South Carolina State Aviation Coordination Plan

June 27, 2017

FEMA

Table of Contents

Introduction

The South Carolina State Aviation Coordination Plan (SCACP) is designed to guide State, local, tribal, and territorial government's air operations during a state disaster. The SCACP will facilitate the coordination of certain aspects of air operations planning and execution before, during, and following an incident. The SCACP encompasses an all-hazards approach.

SCACP provides some uniform aviation operations guidance applicable within the state's airspace. The guidance in SCACP is provided to ensure flight safety, coordination, and visibility of all aviation operations within a multi-state disaster area.

SCACP recognizes and supports State, local, tribal, and territorial authority. SCACP guidance supports communication, coordination, and collaboration of all individual state aviation assets.

SCACP recognizes the Federal Aviation Administration (FAA) authority, in support of individual State and Multi-State direction. SCACP guidance was developed in coordination with the FAA to expedite aviation support during a disaster response.

SCACP is not totally inclusive of all aviation coordination necessary during a state disaster response. Specific disaster information will be located within the South Carolina Aviation Procedures Guide (SCAPG) located on the Air Operations Branch (AOB) link located on the SCEMD website at http://scemd.org/who-we-are/air-branch. Individual agencies are encouraged to use the Federal Emergency Management Agency (FEMA) "State Air Operations Plan Template", the FAA "Airspace Management Plan for Disasters", and the SCAPG.

Communication

The Air Operations Branch will have the capability to communicate via ground to ground or ground-to-air radio in addition to land line. The AOB is not designed to provide direct C2 of aviation resources. (reference **Appendix 3** for comm plan)

Hazards

The following are potential hazards in South Carolina for which air operations could occur:

- Hurricane
- Tornadoes
- Severe winter weather
- Flooding
- Wildfire
- Straight line wind
- Drought
- Hazardous materials events
- Transportation accident
- Pipeline hazard
- Nuclear power plant accident
- Earthquake

Aviation Coordination Plan

This AOB/Federal Disaster Response Aviation Coordination Plan (hereinafter referred to as the "ACP") outlines the aviation operations procedures to be used within the designated disaster area and, as applicable, disaster Temporary Flight Restriction (TFR) airspace established by the FAA, by all response/relief aircraft under the operational control (OPCON) of the identified Unified

Command (UC)/Incident Commander (IC) air operations apparatus, which will be led by South Carolina State authorities - e.g., SC Emergency Management Division (SCEMD) and SC National Guard. This lead responsibility will be shifted to a Federal entity - e.g., the Federal Emergency Management Agency (FEMA) and U.S. Northern Command (NORTHCOM) / Continental North American Aerospace Defense Command Region – First Air Force (CONR-1AF) - if a Presidential Disaster Declaration is made, Federal Assistance is requested by South Carolina, and a UC led by Federal authorities is established to support South Carolina State authorities. The OPCON of these flight operations (sometimes referred to as "participating" aircraft hereafter) is exercised through the Air Operations Branch located at the State Emergency Operation Center (SEOC) in Columbia SC. These procedures have been established to support the safe, efficient, and effective conduct of response/relief air missions by multiple agencies, including assets from Federal, State, local, and tribal (FSLT) entities, in the disaster area.

Considering the introduction of aircraft from multiple agencies, which frequently use dissimilar, agency-specific air mission procedures, into the same airspace, it is imperative that all responder/relief aircraft rigorously comply with this ACP, as well as all U.S. Federal Aviation Administration (FAA) regulations and directions, including direction from Air Traffic Control (ATC) facilities responsible for the affected airspace. This ACP is also intended to mitigate, to the extent practicable, the impact of the participating flight operations and associated contingency air traffic/airspace management (ATM/ASM) measures on non-participating aircraft.

For the purposes of the subject hurricane incident, this ACP may include specialized chapters and/or annexes covering Search and Rescue (SAR), critical needs evacuation, Imagery Assessment and Analysis (IAA), and other priority participating flight operations.

National Airspace System Authority

The FAA has plenary authority over the National Airspace System (NAS) before, during, and after disaster response/relief operations. The FAA serves as the nation's ultimate airspace controlling authority and regulatory oversight authority, as well as the primary Air Navigation Services Provider (ANSP), including ATM and ASM. This ACP and associated documents do not supersede these FAA authorities and roles. Throughout the disaster response/relief periods, FAA provided Air Navigation Services (ANS), including ATC, ATM/ASM (e.g., disaster TFRs over the affected area), and navigational aids, will be used to the extent possible. In the event that existing FAA ANS capabilities are temporarily degraded or disrupted by the incident, the FAA will determine what alternative, contingency capabilities are established. On a case-by-case basis, the FAA may coordinate with DOD, South Carolina EOC, South Carolina National Guard (SCNG), the Department of Homeland Security (DHS) and other interagency partners to temporarily provide ANS related materiel and non-materiel assets (e.g., military mobile Air Traffic Control Towers (ATCT) or Airborne Warning and Control System (AWACS) or Command, Control, Communications (C3) type of aircraft) to compensate for the temporary reduction of FAA capabilities and/or to support extraordinary response/relief air missions. Any introduction of aircraft performing C3 type of functions into the disaster airspace must be pre-approved by the FAA and the UC/IC in order to avoid the unsafe risk of disparate tactical directions being sent to multiple flights operating in shared airspace. As appropriate, the FAA may direct these contingency resources be demobilized as FAA ANS capabilities are restored. Note that the FAA may implement disaster and other TFRs in the affected area to support response/relief operations. All interagency aviation partners should be aware that certain types of TFRs enable non-participating aircraft (i.e., aircraft not performing response/relief air missions under UC OPCON) to access the designated airspace.

Should conflicting guidance exist between the ACP and associated documents, and FAA regulations, procedures, and direction (including ATC directions), the latter (i.e., FAA mandates) will take precedence.

Mission

Common Aviation Mission Set Priorities

The following information is provided for reference only.

