Federal Aviation Administration

Airspace Management Plan for Disasters

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0. PREFACE

0.1 The Airspace Management Plan for Disasters provides a nationally consistent framework and suite of supportive tools for the use of the Federal Aviation Administration's air traffic and airspace management operational expertise and capabilities, as well as statutory authority, to enhance the safety and effectiveness (including unity of effort) of air missions supporting response and recovery efforts such as Search and Recue flights following a disaster. The plan also speaks to the use of these tools to safeguard persons and property on the ground. Additionally, this plan also helps to balance the needs of those response air missions with the agency's concurrent effort to return the National Airspace System, which is critical to the U.S. economy and American way of life, to normal operations. Note that the Federal Aviation Administration also uses operational contingency plans and other air traffic management procedures, which are separate from this document, that specifically focus on sustaining the operation of the National Airspace System and normal air traffic, especially for situations involving the disruption or degrading of the agency's Air Navigation Services.

0.2 Federal, State, and local agency, as well as military, partners are the primary intended audience of this document. This plan is also provides a coordination resource for those Federal Aviation Administration operations personnel who regularly cooperate with interagency partners on the use of air traffic and airspace management capabilities to support response and recovery efforts.

0.3 The plan is informed by numerous natural disasters that have struck the country since Hurricane Katrina in 2005, as well as many national and State-level exercises. Reflecting the lessons learned from those events, the plan is designed to be implemented in a scalable and flexible manner that best meets the operational needs shaped by the specific disaster at hand and the requirements of the responding Federal, State, local, tribal / territorial, and private sector stakeholders. Implementation of this plan can be carried out for any disaster provoking the need for response and recover air missions or otherwise involving the National Airspace System, including events to which the Federal Government is responding through the *Stafford Disaster Relief and Emergency Assistance Act* and purely State or local crises. In many cases, the Federal Aviation Administration will implement this plan initially in cooperation with State level authorities, including State Emergency Management Agencies and National Guard units, and then, as the disaster unfolds, scale up implementation as Federal assistance, including response aircraft begin to arrive in theater. Elements of this plan may also be used to facilitate air operations regularly flown by the U.S. Forest Service, Bureau of Land Management, and National Park Service to support, for example, wildfire firefighting, law enforcement, and search and resure missions.

0.4 The plan is not intended as a stand alone document. It is intended to be implemented through Federal Aviation Administration Temporary Flight Restrictions and other operational measures. The plan is also designed to provide air traffic and airspace management input to a broad range of other aviation centric disaster response and recovery plans and procedures used by U.S. Northern Command, United States Coast Guard, Customs and Border Protection, the State Emergency Management Agencies and National Guard elements, and other Federal, State, local, territorial / tribal interagency partners. In addition, it is intended to complement the National Response Framework and other related disaster response and recovery plans.

0.5 The Federal Aviation Administration Air Traffic Organization's Operations Security directorate developed and manages this plan. Any questions regarding this material should be directed to this office at (202) 267-3364.

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Director, Operations Security
Federal Aviation Administration Air Traffic Organization

18 July 2012

Plan Management

This plan is managed by the FAA Air Traffic Organization's System Operations Security directorate. System Operations Security serves as the Air Traffic Organization's lead office for its operations focused national defense, homeland security, law enforcement, and disaster response efforts. Any questions regarding this plan should be referred to this office at (202) 267-3364.

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1. CHALLENGES

1.1 The immediate aftermath of Hurricane Katrina's landfall on 29 August 2005 starkly underscored that aviation is integral to effective disaster response and recovery. This fundamental lesson has been repeatedly reinforced since 2005 during numerous significant incidents, including widespread flooding in the Midwest during the summer of 2008; other destructive Atlantic hurricanes such as Hurricane Ike in September 2008 and Hurricane Irene in August and September 2011; the magnitude 7.0M_w earthquake striking Haiti in January 2010; and the Deepwater Horizon oil spill that started in April 2010. In each case, Federal, State, local, and territorial / tribal (FSLTT) agencies[1], as well as the private sector, have used air missions to carry out a broad range of critical disaster response and recovery[2] efforts intended to save or sustain lives; and mitigate and/or recover from impacts to property, critical infrastructure and key resources (CIKR), and the environment.

