDEO folder

Step 3 - Allow 20 minutes for video to upload to the COMMANDER program
Log in to COMMANDER using desktop log in.

Step 4 - Search for video file using the Search Only Through My Files box, as well as Time/Date field, entering last 2 days. (If you don't narrow search criteria, it will show all department video files)

Step 5 - Click on your video and Tag with following info: Event number, NetRMS case number, MISC TAG (A1, A3 etc.), MISC TAG (Pilot last name w/Arjis), MISC TAG (TFO last name w/Arjis), MISC TAG (Primary deputy w/Arjis).

Step 6 - Complete Astrea Commander paper log in Sergeant's office.

Sharing files outside of the San Diego Sheriff's Department:

Step 1 - Videos will be downloaded from the helicopter's memory card to a desktop computer.

Step 2 - Access Sheriff's ShareFile program via Department Intranet homepage.

Step 3 - Log in and upload video to ShareFile.

Step 4 - Use the ShareFile program to share video or video link with outside agency's primary officer/deputy. Only share files with an OFFICIAL agency email. Do not send to private email addresses.

Step 5 - Remind the primary officer they have a limited time period to download the video and enter it into their evidence. Once downloaded, that officer/deputy has assumed responsibility for evidence chain of custody.

Step 6 - Delete videos from ShareFile ONLY once you have confirmed the video was received by outside agency (use "Send receipt notification").

Step 7 - Complete Astrea's ShareFile log in Sergeant's office.

14.0 STORAGE, HANDLING, and DEPLOYMENT of FIREARMS in AIRCRAFT

14.1 General Procedures

The purpose of this policy is to identify the proper procedures for securing, handling, deployment, and storage of firearms onboard a San Diego Sheriff's Department Helicopter. This policy does not include side-arms personally worn by crew members.

14.2 Department Policy

Personnel shall be familiar with the Department Policy and Procedures Section 8 (Firearms) regarding the use of firearms and deadly force.

14.3 Training/Qualifications

Personnel who have attended the department's rifle course and who qualified with the AR-15 rifle during the most recent department weapons qualification shoot may carry the AR-15.

14.4 Aircraft

Personnel may carry the AR-15 on all department helicopters, which include the MD500 series, Bell 407 and Bell 205.

14.5 Storage

The AR-15 will be equipped with a brass catcher when stored onboard department helicopters, which include the MD500 series, Bell 407 and Bell 205.

Onboard the Bell 407 the AR-15 shall be housed in a soft case and stowed in the rear passenger compartment. Since there is no locking gun rack onboard the 407, personnel will not leave the rifle unattended.

Onboard the Bell 205 the AR-15 shall be housed in a soft case and stowed in the rear passenger compartment. Since there is no locking gun rack onboard the 205, personnel will not leave the rifle unattended.

Onboard the MD500 series helicopter the AR-15 shall be locked and secured in the rifle rack mounted over the center consol. Personnel will not leave the rifle unattended if they are going to be out of eyesight of the aircraft.

While the patrol crew is at ASTREA Base, the rifle may remain locked in the rifle rack as long as the crew is "in service." Otherwise, no crew member of any aircraft will leave a firearm unattended in the aircraft if they are not within eyesight of the aircraft. This includes the lockbox for handguns onboard the Bell 205s.

Upon the completion of each shift, the rifle will be unloaded and secured in the ASTREA firearms safe.

In the event the crew cannot return to ASTREA Base due to weather or other circumstances, the firearm shall be properly secured.

14.6 Handling

The AR-15 shall be configured for **"Patrol Ready"** by utilizing the loading barrel and pointed in a safe direction at all times.

If it becomes necessary to deploy with the rifle in an enforcement capacity during the crewmembers' shift, the crewmember utilizing the rifle is responsible for returning the rifle to a **"Patrol Ready"** condition prior to securing it in the helicopter. Under no circumstance will the rifle be secured in any aircraft with a round in the chamber.

14.7 Deployment

The AR-15 may be deployed in accordance with Department Policy and Procedures Section 8 (Firearms) and the limitations described in this policy.

Shooting from the helicopter is generally prohibited while in flight.

15.0 ASTREA PAY PREMIUM ADDENDUM

15.1 Pay Premium

1. Qualified ASTREA personnel may receive a pay premium for TFO/Observer, Deputy Sheriff Pilot and Fire/Rescue Pilot (See attached adopted addendum, adopted September 2011).



LABOR RELATIONS

SEP 19 2011

DIVISION

County of San Diego

DEPARTMENT OF HUMAN RESOURCES

LABOR RELATIONS DIVISION

1600 PACIFIC HIGHWAY, ROOM 203, SAN DIEGO, CALIFORNIA 92101-2483
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DONALD W. TURKO
DIRECTOR

LETTER OF UNDERSTANDING
BETWEEN THE
COUNTY OF SAN DIEGO
AND THE
DEPUTY SHERIFFS' ASSOCIATION OF SAN DIEGO COUNTY
(DS UNIT)

IN THE MATTER OF
HELICOPTER DUTY PREMIUM & ADDITIONAL CERTIFIED FIRE LIFE/SAFETY
PREMIUM

1. This attests and records the agreement of the County of San Diego and the Deputy Sheriffs' Association of San Diego County (DS unit) regarding changes to the Helicopter Duty Premium and the addition of a Certified Fire Life/Safety Premium. (Additions are in bold and deletions are shown as ~~strikeout~~.)