- Life sustaining
- Catastrophic incident search and rescue
- Protection of critical infrastructure
- Protection of property
- Rapid needs assessment
- Logistical support

Military – Title 10 Forces

This ACP will be used for Title 10 military operations directed by the Joint Force Air Component Commander (JFACC) in support of disaster response/relief efforts. Guidance provided in this ACP is mandatory. Any Title 10 ATC assets deployed or activated in **JOINT SOUTH CAROLINA/FEDERAL DISASTER RESPONSE AIR COORDINATION PLAN** in support of this ACP must be pre-approved by the FAA and coordinate activity with the appropriate FAA ATC facility to ensure frequency coordination, airspace deconfliction, etc. occurs. The ACP is directive to all Title 10 response operations personnel, including flight crews and air operations planners. A DOD specific Airspace Control Order (ACO) may be provided as additional guidance and procedures regulating participating DOD aircraft.

South Carolina Military Forces – Title 32 / State Active Duty (SAD) Forces

This ACP will be used for Title 32/SAD military operations directed by the AOB and SCNG commanding non-federalized, participating South Carolina Military Forces air assets and any Title 32/SAD air assets placed under South Carolina Military Forces OPCON by other States through the Emergency Management Assistance Compact (EMAC). The ACP provides for an integration of military operations in the NAS, and coordinates the South Carolina Aviation Coordination Group (ACG) requirements. Any Title 32/SAD ATC assets deployed or activated in support of this ACP must be pre-approved by the FAA and coordinate activity with the appropriate FAA IFR facility to ensure frequency, airspace deconfliction and coordination occurs.

Other FSLT Air Mission Providers

Compliance with this ACP is mandatory for disaster response/relief aviation operations of other FSLT departments and agencies (D/A) air assets, including homeland security, law enforcement, emergency operations, and military auxiliary enties (e.g., Civil Air Patrol (CAP)), which have been placed under the OPCON of the UC.

USCG maintains a wide variety of SAR resources (e.g., fixed wind and rotary aircraft, cutters, and boats) primarily dedicated to maritime SAR. The Coast Guard's 24/7 readiness posture enables the agency, in most catastrophic incident SAR situations, to be the first Federal resource on scene. Requests for Coast Guard assistance can be made directly to a Coast Guard Rescue Coordination Center (RCC) http://www.uscg.mil/hq/cg5/cg534/RCC_numbers.asp or through the Air Force Rescue Coordination Center (AFRCC) http://www.1af.acc.af.mil/Units/AFRCC/Points-of-Contact/.

Safety

Aircrew safety is the number one priority. Heads-up vigilance must be exercised at all times. The potential for a near-miss or mid-air collision may be high in congested airspace being used by multiple Visual Flight Rules (VFR) disaster response/relief flights from multiple participating D/As. The FAA's normal ANS, including ATC, may be temporarily disrupted or degraded in some scenarios. Each participating D/A is responsible for evaluating and implementing internal risk management controls for aircrews supporting South Carolina disaster response/relief operations. As noted above, the FAA may request and/or approve an airborne AWACS/C3 platform (e.g., E-3 Sentry, E-2 Hawkeye, or P-3) and/or ground based expeditionary airfield coordination resource. These assets may be used to provide tactical mission directions and, in select cases, limited flight advisory services. These assets are not ATC elements and cannot assume ATC responsibilities to include air traffic separation. However, they may issue recommended headings and altitudes and provide traffic advisories when able to assist in the safe and orderly flow of aircraft. Vector and altitude assignments issued by these assets are advisory and do not relieve the pilot in command (PIC) of the responsibility to conduct safe operations. Pilots will advise these assets when they cannot follow a vector or assigned altitude for safety or tactical considerations. All operations will be conducted under Visual Meteorological Conditions (VMC) to the maximum extent feasible.

If hazards to aviation are observed, immediately take protective measures (e.g., avoid the hazard, broadcast info on the hazard to other aircraft in the area, etc.) and then provide the latitude/longitude and hazard type to the appropriate command and control agency, the responsible FAA ATC facility, and the AOB. Once the mission has terminated input the appropriate info into the SAFECOM Aviation Safety Communique in **Appendix 1.**

Operations

Airspace Management Tools

Disaster response/relief air missions are conducted in an area dynamically defined by the ACG in response to the evolving incident and resultant mission needs. Within this area, the FAA may implement an Airspace Coordination Area (ACA), or TFR(s). The air operations area will also be further defined by D/A specific mission plans such as DOD's Joint Operating Area (JOA) and ACO. While these D/A specific air mission plans may include procedures and other directions peculiar to the authoring D/A such as DOD or the SCNG, all plans must be harmonized with this ACP and applicable FAA procedures and directives, including any pertinent TFRs. TFR requests may be submitted using the form in **Appendix 2**.

Designation of an Airspace Coordination Area: Through Special Notices, the FAA may establish an Airspace Coordination Area (ACA), which denotes a volume of airspace over the disaster area in where participating aircraft are operating, which warrant increased vigilance by all pilots, are regularly active. This ACA is generally covers a large area encompassing one or more TFRs. ACAs will usually be defined within a Special Notice that advises pilots of heightened risks associated with

participating aviation operations in the subject airspace. These Special Notices may also provide advisory details on expected low altitude VFR response aviation operations patterns. As needed, AFNORTH will be asked to align their Joint Operations Area (JOA) for NORTHCOM's Defense Support to Civil Authorities (DSCA) driven response air missions with the ACA.

The FAA will immediately work with the AOB once a disaster is imminent or occurs to make any needed modifications and to rapidly build disaster specific detailed provisions (e.g. designation of rotary wing ad hoc landing zones (LZ) or "lily pads", air mission coordination frequency assignments, etc.). These responding agencies, especially those that regularly conduct response air missions, may also carry out complementary flight operations planning activities (e.g., designation of air bases, route deconfliction, etc.) intended to maximize safety and facilitate incident command.

The AOB will coordinate with the FSLT partners to determine the TFR and air mission requirements for aircraft to enter the disaster airspace. The AOB will then coordinate the vetting requirements with the FAA's Active Advisory Rulemaking Committee (AARC). Aircraft intending to enter disaster TFR airspace may be required to request approval from the FAA's AARC. The vetting of aircraft positioned inside the TFR and/or ACA may be transferred to an appropriate AOB/ACG established in a JFO or SEOC. Any TFRs implemented by the FAA for this incident are defined by Notices to Airmen (NOTAM) issued by FAA.