1.2 While each disaster presents a unique set of circumstances, the ability of response agencies to conduct these contingency aviation operations safely and effectively consistently faces a number of key challenges, including the variables listed below.

- Air Traffic Management (ATM) and other Air Navigation Services (ANS) such as communications, navigational aids, and surveillance (e.g., radar) normally provided by the Federal Aviation Administration (FAA) may be disrupted or otherwise degraded.

- In addition to their ANS shortfalls, airports and airfields that need to be used as aviation enabled response and recovery nodes[3] may have constrained capacity and/or Maximum on Ground (MOG) levels due to unavailable or degraded airport operations, including aircraft ground support services such as refueling, passenger/cargo handling, security, etc.

- Large numbers of low altitude air missions such as Search and Rescue (SAR) flights may be needed, necessitating these aircraft operate under Visual Flight Rules (VFR) and in Visual Meteorological Conditions (VMC).

- A diverse mix of rotary wing and fixed wing platforms, as well as Unmanned Aircraft Systems (UAS), is often used to support response efforts.

- Response air missions are frequently carried out by multiple operators from different FSLTT agencies, using air crews, who may be unfamiliar with the disaster area and conducting contingency flight operations with each other.

- Air mission tasking may be carried out through agency specific command-and-control (C^2) channels complicating unified management of aviation operations in the disaster area. For example, disaster response efforts may involve aerial firefighting aircraft under

[1] References within this document to 'Federal' and 'State' agencies may respectively include Department of Defense and State National Guard units activated under Title 10 USC; and State National Guard units activated under Title 32 or State Active Duty.
[2] This document may use the term 'response' activities as an abbreviated reference to both response and recovery.
[3] Depending on how they are being used, these airports and airfields are frequently referred to by interagency responders as Incident Staging Bases (ISB), Aerial Ports of Embarkation / Debarkation (APOE/D), or other response specific names.

the direction of an Air Tactical Group Supervisor operating near other response flights being managed by other C^2 structures.

- Some types of disaster Temporary Flight Restrictions (TFR), in accordance with 14 Code of Federal Regulations (CFR) § 91.137, *Temporary flight restrictions in the vicinity of disaster/hazard areas*[4], enable many types of flights not participating in response activities, including aircraft transporting the media. These operations[5] may need to be deconflicted with response flights, increasing the complexity of the air traffic flying in the disaster area.

- Air missions may be conducted using private contractor operators or by Non-Governmental Organizations (NGO) such as the American Red Cross, which could have unclear coordination links to the aviation operations management mechanisms used by the incident commander. NGOs conducting relief efforts using air transport (e.g., Operation Blessing's air operations) require careful coordination in particular because they may be considered to be participating in response efforts and yet have not been operationally integrated into response air missions managed by the unified command.

- Aircraft not participating in response activities (e.g., General Aviation (GA) and commercial carriers) may need and be authorized to access the airspace over the disaster area as part of the FAA's mandated effort to promote and enable access to the National Airspace System (NAS) by all stakeholders.

- Self-evacuation by private residents who own or have access to aircraft may also increase the complexity of air operations in the disaster area, particularly in the first 24-48 hours after a disaster.

1.3 The above constraining factors are frequently present during disasters in combination and amplified by the consistent need to conduct response flights in a shared volume of airspace.

2. PARTNERSHIPS AND PLAN'S INTENDED AUDIENCE

2.1 These challenges can only be successfully overcome through robust cooperation between the FAA and its FSLTT partners (as well as private sector stakeholders in many cases) on preparedness activities, including aviation management contingency planning, and operations during actual disaster response and recovery efforts. Key partners include agencies that serve as mission requestors and/or air asset providers such as:

- Department of Homeland Security (DHS), specifically including the Federal Emergency Management Agency (FEMA); Customs and Border Protection (CBP) and its Air and Marine Operations (AMO); United States Coast Guard (USCG) and USCG Auxiliary; and the Transportation Security Administration (TSA)

- Department of Defense (DOD), including U.S. Northern Command (NORTHCOM); First Air Force (1AF) / Air Forces Northern (AFNORTH) – Continental U.S. North American Aerospace Defense Command Region (CONR) and its 601st Air and Space Operations Center (AOC); U.S. Transportation Command (USTRANSCOM) and its component Air

[4] Hereafter referred to as "91.137 TFRs" or "disaster TFRs"

[5] Flights not carrying out response missions under the direction of the incident command or unified command are frequently referred to as "non-participating" in this document.