Article 5. Section 4. Helicopter Duty Premium

This Section establishes additional compensation for a properly qualified employee who is assigned to operate a Sheriff's Department helicopter as its pilot or for an employee who is assigned to service in a Sheriff's Department helicopter as a Tactical Flight Officer.

A. Eligibility

Helicopter Pilot

~~This Section establishes additional compensation for a properly qualified eligible employee who is assigned to operate a Sheriff's Department helicopter as its pilot.~~
Pilots are defined as those employees who are certified by the FAA as commercial helicopter pilots and are approved by the ASTREA lieutenant to act as "pilot in command" of a patrol or firefighting/rescue helicopter.

The ASTREA lieutenant's status as "pilot in command" must be approved by the Emergency Services Captain.

*Winner IPMA-HR Large Agency Award for Excellence
Winner SD SHRM Workplace Excellence Award*

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Helicopter Observer Helicopter Tactical Flight Officer

~~This Section establishes additional compensation for an employee who is assigned to serve in a Sheriff's Department helicopter as an observer.~~

Helicopter Tactical Flight Officers are defined as those employees who have successfully completed the ASTREA Tactical Flight Officer training syllabus and are approved by the ASTREA lieutenant to act as a fully functional tactical flight officer of a patrol helicopter.

B. Eligibility Eligible Classes

Helicopter Pilot

Employees who are assigned to ASTREA on a full time basis in the following classes:

- 5746 – Deputy Sheriff**
- 5790 – Sheriff's Sergeant**
- 5780 – Sheriff's Lieutenant**

Tactical Flight Officer

Employees who are assigned to ASTREA on a full time basis in the following classes:

- 5746 – Deputy Sheriff**
- 5790 – Sheriff's Sergeant**
- 5780 – Sheriff's Lieutenant**

~~An employee must be assigned full-time duty as a helicopter pilot or observer to become eligible to receive this premium compensation.~~

C. Calculation of Premium

For each full standard work period of eighty-five (85) hours an eligible employee shall receive, in addition to his/her base biweekly rate, the following:

~~**Pilot:** \$166.60 biweekly, based on \$1.96/hour for an eighty-five (85) hour standard work period. Hereafter, the FLSA regular rate for overtime shall apply.~~

Years of Service	Amount of Premium
Pilots assigned to ASTREA with less than 5 years	7.5% of base pay
Pilots assigned to ASTREA with 5 years or more	12.5% of base pay

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This premium shall apply for an eighty five (85) hour standard work period. Thereafter, the FLSA regular rate for overtime shall apply. This premium shall apply for time worked and toward paid time off, not including overtime. This premium does not apply towards terminal pay.

~~Tactical Flight Officer: \$56.10 biweekly, based on \$0.66/hour for an eighty-five (85) hour standard work period. Thereafter, the FLSA regular rate for overtime shall apply.~~

~~If the assignment is for more than one full standard work period, the biweekly premium shall be pro-rated if the assignment is ended prior to the completion of a second or additional full standard work period.~~

Tactical Flight Officer Premium	Amount of Premium
Tactical Flight Officers assigned to ASTREA	5% of base pay

This premium shall apply for an eighty five (85) hour standard work period. Thereafter, the FLSA regular rate for overtime shall apply. This premium shall apply for time worked and toward paid time off, not including overtime. This premium does not apply towards terminal pay.

D. Employees with more than one assignment/tour of duty in ASTREA shall calculate their years of service in ASTREA cumulatively.

II. **New Premium**

Article 5, Section 17 Fire/Life Safety Premium

This section establishes additional compensation for a properly qualified employee who possesses a current "Helicopter Pilot Qualification" through Cal Fire or the US Forest Service.

A. **Eligibility**

Fire/Life Safety Pilot

Fire/Life Safety Pilots are defined as those employees who possess a current "Helicopter Pilot Qualification" through Cal Fire or the US Forest Service.

B. **Eligible Classes**

Employees who are assigned to ASTREA on a full time basis in the following classes:

5746 – Deputy Sheriff

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Helicopter Duty Premium & Certified Fire Life/Safety Pilot
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5790 – Sheriff's Sergeant
5780 – Sheriff's Lieutenant

C. Calculation of Premium

Fire/Life Safety Premium	Amount of Premium
Helicopter Pilots assigned to ASTREA	5% of base pay

This premium shall apply for an eighty five (85) hour standard work period. Thereafter, the FLSA regular rate for overtime shall apply. This premium shall apply for time worked and toward paid time off, not including overtime. This premium does not apply towards terminal pay.

III. This agreement shall become effective upon agreement and ratification by the Deputy Sheriffs' Association of San Diego County and upon the Board of Supervisors' approval and adoption.

FOR THE COUNTY OF SAN DIEGO:

FOR THE DEPUTY SHERIFFS'
ASSOCIATION OF SAN DIEGO COUNTY
(DS UNIT):

Susan Brazeau
SUSAN BRAZEAU
Labor Relations Manager

Hank Turner
HANK TURNER
President

Date: 9-19-11

Date: 9-17-11

16.0 Physical Fitness Requirements

- 16.1 Personnel assigned to ASTREA are required to obtain and maintain a 2nd Class FAA Medical Certificate. During the course of their duties, pilots and TFO's may be required to conduct missions in physically demanding environments. It is incumbent upon the individual to maintain a high standard of physical fitness. When in a relief position, ASTREA personnel are encouraged to exercise, preferably at ASTREA base, or within close enough proximity to respond to the base as needed.