The AARC may assign participating flights approved for operations within the TFR mission-based beacon codes and, if not previously established, call signs. These aircraft may also be assigned flight specific discrete beacon codes depending on the density of participating air traffic, mission need, available surveillance, and other factors. This function may be transferred to an appropriate AOB/ACG for aircraft positioned inside the TFR and/or ACA established in a JFO or SEOC. To the extent practicable, beacon codes and call signs pre-assigned to Federal and State operators and other authorities (e.g., law enforcement, the national aerial firefighting beacon codes, etc.) will be used.

Participating traffic flow management and slot scheduling: In the event that the airspace within the TFR has a constrained capacity that cannot meet access demands by participating and, in some cases, non-participating aircraft, the AARC may cooperate with the Air Traffic Control System Command Center (ATCSCC) National Operations Manager (NOM), involved AOB/ACGs, and, for DOD airlift flights, to manage the flow of incoming aircraft to ensure that priority response air missions can be conducted.

This Traffic Flow Management (TFM) function may be expanded to include the application of a prior permission required (PPR) centric of slot reservation and scheduling process using the AARC and ATCSCC's Crisis Management Program (CMP) tool for participating aircraft attempting to land at airfields designated as Incident Staging Bases (ISB) or Aerial Ports of Embarkation/Debarkation (APOE/D) within the ACA or TFR, at which there is a constrained capacity and/or Maximum on Ground (MOG). As indicated previously, some disaster TFRs (i.e., 91.137(a)(2) and 91.137(a)(3)) are permissive with regard to non-participating operations. The access vetting and flow management outlined above may have to take into consideration a continuing flow of non-participating flights operating in the disaster area

VFR Operations Emphasis

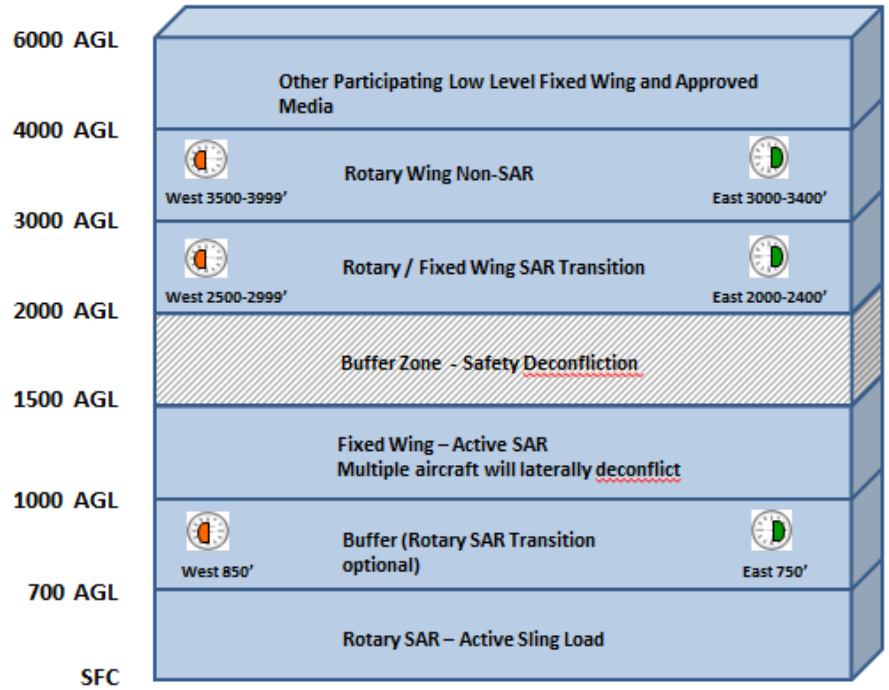
Disaster response/relief air missions conducted under OPCON of the UC should be conducted under VFR to the maximum extent possible. All aircraft will use the local altimeter setting as directed by the appropriate ATC facility.

In the event of Instrument Meteorological Conditions (IMC), all air crews will follow instructions from the controlling ATC facility and exit the immediate area of VFR operations via the safest route. All pilots will advise any C2 D/A (i.e., the parent D/A, which owns the aircraft and/or is providing tactical control (TACON)) if VFR cannot be maintained in order to provide situational awareness to decision makers. Even if ATC directions are unavailable, flight advisory service may be available to assist the affected aircraft exit the immediate area.

In the event there is a need for relatively high density, low altitude VFR response air missions (e.g., SAR and sling loads), the FAA may segregate select operations by mission type using altitude blocks within a TFR (See diagram below). These mission type based altitude stratification is designed to be used for VFR operations (i.e.,"see and avoid" based flight). Air missions operating within designated altitude blocks must remain VFR and stay under VMC. If a pilot is unable to do so because of expected or encountered Instrument Meteorological Conditions (IMC), the flight must depart the defined TFR stratified altitude structure by the safest route possible. The flight in question may resume its response air mission if and when it is able to resume VFR operations under VMC within the designated altitude block. If ATC is available, the subject Pilot-in-Command (PIC) must also advise ATC and comply with any consequent ATC instructions. The FAA will adjust this altitude stratification schema to meet the specific conditions of each disaster and the mission needs of its FSLT partners. Also note that response air missions, both those identified in the altitude stratification diagram and others, may be authorized to operate within altitude blocks not normally designated for their use to address overriding safety concerns and/or mission needs (e.g., time critical life-saving activities) with the approval of the AOB/ACG or appropriate tactical operations cell and the use of deconfliction procedures set forth in the applicable ACP and/or SPINS. The agency will also make location and disaster specific modifications to this altitude to accommodate any overlap with Class B or other controlled airspace, which may still be provided ATC by an FAA facility.

