LAW ENFORCEMENT MUTUAL AID PLAN
(SAR) ANNEX

MUTUAL AID GUIDELINES

SEARCH AND RESCUE
FIXED WING AIRCRAFT

December 8, 2011

California Governor's Office of Emergency Services
Law Enforcement Branch
Search and Rescue Mutual Aid – Fixed Wing Aircraft Guidelines

ACKNOWLEDGEMENT

This document is the product of a cooperative effort of an assembled Search and Rescue Fixed Wing Aircraft Working Group and the California's State Sheriffs' Search and Rescue Coordinators.

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This document was completed, accepted, and approved by the State Sheriff's SAR Coordinators on 10/19/2011. It was further accepted and approved by the California State Sheriff's Association on 12/8/2011.

Introduction

Pursuant to the California Government Code, Chapter 7 of Division 1 of Title 2, "The Emergency Services Act", the California Governor's Office of Emergency Services (CAL OES), Law Enforcement Branch manages and maintains the State of California Search and Rescue Mutual Aid Program. This includes the publication of plans pertaining to Search and Rescue Mutual Aid. This publication, The CAL OES SAR Mutual Aid Plan, serves as an annex to the CAL OES Law Enforcement Mutual Aid Plan.

In order to refine the State's Search and Rescue Mutual Aid Program, the CAL OES Law Enforcement Branch assembled California's 58 County Sheriffs' Search and Rescue Coordinators, as well as California's State and Federal SAR Cooperators. This group of interested agencies is called the "State Sheriffs' Search and Rescue Coordinators". The main objective of this group is to collectively review and address statewide SAR issues to improve the effectiveness and efficiency of the State's SAR Mutual Aid Program.

One of the main issues identified was the existence of multiple and inconsistent "standards" that affect the SAR discipline, specifically mutual aid SAR responses. The lack of statewide consistency in how SAR resources were evaluated and categorized made it difficult for SAR resources to be used as a mutual aid resource. This issue was addressed in detail by the State Sheriffs' SAR Coordinators. Their objective was to create mutual aid guidelines that met or exceeded existing applicable "standards" while creating effective and efficient statewide criteria for mutual aid SAR responses. These guidelines are intended to define SAR proficiencies solely for mutual aid resources.

- These guidelines contain information for law enforcement agencies to consider when addressing the broad range of issues related to Search and Rescue Mutual Aid. These guidelines do not constitute a policy, nor are they intended to establish a standard for any agency. CAL OES is sensitive to the needs for agencies to have individualized policies that reflect concern for local issues. CAL OES intends these guidelines to be a resource for law enforcement agencies that will provide maximum discretion and flexibility in the development of individual agency policies.

The creation of California's SAR Mutual Aid Guidelines encompasses all potential SAR disciplines and is developed as follows:

1. The State Sheriffs' SAR Coordinators identify the guideline discipline need.
2. The State Sheriffs' SAR Coordinators elect one of their fellow coordinators to chair the guideline creation process.
3. The State Sheriffs' SAR Coordinators identify and task a group of subject matter experts into a "Specialist Working Group".
4. The Specialist Working Group creates the guidelines based upon their knowledge and experience and submits them back to the coordinators for review, recommendation, and/or approval.
5. Once approved by the coordinators, and reviewed by CAL OES Administration and Staff Counsel, the coordinators present the guidelines to the California State Sheriffs' Association (CSSA) for their review, recommendation and/or approval.
6. Once approved by CSSA, the guidelines become part of the CAL OES California Law Enforcement Mutual Aid Plan – SAR Annex.

Effectiveness and efficiency is achieved as California's SAR Mutual Aid Guidelines are created by California's SAR experts, for California's Sheriff's SAR Coordinators, and approved by the Sheriffs of California, all for the benefit of those who become the subjects of search and/or rescue in California's SAR environments.

The following guidelines include "typing" of both the SAR environment as well as the SAR resource. They are designed to match the conditions, environment and possible length of deployment (normal operational periods should be 12 hours) as determined by the mutual aid requestor and the minimum equipment, experience, and skill level the responding agency should consider when sending SAR personnel.

The goal of "typing" is to be able to identify the largest number of SAR resources while minimizing the risk of placing an unsuitable SAR resource in an unsafe situation. The responding agencies' liaison or leader shall have final approval of any assignments their personnel are asked to perform.

Volunteer SAR personnel should be properly registered as Disaster Service Workers (DSW). DSW registration will ensure that the volunteers are eligible for worker's compensation coverage if they should be injured and provides additional liability protection for the volunteer and the government agency.

NOTE: The endeavor of Search and Rescue necessitates response into difficult and unpredictable circumstances in widely varied and many times hazardous terrain. These guidelines are intended to assist Search and Rescue Coordinators in identifying appropriate emergency response resources to effect searches and rescues in the most expeditious manner possible while considering known and unknown hazards. These guidelines are not intended to address all eventualities. Rather they are a set of tools derived from collective knowledge to address the task at hand. Search and Rescue is inherently dangerous and participants respond with knowledge of the associated risks.

It is the responsibility of agencies responding to California Search and Rescue Mutual Aid requests to provide qualified personnel and equipment that meet or exceed the recommended level of skills and capabilities stipulated in these guideline documents.

The California SAR Mutual Aid Guidelines are only minimum guidelines and circumstances that are unique to a particular search and rescue mission may dictate that additional or higher skills and qualifications may be necessary for the safety of the searcher and for successful search and rescue operations.

Summary

A fixed wing aircraft pilot is a SAR member capable of performing different types of operations in varied terrains and climates. Examples include, but are not limited to, transportation of personnel, radio relay operations, and search and rescue. Pilot considerations include: type of licensing i.e. private VFR, private instrument, commercial, ATP, ratings i.e. instrument or multi, experience i.e. total hours, cross country, instrument, and night, along with experience in flying in mountainous areas or at high altitude. A pilot

may be an expert in one area, and a novice in another. The different scenarios that require air operations call for varying degrees of pilot expertise and aircraft.