Mobility Command (AMC) and its 618th AOC (Tanker Airlift Control Center (TACC)); the Air Force Rescue Coordination Center (AFRCC); and Civil Air Patrol (CAP)[6]

- U.S. Department of Agriculture (USDA), specifically including the U.S. Forest Service (USFS)
- Department of Interior (DOI), specifically including the Bureau of Land Management (BLM), U.S. National Park Service (NPS), and U.S. Fish and Wildlife (FWS)
- Department of Commerce (DOC), specifically including the National Oceanic and Atmospheric Administration (NOAA) and its National Weather Service (NWS)
- State Emergency Management Agencies (EMA)[7], State Department of Transportation Aviation elements, State Police
- State National Guard (NG), including the Army National Guard (ARNG), Air National Guard (ANG), specifically including State Aviation Officers (SAO) and Adjutant General (TAG); also the National Guard Bureau (NGB)
- Other State and local agencies, including law enforcement, emergency medical services, and environmental management agencies.
- Civil aviation operator groups, including the Air Transport Association (ATA) and the Aircraft Owners and Pilots Association (AOPA).
- Private air operators, including those contracted to FSLTT partners participating in disaster response efforts and those conducting response air missions on their own for privately owned critical infrastructure (e.g., oil refineries and pipelines) and other property.

2.2 The primary intended audience of this document includes Federal, State, and local agencies, as well as DOD and NG elements. This plan is also provides a coordination resource for those Federal Aviation Administration operations personnel who regularly cooperate with interagency partners on the use of air traffic and airspace management capabilities to support response and recovery efforts.

3. BASIC CONCEPT AND SCOPE

3.1 The *Airspace Management Plan for Disasters* (AMP) is specifically designed to address the aforementioned challenges and to leverage the agency's FSLTT partnerships by applying the FAA's unique air traffic and airspace management operational expertise and capabilities, as well as its statutory authority, to disaster response aviation operations. The plan also speaks to the use of these tools to safeguard persons and property on the ground. Additionally, this plan also helps to balance the needs of those response air missions with the agency's concurrent effort to return the National Airspace System, which is critical to the U.S. economy and American way of life, to normal operations. Note that the Federal Aviation Administration also uses operational

[6] The FAA works with CAP in the latter's roles as an auxiliary to the United States Air Force and as a State based, volunteer organization.

[7] The designation and configuration of State agencies responsible for emergency management, including disaster response, vary from State to State. Common designations include Emergency Management Agency (EMA), Department / Division of Emergency Management (DEM), Department of Emergency Services (DES), and Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). For the purposes of this document, these partners are referred to generically as State EMAs.

contingency plans and other air traffic management procedures (e.g., Traffic Management Initiatives (TMI) and contingency routes), as well as other operational contingency capabilities (e.g., mobile Air Traffic Control Towers), which are addressed in plans separate from this document. These complementary tools largely focus on sustaining the operation of the National Airspace System and normal air traffic, especially for situations involving the disruption or degrading of the agency's Air Navigation Services.

3.2 The AMP provides a nationally consistent framework and suite of operational implementation tools to enhance the safety and effectiveness of these important contingency aviation operations. The AMP's intended benefits specifically include increased unity of effort, which is consistently a difficult goal to achieve given the potential for fragmented air operations among the myriad FSLTT, NGO, and private sector entities, which respond to disasters and other significant, disruptive incidents. Note that the AMP applies an all hazards approach. While the bulk of this plan addresses larger scale disasters (e.g. Hurricane Katrina), elements of the AMP are also intended to be applied to response missions such as aerial firefighting for wildfires, which are regularly conducted in the NAS every year. In addition to its support for flights carrying out response activities, this plan also speaks to the agency's concurrent effort to mitigate the impact of these incidents on normal NAS operations and air traffic (e.g., airline and GA flights), which are critical to the U.S. economy and American way of life.

3.3 The AMP plan is informed by the lessons learned from FAA collaboration with its FSLTT partners during numerous natural disasters that have struck the country[8] since Hurricane Katrina in 2005, as well as many national and State-level exercises. The interagency experience gained in conducting the response efforts during those events yielded critical best practices, which are integrated into this plan, including the basic concept of implementation articulated below.