Altitude Segregation

As indicated in the diagram below, participating aircraft flying within this altitude stratification may be further deconflicted through the use of flight direction altitude blocks below:



- NORTH/EAST – from 360º to 179º

- SOUTH/WEST – from 180º thru 359º

Safety Note: This altitude segregation structure does not constitute ATC instruction, positive separation, controlled airspace, or impenetrable blocks. This stratification is intended to provide procedural deconfliction (again, not separation) for flights in a disaster TFR, enhancing safety and shared situational awareness. The depicted stratification will be altered to support the mission needs and safety concerns specific to individual incidents, incident command input, and locations (including adjustments of the lowest strata to accommodate terrain). **These altitudes will be translated to MSL in FAA NOTAMs.** This strata is intended only for VFR operations – changing weather introducing IMC will force altered operations communicated via SPINS and other mechanisms. Pilots must refer to latest NOTAMs.
Other Notes: In collaboration with the incident command, the FAA and its interagency partners may complement this altitude segregation with lateral deconfliction measures such as defined operating zones, egress/ingress routes, etc. Also note that the stratification outlined here is not intended to stop ascending and descending flights , which need to transit these strata.

Any conflicts with instructions from FSLT partners, including tactical IC elements such as Air Tactical Group Supervisor (ATGSs) who are actively coordinating participating aircraft, must be identified and resolved as soon as possible.

These altitude blocks do not constitute or supersede any ATC instructions.

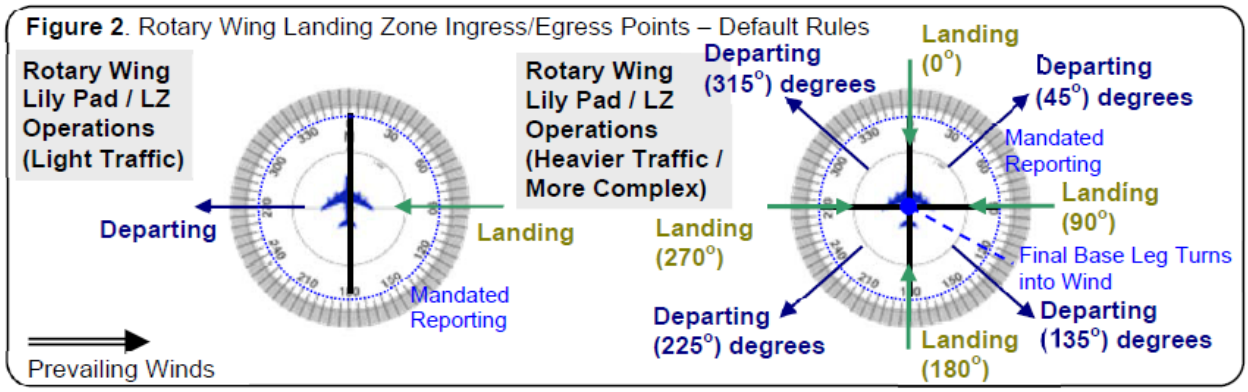
Landing Zone Ingress/Egress Directions:

A. With the exception of air mobility flights and higher altitude operations (e.g., fixed wing IAA of wide areas), most response air missions within an ACA and TFR will be conducted as VFR operations. Those participating flights needing to operate from within the disaster area will frequently use airports, airfields, or other landing zones for which ATC and other ANS services such as navigational aids may be unavailable during the first 72-96 hours after a disaster strikes. Rotary wing SAR operations, in particular, will frequently have to make use of “lily pads” or LZs such as school sports fields, parking lots, pastures, farm fields, etc.

B. To enhance the safety of these operations, the Air Operations Branch may, in coordination with the Incident Commander, the SC EMD, and the FSLT partners at the appropriate AOB/ACG, establish ingress/egress directions and/or reporting points (and frequencies) for VFR response flights using uncontrolled airfields or lily pads/LZs. As needed, these egress/ingress directions and reporting points will be customized to accommodate location specific features (e.g., obstructions and available visual reference points) and mission needs of the participating operators. As a general rule, these ingress/egress directions and points will be configured as described in **Figure 2** below with final base leg turns into the prevailing wind for landings and take-offs. In some disasters the FAA may supersede the direction of the state agencies.

C. TFR Ingress/Egress Points and Routes (Spider Routes): the Air Operations Branch may, in coordination with the Incident Commander, the SC EMD, and the FSLT partners at the

appropriate AOB/ACG, establish ingress/egress points (latitude / longitude and altitude) for VFR participating flights entering or leaving disaster ACAs and or TFRs. The agency may also expand the use of these initial ingress/egress points to build multi-segment, radiating mission specific routes designed to deconflict inbound and outbound air traffic (sometimes referred to as 'spider routes') defined by coordination points linking the boundary of the ACA and/or TFR to designated APOE/Ds, lily pads / LZs, or other designated locations within the disaster area. Pilots should offset 1/2 nm to the right when flying along spider routes. All disaster response aircraft should expect increased VFR air traffic near and along the spider routes and should maintain heads-up vigilance. In some disasters the FAA may supersede the direction of the state agencies.



D. UAS Operations: Responding agencies increasingly want to fly UAS platforms (e.g., Global Hawk, Predator, or Scan Eagle) to conduct IAA air missions over disaster areas. To support these mission needs, the FAA has approved Certificate of Authorization or Waiver (CoA) for NORTHCOM, CONR-1AF, and other Federal and State partners to enable UAS operations over disaster areas. In some cases, UAS operations may be conducted under pre-existing CoAs or authorized through expedited CoA processes for time critical operations. Note that the FAA has established a specialized UAS Program Office (UASPO), which manages requests for CoAs – see www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/aaim/organizations/uas/coa/

Positional Reference Procedures

The geographically defined elements of this ACP are based upon the use of latitude/longitude expressed in degrees, minutes, and decimal minutes (e.g., N3017.0170/W09743.9500). For purposes of this ACP, the World Geodetic System 1984 (WGS 84) and North American Datum 1983 (NAD 83) are considered equivalent. SAR Grids will be defined using Global Area Reference System (GARS) see **Appendix 5**. SAR procedures and guidance specific to this incident are provided, as needed, in response plans, including Special Instructions (SPINS) to participating air crew.

All users should exercise caution in reading coordinates – some users define points using degree, minutes and seconds. Although the potential difference is usually small, it can result in a critical error in a crisis response situation.