The following pages contain several tables, based on the mission type: 1) Search Environment Type and 2) Recommended Capabilities and Skills. Keeping in mind local conditions and safety requirements, the SAR Coordinator should select the resource required by combining and selecting from the Search Environment Type and Recommended Capabilities and Skills Type tables. For example, if the search area includes rugged conditions, but is less than 7000 feet without ice or snow this would probably be a Type 2 Environment that would be appropriate for most Type 1 and Type 2 Capability and Skill searchers.

Search Environment Type			
Type 1 Extreme / Complex Terrain Environments	**Type 2 Rugged Terrain Environments**	**Type 3 Moderate / Gentle Terrain Environments**	**Type 4 Urban Environments**
Extreme Conditions (including but not limited to) Altitude (generally 7000'+) or Snow, Ice, Desert, Heat, Heavy Ground Cover, Steep difficult terrain.	Rugged Conditions, Altitude generally under 7000', Heat, Cold concerns, Moderate to Heavy Ground Cover.	Gently Rolling Terrain, Open Spaces, Maintained Trailheads, And Agricultural Areas.	High Traffic, Urban Office Complexes, Man-Made Surfaces, Public Interaction and Park Trails.

Recommended Capabilities and Skills				
	TYPE 1	**TYPE 2**	**TYPE 3**	**TYPE 4**
Can be deployed to Environment Type	**1/2/3/4**	**2/3/4**	**3/4**	**3/4**
Operational periods w/o external support	Capable of field assignments up to one day. With the possibility of an overnight in the field.	Capable of field assignments up to one day. With the possibility of an overnight in the field.	One operational Period	One Operational Period with external support
Medical Skills	Current First Aid/CPR	Current First Aid/CPR	Current First Aid/CPR	Current First Aid/CPR
Radio Communications	Member should be familiar with basic radio communication skills. This should include: understanding the use of Mutual Aid Radio Frequencies and basic radio etiquette.	Member should be familiar with basic radio communication skills. This should include: understanding the use of Mutual Aid Radio Frequencies and basic radio etiquette.	Member should be familiar with basic radio communication skills. This should include: understanding the use of Mutual Aid Radio Frequencies and basic radio etiquette.	Member should be familiar with basic radio communication skills. This should include: understanding the use of Mutual Aid Radio Frequencies and basic radio etiquette.
Knowledge of Basic SEMS/ICS	Member should be familiar with the "Standardized Emergency Management System/ICS."	Member should be familiar with the "Standardized Emergency Management System/ICS."	Member should be familiar with the "Standardized Emergency Management System ICS."	Member should be familiar with the "Standardized Emergency Management System/ ICS."

Aircraft Safety	Basic Aircraft Safety. Knowledge and familiarity with Loading/ Unloading. Help establish landing site.	Basic Aircraft Safety. Knowledge and familiarity with Loading/ Unloading. Help establish landing site.	Basic Aircraft Safety - Help establish landing site.	Basic Aircraft Safety - Help establish landing site.
Navigation	Determine and communicate position; navigate point-to-point with GPS and map/compass; route-finding.	Determine and communicate position; navigate point-to-point with GPS and map/compass; route-finding.	Determine and communicate position; navigate point-to-point with GPS and/or map/compass; route-finding.	Determine and communicate position; navigate point-to-point with GPS and/or map/compass and/or route finding.
Tracking Skills	Clue and track aware.	Clue and track aware.	Clue and track aware.	Clue and track aware.
Fitness	Fitness appropriate for conditions, terrain and missions	Fitness appropriate for conditions, terrain and missions.	Fitness appropriate for conditions, terrain and missions.	Fitness appropriate for conditions, terrain and missions.
Search and Rescue Operations	Excellent ground visibility, 3+ capacity, 4+ hour endurance,	Excellent ground visibility, 3 person, 4 hour endurance,	Good ground visibility, 2-3 persons, 4 hour endurance,	Fair to good visibility, 2 persons, less than 4 hour endurance.
Radio Relay Platform	External Radio Antenna, 13,000+' altitude, 4+ hour endurance, 3+ person capacity	External Radio Antenna, 11,000' altitude, 4 hour endurance, 3+ person capacity	External Radio Antenna, 10,000' altitude, 3 hour endurance, 2 person capacity	External Radio Antenna, 10,000' altitude, less than 3 hour endurance, 2 person capacity

Additional Considerations

Search and Rescue Pilot, based on mission needs:

Type 1: Extensive experience in mountain flying, high altitude experience, training in search patterns, ELT homing, instrument capability, 900+ climb rate, 70-80 knots search speed, external radio antenna, IFR capable

Type 2: Type 1 characteristics without instrument capability, 800+ climb rate, 80 knots search speed, external radio antenna, IFR capable

Type 3: Moderate experience in mountain flying, training in search patterns, ELT homing, 700+ climb rate, 80 knots search speed.

Type 4: Training in search patterns, ELT homing, less than 700 climb rate.

Other Pilot Characteristics to be considered based on mission needs:

1. Licensing
- a. Private
- b. Commercial
- c. Airline transport pilot

2. Ratings
- a. Airplane single engine land (sea)
- b. Airplane multi engine land (sea)
- c. Instrument

3. Experience
- a. Total hours as Pilot in Command (PIC)
- b. Cross Country Hours
- c. Instrument – total instrument hours and recent flight experience/proficiency
- d. Night Hours – recent flight experience/proficiency
- e. Mountain or elevated terrain – recent flight experience/proficiency