3.4 The FAA operates the safest, most complex, and most heavily used aviation system in the world, enabling NAS operations by providing a robust ANS regime, including a sophisticated, resilient, and frequently redundant network of ATM services and Communications, Navigation, and Surveillance (CNS) infrastructure. When disasters occur, past response activities such as the summer 2010 effort to contain and clean up the Deepwater Horizon oil spill in the Gulf of Mexico (GOMEX) have clearly demonstrated the importance of leveraging the FAA's existing ANS to the maximum extent practicable. During that event, FAA provided ATC services along the coast and pre-existing ATM procedures for the affected oceanic airspace that helped to safeguard and facilitate flights participating in the Deepwater Horizon response effort and to enable continued operations by aircraft conducting normal operations (e.g., rotary wing traffic serving the oil platforms in the Gulf).[9] Emphasizing the use of these existing capabilities strengthens the agency's ability to provide needed air traffic and airspace management related support to disaster response aviation operations, facilitates NAS consequence mitigation and recovery efforts, and improves the safety of air traffic operating in a disaster area.

3.5 With this fundamental principle in mind, the FAA develops and implements a package of air traffic and airspace management measures (see details in Section 6) that is scalable and flexibly adjusted to meet often rapidly evolving disaster situations on a case-by-case basis. These carefully designed packages are intended to accomplish one or some combination of the following overarching objectives:

- Mitigate the impact of the disaster itself and of response aviation operations on the safety and efficiency of the NAS.

[8] Important lessons learned were also derived from recent Government response efforts addressing disasters affecting friendly foreign countries, specifically the catastrophic earthquake that struck Haiti in January 2010.
[9] The term "participating" aircraft denotes those aviation operations being conducted in direct support of disaster response and recovery efforts, ideally under the direction of the incident command. The term "non-participating" aircraft denotes all other air traffic including aviation operations that would be normally conducted in the area now impacted by a disaster.

- Limit, vet, and/or manage the flow of flights conducted in the disaster area's airspace or into designated airports and airfields being used for response and recovery efforts.

- Identify and apply special operational requirements on flights conducted in the airspace over the disaster area in order to safeguard participating and non-participating aircraft.

- Assist the Unified Command (UC) or Incident Commander (IC) to effectively manage scarce air assets by helping to capture, track, deconflict[10], and harmonize response air missions.

- Facilitate the seamless scaling up of contingency air operations being managed by State and local authorities, which are often the first responders and incident leads, to include the introduction of Federal assets and agency participation.

3.6 These packages are developed and implemented along the three general sequences below, which are, of course, dynamically modified by the FAA to meet the situation and mission needs specific to each individual disaster.

- **Small Disasters** - Localized disasters and other significant incidents (e.g., aftermath of a tornado strike) that are addressed through the use of Special Notices simply cautioning all operators flying in a designated area and/or a TFR established using the basic provisions of a 91.137 TFR.

  Note that some of these relatively contained disasters, specifically including wildfires, may prompt the use of disaster TFRs complemented by pre-coordinated C^2 structures and operations coordination tools (e.g. Fire Traffic Areas) used to manage all participating flights.

- **Growing Disasters** - Disasters such as Hurricane Katrina that are initially considered to be relatively localized crises are addressed using the approach outlined in the previous bullet, but are subsequently determined to be more significant (e.g., wider area and more serious destruction, more complex operations, etc.). As the more serious effects of these disasters are identified, the FAA may scale up its response using Special Notices, 91.137 disaster TFRs reinforced by integrated procedures (e.g., low level altitude stratification by mission type of participating flights) to help manage participating and non-participating air traffic over the disaster area., and other related air traffic and airspace management measures.

- **Large Disasters** - Large Disasters that are immediately characterized as wide scale and catastrophic - e.g., a major New Madrid Seismic Zone (NMSZ) earthquake. In these scenarios, the FAA may opt to immediately implement advisory Special Notices and 91.137 TFRs broadly covering what is believed to be the disaster area based on the best available impact information. As damage assessments are conducted, clarifying the situation at hand, and FSLTT response activities are initiated, the FAA would refine its air traffic and airspace management measures to better support the mission needs of contingency aviation operations and efforts to mitigate and recover from the impact to the NAS.