NOTE: Ground units may pass information using Military Grid Reference System (MGRS) or National Geo Reference System coordinates. This data will need to be converted into latitude/longitude for use by aviation assets.

Mission type During Catastrophic Incident Search and Rescue (CISAR) operations (and to avoid confusion) Latitude and Longitude should be in one standard format: DD-MM.mm. If required, use up to 2 digits to the right of the decimal. If required, allow 3 digits in the degrees field for longitude (i.e., DDDMM. mm). Do not use leading zeroes to the left of the decimal for degrees or minutes that require fewer than the maximum number of possible digits to express their value. The minimum number of digits is always one, even if it is a zero. (Example: Recommended: 39° 36.6'N 76° 51.42'W; Not Recommended: 39° 36.600'N 076° 51.420'W).

Airspace deconfliction will only be implemented and managed using Latitude and Longitude

US National Grid System (USNGS) is the primary geo-referencing source utilized by most municipal fire/rescue and Urban SAR (US&R) teams. It is identical to the Military Grid Reference System (MGRS) used by DoD forces. All operators can expect to receive geo-referencing from municipal fire/rescue and Urban SAR (US&R) teams in this format. USNGS may be used for *Area* gridding, as well as for pinpoint locations.

A. Note: State/local SAR authorities and the local IC may utilize natural landmarks in combination with geo-referencing methods to identify a position, or in some cases by both natural and manmade landmarks (e.g. "Search Cooper River Bridge, east to latitude forty-six degrees, forty-six decimal zero minutes North"). CISAR planners and responders must adapt to the geo-referencing method used during a CISAR response.

B. Aeronautical SAR responders working with Land SAR responders have the primary responsibility of coordinating SAR using USNG. However both groups must become familiar with both geo-reference systems.

C. If a SAR responder requests that a position be converted to a particular format, every effort should be made to accommodate the request.)

Table 1: CISAR Geo-Referencing Matrix

Geo-Reference System User	USNG	Latt/Long (DD-MM.mm) (1)	GARS (2)
Land SAR Responder (3)	Primary	Secondary	N/A
Aeronautical SAR Responders (4)	Secondary	Primary	Tertiary
Air Space Deconfliction (5)	N/A	Primary	N/A
Land SAR Responder to Aeronautical SAR Responder Interface (6)	Primary	Secondary	N/A
Incident Command: Air			N/A

SAR Coordination Land SAR Coordination	Secondary Primary	Primary Secondary	N/A
Area Organization and Accountability (7)	Secondary	Tertiary	Primary

Special Instructions (SPINs)

Important incident information, safety, and mission specific instructions too dynamic, time sensitive or easily dated are captured on a Special Instructions (SPINs) document, updated each day and distributed primarily via email to each D/A and all participating pilots. Any D/A or aircrew requesting SPINs should email the AOB at aob@emd.sc.gov to get added to the distribution list. All changes or additions from the previous SPINS will be highlighted in yellow. SPINS are an informal but efficient method of distributing incident critical operating instructions. All participating responsible parties for supporting resources are required to read daily SPINS before each mission. Information and instruction within SPINS contains but is not limited to:

- Daily Comm Plan
- Aircraft Deconfliction & Ingress/Egress Routes
- TFR/UAS Operations
- Hospital locations, priority, capability
- Lilypad, Helispot locations/status
- Pre-Hospital Stabilization Kit locations/status
- Airfield/Fuel Status

APPENDIX 1: SAFECOM

Reported By (Optional):	Name:	Tele #::	
	Org.:		Date:
EVENT:			
Date: / /	Local Time:	Injuries: Yes No	Damage: Yes No
MM/DD/YYYY	24 Hour Clock	Circle	Circle
Location:	State:	Airport, City, Lat/Long, or Fire	
MISSION:			
Type:		Procurement:	
Pax, Cargo, Recon, Sling, Longline, Rappel, etc.		Contract, CWN, Rental, Fleet, Cooperator, etc.	
Number of Persons Onboard:		Special Use? Yes No	HazMat? Yes No
		Circle	Circle
AIRCRAFT:			
N#:	Mfr:	Model:	
Owner/Operator:		Pilot:	
NARRATIVE:			
CORRECTIVE ACTION:			

APPENDIX 2: REQUEST FOR TEMPORARY FLIGHT RESTRICTION

(TFR request must be phoned in as per FAA. This form may also be Faxed to provide documentation.)

RESOURCE ORDER NUMBER: Request #: A -	DATE: TIME:
TO: FAA ARTCC _____ FAA PERSON CONTACTED: _____ FAA PHONE: _____ FAX: _____	**FROM:** DISPATCH OFFICE _____ PERSON REQUESTING TFR: _____ 24 HR. PHONE (No Toll Free #s) _____

Check if this TFR is a replacement. If so, NOTAM # of TFR being replaced. _____

(Existing TFRs can not be changed, only cancelled and replaced.)

Geographic Location of Incident (nearest town, state) _____

Location (Circular TFR) List nearest NAVAID (distance should be less than 50 NM) - do not use NDB or T-VOR.

VOR ID	RADIAL (Degrees)	DISTANCE (NM)	LAT/LONG of Center Point (use US NOTAM OFFICE FORMAT ddmmssN/dddmmssW)	RADIUS (NM) (5 NM is standard)
			N/ W	

OR (Polygon TFRs should be rare and only used if circular shape is not adequate.)

Location (Polygon TFR) (List perimeter points in clockwise order) List nearest NAVAID (distance < 50 NM) - do not use NDB or T-VOR.

Point #	VOR ID (XXX)	Radial (Degrees)	Distance (NM)	Lat/Long ddmmssN/dddmmssW	Point #	VOR ID (XXX)	Radial (Degrees)	Distance (NM)	Lat/Long ddmmssN/dddmmssW
1				N/ W	5				N/ W
2				N/ W	6				N/ W
3				N/ W	7				N/ W
4				N/ W	8				N/ W

Altitude restrictions: _____ FEET MSL (do not use AGL – Standard is 2000' above highest terrain point)

The _____ (Agency Name) / _____ (Incident Name) at _____ (4 Hr. Phone # (No Toll Free #s)), _____ (VHF-AM Air/Air Frequency)

is in charge of on scene emergency response activities. TFR to provide a safe environment for fire fighting aircraft operations; effective immediately, until further notice, 24 hrs/day.

The requested TFR affects the following Special-Use Airspace:

The requested TFR affects the Military Training Routes listed below:

Route	SCHEDULING	SEGMENT(S)	Route	SCHEDULING	SEGMENT(S)

IMPORTANT NOTE TO FAA: If the TFR affects SUA and/or MTR(s), we request NOTAM distribution to all military bases involved, to the Coordinating Flight Service Station, and, for MTRs, to the Flight Service Station and Air Route Traffic Control Center with responsibility for the airspace at the route entry point(s).

NOTAM # _____ ISSUED AT _____(Time) On _____/_____(Date)

Date/Time TFR Cancelled: _____ By: _____

APPENDIX 3: BASIC AVIATION COMMUNICATIONS PLAN & DIRECTORY
(Refer to SPINs for most current data)

Date/Time: (Mandatory)

FUNCTION	FREQUENCY RX TX	TONE	ASSIGNMENT	REMARKS
AIR-TO-AIR VHF AM			IN-FLIGHT COORDINATION	
AIR-TO-GROUND VHF AM			FLIGHT FOLLOWING/TRACKING/RE-DIRECTION	
AIR-TO-GROUND VHF FM HI BAND			AIR-TO-GROUND COORDINATION/TACTICS	
AIR-TO-AIR UHF AM			IN-FLIGHT COORDINATION	MILITARY ONLY
AIR-TO-GROUND UHF AM			FLIGHT FOLLOWING/TRACKING	MILITARY ONLY

IMPORTANT: This Plan should be handed out daily or at each operational briefing. This includes plans in which only changes to date/time have been made. This insures that the most current plan is being issued.

Agency	e-Mail	Phone
Air Operations Branch	*aob@emd.sc.gov*	803-737-8887
Civil Air Patrol (CAP)		
State Law Enforcement Division (SLED)		
Department of Natural Recourses (DNR)		
SC Aeronautics Division		
SC National Guard		
SC Air National Guard		
U.S. Coast Guard		
SC-HART		

APPENDIX 4: SC Staging / Forward Area Refueling Plan

West Conglomerate:

(1) Donaldson (KGYH)
(2) Greenville / Spartanburg (KGSP)
(3) Anderson (KAND)

North Conglomerate:

(1) Myrtle Beach (KMYR)
(2) Georgetown (KGGE)
(3) Florence (KFLO)

Central Conglomerate:

(1) Charleston (KCHS)
(2) Walterboro Low Country Regional (KRBW)
(3) Charleston Exec (KJZI)

Southern Conglomerate:

(1) Beaufort (KNBC)
(2) Waterboro Low Country Regional (KRBW)
(3) Charleston (KCHS)
(4) Ridgeland (K3J1)

APPENDIX 5: Global Area Reference System (GARS) – Grid System

GLOBAL AREA REFERENCE SYSTEM: Global Area Reference System is the standardized disasterspace area reference system across Department of Defense which will impact the entire spectrum of disasterspace deconfliction. It is based on lines of longitude and latitude, to provide an integrated common frame of reference for joint force situational awareness to facilitate air-to-ground coordination, deconfliction, integration, and synchronization. This area reference system provides a common language between the components and simplifies communications. It is important to note that Global Area Reference System is primarily designed as a disasterspace management tool and not to be used for navigation. You may download Falcon View shape files at http://earth-info.nga.mil/GandG/coordsys/grids/gars.html along with the information listed below:

a. **Global Area Reference System divides the surface of the earth into 30-minute by 30- minute cells.** Each cell is identified by a five-character designation (ex. 006AG).

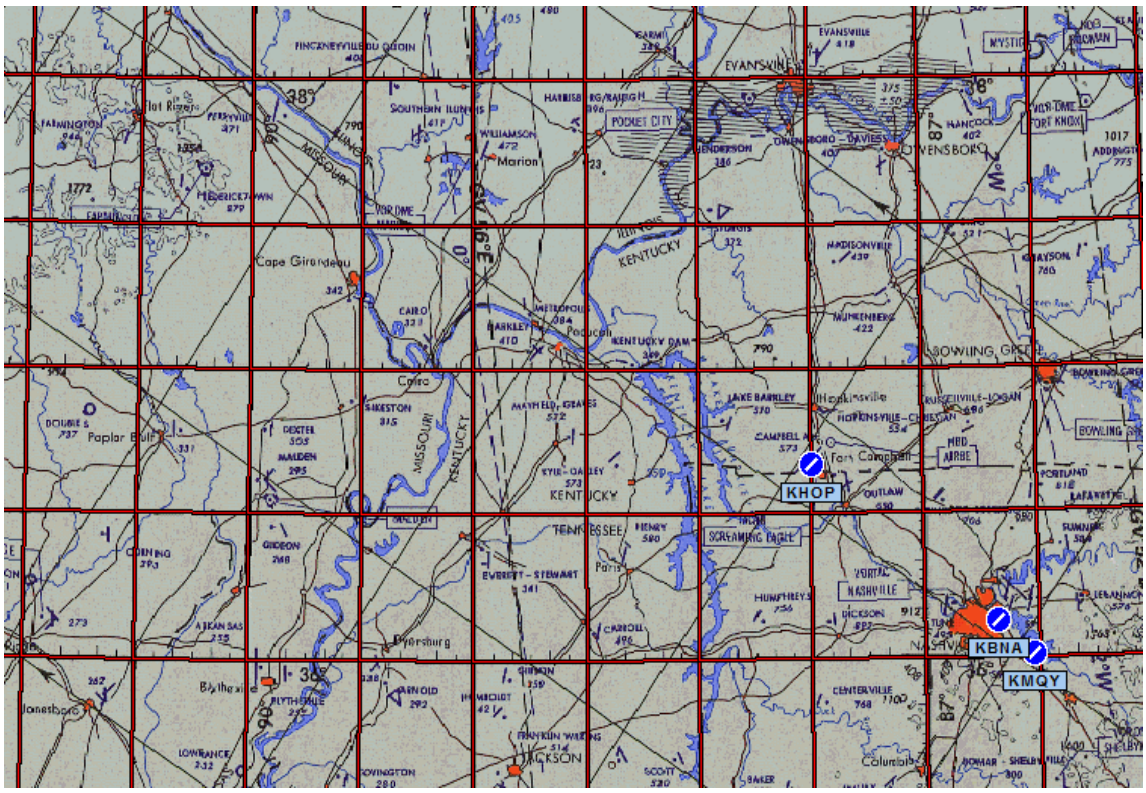
b. **The first three characters** designate a 30-minute wide longitudinal band. Beginning with the 180-degree meridian and proceeding eastward, the bands are numbered from 001 to 720, so that 180 E to 179 30'W is band 001; 179 30'W to 179 00'W is band 002; and so on.