[10] Unless specifically indicated, the term "deconflict" used in this document denotes either mission deconfliction (e.g., ensuring that two SAR helicopters are not assigned to the same requested rescue) and measures to reduce the risk of mid-air incidents between VFR response flights. "Deconflict" specifically does not denote or connote any air traffic control separation services.

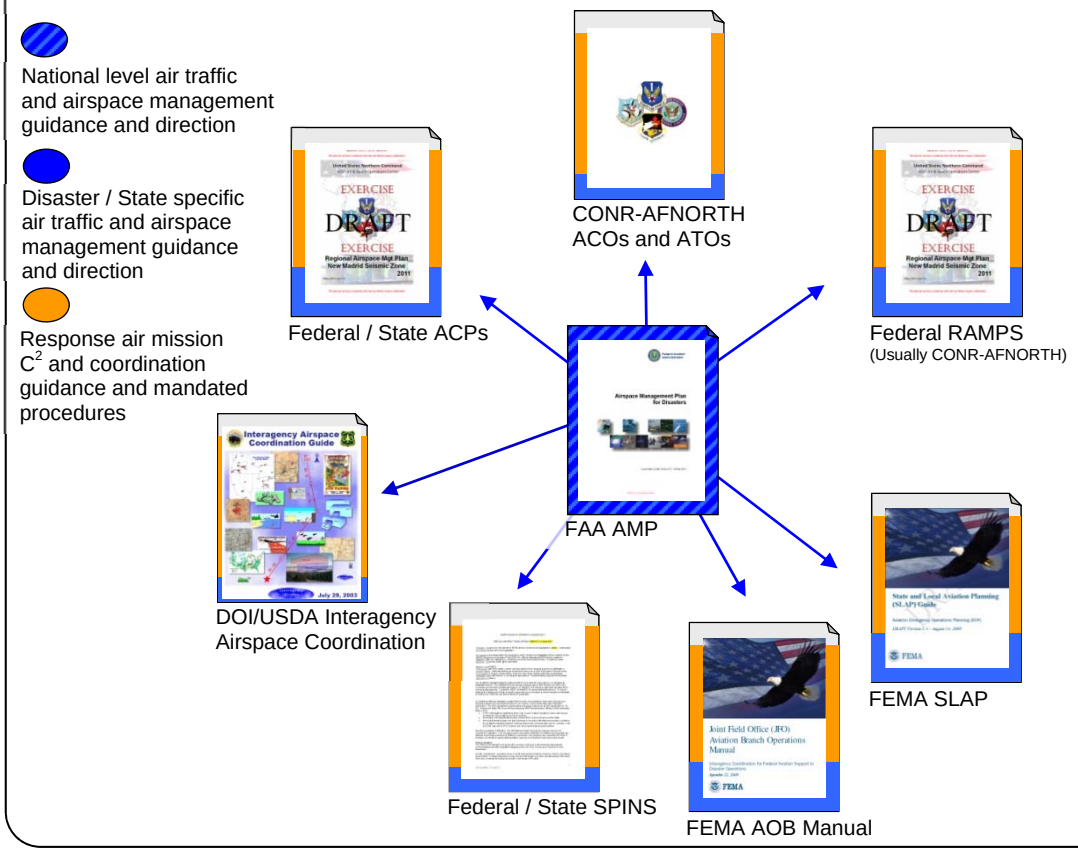
4. AUTHORITIES

4. Under Title 49 United States Code (USC), including § 40103 and § 44701(a)(5), the FAA has plenary authority over the nation's airspace before, during, and after a disaster. As the country's airspace controlling authority and primary Air Navigation Services Provider (ANSP), the FAA is empowered to implement the contingency air traffic and airspace management procedures outlined by the AMP. This plan does *not* supersede ATC instructions or the Federal Aviation Regulations (FAR). The FAA will continue to provide ATM and other ANS in the disaster area to the maximum extent practicable unless changes to these services are specifically needed to support response aviation operations and are pre-approved by the agency.