c. **The fourth and fifth characters** designate a 30-minute wide latitudinal band. Beginning at the south pole and proceeding northward, the bands are lettered from AA to QZ (omitting I and O) so that 90 00'S to 89 30'S is band AA; 89 30'S to 89 00'S is band AB; and so on.

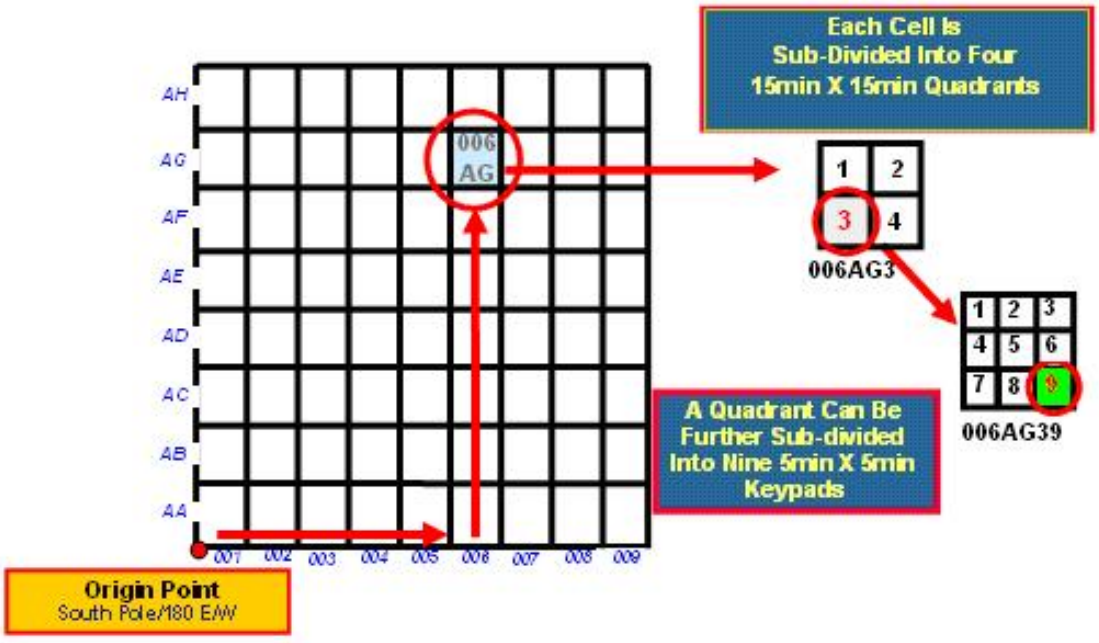
d. **Each 30-minute cell is divided into four 15-minute by 15-minute quadrants.** The quadrants are numbered sequentially, from west to east, starting with the northernmost band. Specifically, the northwest quadrant is "1"; the northeast quadrant is "2"; the southwest quadrant is "3"; the southeast quadrant is "4". Each quadrant is identified by a six-character designation (ex. 006AG3). The first five characters comprise the 30-minute cell designation. The sixth character is the quadrant number.

e. **Each 15-minute quadrant is divided into nine 5-minute by 5-minute areas.** The areas are numbered sequentially, from west to east, starting with the northernmost band. The graphical representation of a 15-minute quadrant with numbered 5-minute by 5-minute areas resembles a telephone keypad.

f. **Each 5-minute by 5-minute area**, or keypad "key" is identified by a seven-character designation. The first six characters comprise the 15-minute quadrant designation. The seventh character is the keypad "key" number (ex.006AG39).


KHOP
KBNA
KMQY

GARS


Each Cell Is
Sub-Divided Into Four
15min X 15min Quadrants
AH
AG
AF
AE
AD
AC
AB
AA
006
AG
001
002
003
004
005
006
007
008
009
1
2
3
4
006AG3
1
2
3
4
5
6
7
8
9
006AG39
A Quadrant Can Be
Further Sub-divided
Into Nine 5min X 5min
Keypads
Origin Point
South Pole/180 E/W

APPENDIX 6: AUTHORITIES AND REFRENCES

I. Authorities

A. State

South Carolina Code of Laws Title 25 establishes the authority and responsibilities of the Governor, state agencies, and local government for emergency management in South Carolina. The State Emergency Management Division takes fulfills this role for the Governor.

B. Federal

1. Federal Civil Defense Act of 1950.
2. Federal Aviation Act of 1958.
3. Homeland Security Presidential directive 5, Management of domestic Incidents, February 28, 2003.
4. Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA), Public Law 109-295.
5. Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, 42 U.S.C. 5121, et seq., as amended.

(1) References

A. State

1. South Carolina Emergency Operations Center (SC-EOC)

B. Federal

1. Air Forces Northern (AFNORTH) Instruction 10 -202A, Joint Concept of Operations (J-CONOPS) Air Mobility Coordination for Crisis Response. March 2, 2009.
2. Catastrophic Incident Search and Rescue Addendum (CISAR Addendum) to the National Search and Rescue Supplement to the International Aeronautical and Maritime Search and Rescue Manual Version 3.0, June 2012.
3. *Aviation Concept of Operations.* Department of Homeland Security (DHS) Management Directive System MD Number: 0021. April 18, 2005.
4. *Aviation Management and Safety.* DHS Management Directive System MD Number: 0020.1. February 22, 2005.
5. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3710.01 DoD, *Counterdrug Support.* January 28, 2008.
6. Defense Support to Civil Authorities (DSCA) Handbook: Air Support Handbook . AFD-070808-022. August 1, 2007.
7. DoD Directive 3025.1, Defense Support of Civil Authorities. January 15, 1993.