5. IMPLEMENTATION AND INTERDEPENDENCIES

5.1 This plan is not intended as a stand alone document. The FAA operationally implements the AMP through a broad array of operational response measures, including the use of 91.137 TFRs and other air traffic and airspace management measures outlined in Section 6. The AMP is also designed to provide authoritative air traffic and airspace management input to a broad range of other aviation centric disaster response and recovery plans and procedures used by

Figure 1. AMP Linkages to Other Disaster Aviation Plans



AFNORTH, FEMA, CBP, USCG, State EMAs and NG units, and other FSLTT partners. These other plans often address air traffic and airspace management measures specific to a State and/or disaster, which are developed and implemented in cooperation with the FAA. These other plans also frequently prescribe procedures to be used to manage disaster response air missions,

addressing *mission prioritization, tasking, harmonization, and deconfliction issues that are outside the scope of the AMP*. Examples of key plans that complement the AMP are provided in Figure 1 above.

- Regional Aviation Management Plans (RAMP) established by and for AFNORTH controlled flight operations.
- Federal and State Airspace Coordination Plans (ACP). While AFNORTH originally developed these ACPs, many States have adapted them for their own use. In some cases such as North Dakota, State EMAs have developed joint Federal-State ACPs.
- Specialized federal airspace plans such as the DOI/USDA Interagency Airspace Coordination Guide (IACG).
- AFNORTH's Airspace Control Order (ACO), which applies to DOD participating air assets.
- Special Instructions (SPINS) to participating air crews. SPINS were originally developed by AFNORTH for use with DOD and Title 10 activated NG aircraft. However, SPINS, in various forms, are now frequently drawn from the aforementioned ACPs and provided to participating air crews, although ensuring comprehensive distribution, familiarization, and compliance remains a challenge.
- NORTHCOM's *Joint Concept of Operations for Air Mobility Coordination for Crisis Response* (J-CONOPS Air Mobility), which supports operational coordination between the FAA's Airspace Access Response Cell (AARC)[11] and the 601st AOC on vetting and managing the flow of participating U.S. military and civilian aircraft into disaster TFRs and designated APOE/Ds in the disaster area.
- The *FAA – 1AF-CONR Disaster Management Protocols*, which include provisions for operational coordination between 601st AOC and the FAA on TFRs and other response measures.
- Emerging FEMA aviation plans, including the draft Air Operations Branch Manual (AOB) and State and Local Aviation Planning Guide (SLAP).[12]

5.2 In addition to the above, the AMP intended to support the National Response Framework (NRF) and related plans addressing aviation operations, including the Emergency Support Function 1, Transportation (ESF-1) Annex and Catastrophic Incident Supplement (NRF-CIS).

6. OPERATIONAL TOOLS

6.1 As emphasized above, FAA will flexibly implement the AMP to best meet the often evolving situation created by disasters and the associated mission needs of responding FSLTT partners, as well as the private sector. At no time will AMP measures supersede real time ATC instructions or the FARs, unless, in the case of the latter, specific waivers or exemptions are granted by the FAA. It should also be noted that the AMP does not address air mission prioritization, tasking, harmonization, or deconfliction. These are issues handled by the Federal

[11] The AARC was formerly known as the FAA Recovery Desk (FRD). The designation has been changed to reflect the cell's significantly increased responsibilities since the the FRD was first stood up for Hurricane Katrina.
[12] These FEMA plans still need to be formally coordinated with the FAA and other key interagency stakeholders.

and State ACPs, SPINS, and other related disaster response aviation plans and procedures, which are developed and coordinated among the FAA and involved FSLTT partners, specifically including the UC/IC.

6.2 The air traffic and airspace management measures outlined below compose the core suite of operational tools used by the FAA to implement the AMP. These measures will be used as baseline or default initial inputs on air traffic and airspace management issues to the Federal and State ACPs and other pertinent contingency aviation operations plans and procedures in the course of preparedness coordination between the FAA and its FSLTT partners.

6.2.1 Note that the tools outlined below will frequently be complemented by other operational measures taken by the FAA to mitigate impacts on and to sustain NAS operations. These other operational measures include the implementation of TMIs (e.g., ground delay programs); the implementation of Operational Contingency Plans (OCP), including contingency routes; deployment of mobile ANS assets such as Mobile Air Traffic Control Towers (MATCT); and the divestiture of airspace.

6.2.2 The FAA will immediately work with the responding agencies 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.

6.2.3 **Advisory Special Notices**

The FAA may publish Special Notices cautioning pilots operating over or near to the disaster area of specific hazards (e.g., oil fire smoke plumes) and/or of heightened safety risks associated with participating aircraft operations, particularly low altitude, VFR activities such as active SAR flights.