APPENDIX 7: ACRONYMS AND ABBREVIATIONS

1st AF	First Air Force
AARC	Active Advisory Rulemaking Committee
ACG	Aviation Coordination Group
AOB	Air Operations Branch
AE	Aeromedical Evacuation
AFRCC	Air Force Rescue Coordination Center
AFSS	Automated Flight Service Station
AGL	Above Ground Level
AMC	Air Mobility Command
AMLO	Air Mobility Liaison Officer
AMR	Air Mission Request
ANG	Air National Guard
ANS	Air Navigation Services
ANSP	Air Navigation Services Provider
AOB	Air Operations Branch
AOC	Air Operations Center
AOR	Area of Responsibility
APOE/D	Arial Ports of Embarkation / Debarkation
ARF	Action Request Form
ARTCC	Air Route Traffic Control Center
ATA	Airline Transport Association
ATA	Actual Time of Arrival
ATC	Air Traffic Control
ATCSCC	Air Traffic Control System Command Center
ATCT	Airport Traffic Control Tower
ATD	Actual Time of Departure
ATGS	Air Tactical Group Supervisor
ATM	Air Traffic Management
ATO	Air Tasking Order
C2	Command and Control
C3	Command, Control and Communications
CAP	Civil Air Patrol
CBP	Customs and Border Protection
CISAR	Catastrophic Incident Search and Rescue
COA	Certificate of Waiver or Authorization
COA	Course of Action
CONR	Continental United States North American Aerospace Defense Command Region
CONUS	Continental United States
CRASS	Contingency Response Air Support Schedule
CRG	Contingency Response Group
CRE	Contingency Response Element
CWN	Call When Needed (helicopter services)
DAD	Disaster Assistance Directorate
DHS	Department of Homeland Security
DME	Distance Measuring Equipment
DOA	Department of Agriculture
DOC	Disaster Operations Center
DoD	Department of Defense
DOD	Disaster Operations Directorate (FEMA)
DOI	Department of the Interior
DOJ	Department of Justice

DOT	Department of Transportation
DSCA	Defense Support of Civil Authorities
DV	Distinguished Visitor
EATPL	ESCAT Air Traffic Priority List
EMAC	Emergency Management Assistance Compact
EMS	Emergency Medical Service
EOC	Emergency Operations Center
EPLO	Emergency Preparedness Liaison Officer
ESCAT	Emergency Security Control of Air Traffic
ESF	Emergency Support Function
ETA	Estimated Time of Arrival
ETB	Estimated Time Aircraft Will be on Blocks
ETD	Estimated Time of Departure
ETE	Estimated Time Enroute
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FBO	Fixed-Based Operators
FCC	Federal Communications Commission
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FM	Frequency Modulated
FRD	Federal Aviation Administration Recovery Desk
FS	Forest Service
FSDO	Flight Standards District Office
FSLT	Federal, State, Local, and Tribal
FSS	Flight Service Station
F/W	Fixed-Wing
GARS	Global Area Reference System
GMT	Greenwich Mean Time
GSA	General Services Administration
HAZMAT	Hazardous Materials
HF	High Frequency
IAA	Interagency Airspace Agreement(s)
IAA	Incident Awareness and Assessment
IAP	Incident Action Plan
IC	Incident Command(er)
ICP	Incident Command Post
ICS	Incident Command System
ID	Identifier
IFO	Incident Field Office
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
IMAT	Incident Management Assessment Team (FEMA)
ISB	Incident Staging Base
JFO	Joint Field Office
JIC	Joint Information Center
LE	Law Enforcement
LEA	Local Enforcement Agency
LNO	Liaison Officer
MA	Mission Assignment
MAP	Mutual Aid Plan
MOA	Memorandum of Agreement
MOG	Maximum on Ground
MOU	Memorandum of Understanding

MSL	Mean Sea Level
NAS	National Airspace System
NAVAIDS	Air Navigation Aids
NDB	Non-Directional Beacon
NGO	Non-Governmental Organization
NICC	National Infrastructure Coordination Center
NIMS	National Incident Management System
NORAD	North American Aerospace Defense Command
NOTAM	Notice to Airmen
NORTHCOM	United States Northern Command
NRF	National Response Framework
OPLAN	Operating Plan
PKEMRA	Post-Katrina Emergency Management Reform Act
RFA	Request for Assignment
ROC	Regional Operations Center
RRCC	Regional Response Coordination Center
R/W	Rotary Wing
SAD	State Active Duty (National Guard)
SAR	Search and Rescue
SARDA	State and Regional Disaster Airlift
SCA	Security Control Authorization
SCATANA	Security Control of Air Traffic and Navigation Aids
SEADOG	South East Airport Disaster Organization Group
SEOC	State Emergency Operations Center
SLAP	State and Local Aviation Planning
SUA	Special Use Airspace
TACAN	Tactical Air Navigation Aid
TALCE	Tanker-Airlift Control Element. (Now known as the CRE, see 6 CRE above.)
TC	Transportation Command
TFR	Temporary Flight Restrictions
TRANSCOM	Transportation Command
TRSA	Terminal Radar Service Area
UAS	Unmanned Aircraft System
UC	Unified Command(er)
UHF	Ultra High Frequency
USA	United States Army
USAF	United States Air Force
USCG	United States Coast Guard
USFS	United States Forest Service
USN	United States Navy
USNG	United States National Grid
USTRANSCOM	United States Transportation Command
UTC	Universal Time Converted
UTM	Universal Transverse Mercator
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
VOR	Very High Frequency Omni-directional Radio-range
VORTAC	Very High Frequency Omni-directional Radio-range- Tactical Air Navigation Aid
WASP	War Air Service Program
WATPL	Wartime Air Traffic Priority List
WESTDOG	Western Airports Disaster Operations Group
WGS-84	World Geodetic System of 1984