6.2.4 **Designation of an Airspace Coordination Area**

Through the aforementioned Special Notices, the FAA may establish an Airspace Coordination Area (ACA), which denotes a volume of airspace over the disaster area in which participating aircraft operations, 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, as indicated above, 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.

6.2.5 **Temporary Flight Restrictions – Basic Provisions**

6.2.5.1 The FAA may impose on behalf of the IC/UC air traffic and airspace management measures through disaster 91.137 TFRs and/or special security instructions established under 14 CFR § 99.7 (hereafter referred to as “99.7 TFRs” or “security TFRs” to simplify citations). The specific air traffic and airspace management provisions implemented by these TFRs vary widely depending on the CFR authority applied and the implementation details established by the FAA on a case-by-case basis. Possible basic TFR provisions are identified below. These TFRs are generally developed and published in consultation with the appropriate IC (or UC structure, specifically including AOBs or comparable operations cells) and FSLTT partners by local FAA

ATC facilities for small scale incidents[13] in coordination, as needed with the FAA Air Traffic Organization Incident Response Management Center (AIRMAC) and System Operations Support Center (SOSC) for large scale disasters. Examples of these TFRs are provided in Annex A.

- **Access limitations** – In order to protect persons and property on the surface or in the air from a hazard associated with an incident on the surface, the FAA may implement a 91.137(a)(1) TFR on behalf of the IC/UC, which restricts access to the subject airspace to participating aircraft operating under the direction of the IC/UC.

  In order to provide a safe environment for disaster response aircraft or to prevent an unsafe congestion of sightseeing and other aircraft over an incident, the agency may also respectively implement a 91.137(a)(2) or 91.137(a)(3) TFR. Both of these TFRs incorporate several access requirements, including: participation in disaster response activities versus non-participation, transport of law enforcement, operation under an ATC approved Instrument Flight Rules (IFR) flight plan, coordination with the responsible Flight Services Station (FSS) and/or ATC, operation directly to or from an airport within the subject area, transport of accredited media, and avoidance of disaster response air missions.

  To address incidents involving locations or activities with homeland security implications, the FAA's AIRMAC and SOSC may also establish TFRs under 14 CFR § 99.7, *special security instructions*, within the disaster areas. In addition, the FAA's AIRMAC and SOSC may implement TFRs under 14 CFR 91.141, *Flight restrictions in the proximity of the Presidential and other parties*, to protect visits by Presidential parties, which often occurs in the aftermath of major disasters. These TFRs frequently impose very restrictive access requirements, including the prohibition of all aircraft except air missions that have been security vetted and are conduction operations under the direction of an IC/UC specific to the subject incident.

6.2.6 Temporary Flight Restrictions – Advanced Provisions

6.2.6.1 To support the increased challenges posed by disasters that are larger in scope, more severe, and/or are more complex than those events addressed above in subsection 6.2.3, the FAA may establish on behalf of the IC/UC contingency air traffic and airspace management measures more advanced than the provisions incorporated in the basic 91.137 TFR. These advanced measures are generally developed and implemented by the FAA AIRMAC and SOSC in coordination with the appropriate UC/IC and FSLTT partners, frequently through FAA aviation operations Liaison Officers (LNO) deployed to the National Response Coordination Center (NRCC) and to Air Operations Branches (AOB) or Aviation Coordination Groups (ACG) stood up in Joint Field Offices (JFO) and State Emergency Operations Centers (SEOC).[14]

6.2.6.2 Actual implementation is effected through TFR NOTAMs and, as appropriate, incorporation into Federal and State ACPs, NORTHCOM's ACO, and SPINS. Additional advisory references to these measures may be provided through ACA Special Notices and NORTHCOM guidance regarding the JOA applied to the subject disaster. Examples of these more advanced TFR NOTAMs are provided in Annex B.

6.2.6.3 The key advanced measures that could be used by the FAA include the following provisions, which may used by themselves or any combination the agency decides best meets the mission demands posed by the disaster at hand.

[13] Local facilities will coordinate with their corresponding Air Traffic Organization Service Center, which includes robust airspace planning capabilities.
[14] The operational groups tasked by States and FEMA with overall management of response aviation operations has varied depending on the disaster at hand and the State(s) involved.

- **Access vetting** – Aircraft intending to enter disaster TFR airspace may be required to request approval from the FAA's AARC located at the agency's Air Traffic Control System Command Center (ATCSCC). The AARC would vet requesting aircraft against the requirements set forth by the TFR and air mission information provided by the FAA's FSLTT partners. 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.

- **Participating aircraft identification** – 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 ATCSCC National Operations Manager (NOM), involved AOB/ACGs, and, for DOD airlift flights, the 618th TACC 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 airports and 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 MOG. In the event that DOD has deployed a Contingency Response Group (CRG) or Contingency Response Element (CRE) to manage some or all of the ramp area at an ISB or APOE/D[15], the AARC would, as a default rule, be responsible for managing slots for civilian response flights while the 601st Regional Air Movement Control Center (RAMCC) handles military flights.

  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.

- **Mission type altitude segregation** – 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 Figure 3 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

[15] The assumption by a CRG/CRE of the management of a ramp area on a civilian airport/airfield would only be carried out with the concurrence of the airport authority, in coordination with the FAA, and at the request of FEMA and/or the State EMA.

available, the subject Pilot-in-Charge (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 FSLTT partners. Some partners such as DOI/USDA and State firefighting agencies (e.g., the California Department of Forestry and Fire Protection (CAL FIRE)) may have pre-coordinated plans for altitude segregation (e.g., Fire Traffic Areas (FTA)) and use of tactical air mission coordinators, including airborne Air Tactical Group Supervisors (ATGS). The FAA will work to accommodate these plans to the maximum extent consistent with flight safety and the need to harmonize response air operations. 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, ACO, and/or SPINS. The agency will also make location and disaster specific modifications to this altitude stratification schema to accommodate any overlap with Class B or other controlled airspace, which may still be provided ATC by an FAA facility.

Additional Notes Regarding Figure 3 and the Altitude **Stratification** Schema

> As indicated in the Figure 3 diagram, participating aircraft flying within this altitude stratification may be further deconflicted through the use of flight direction altitude blocks in accordance with the below:

- NORTH/EAST – from 360º to 179º
- SOUTH/WEST – from 180º thru 359º

> All aircraft will use the local altimeter setting as directed by the appropriate ATC facility or nearest aeronautical weather reporting facility.

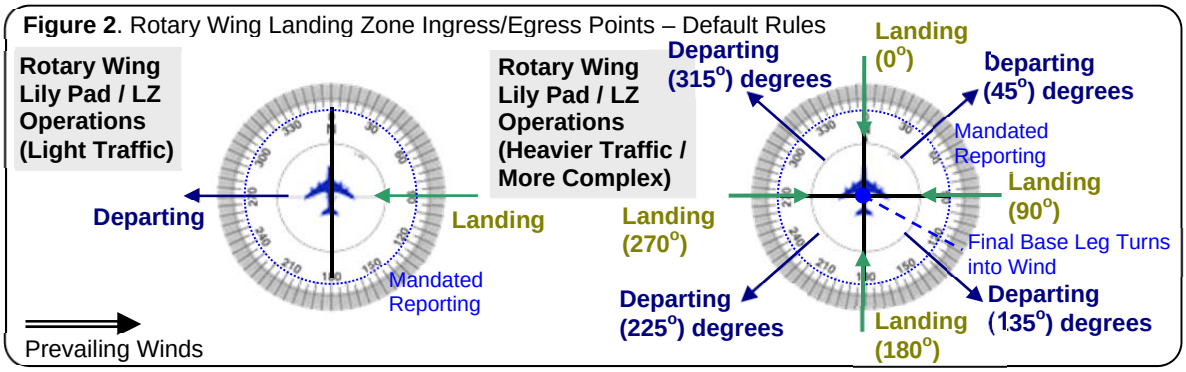
> Any conflicts with instructions from FSLTT partners, including tactical IC elements such as ATGSs who are actively coordinating participating aircraft, must be identified and resolved as soon as possible.

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

- **Landing Zone Ingress/Egress Directions** – 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.

  To enhance the safety of these operations, the FAA may, in coordination with its FSLTT 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.

Figure 2. Rotary Wing Landing Zone Ingress/Egress Points – Default Rules

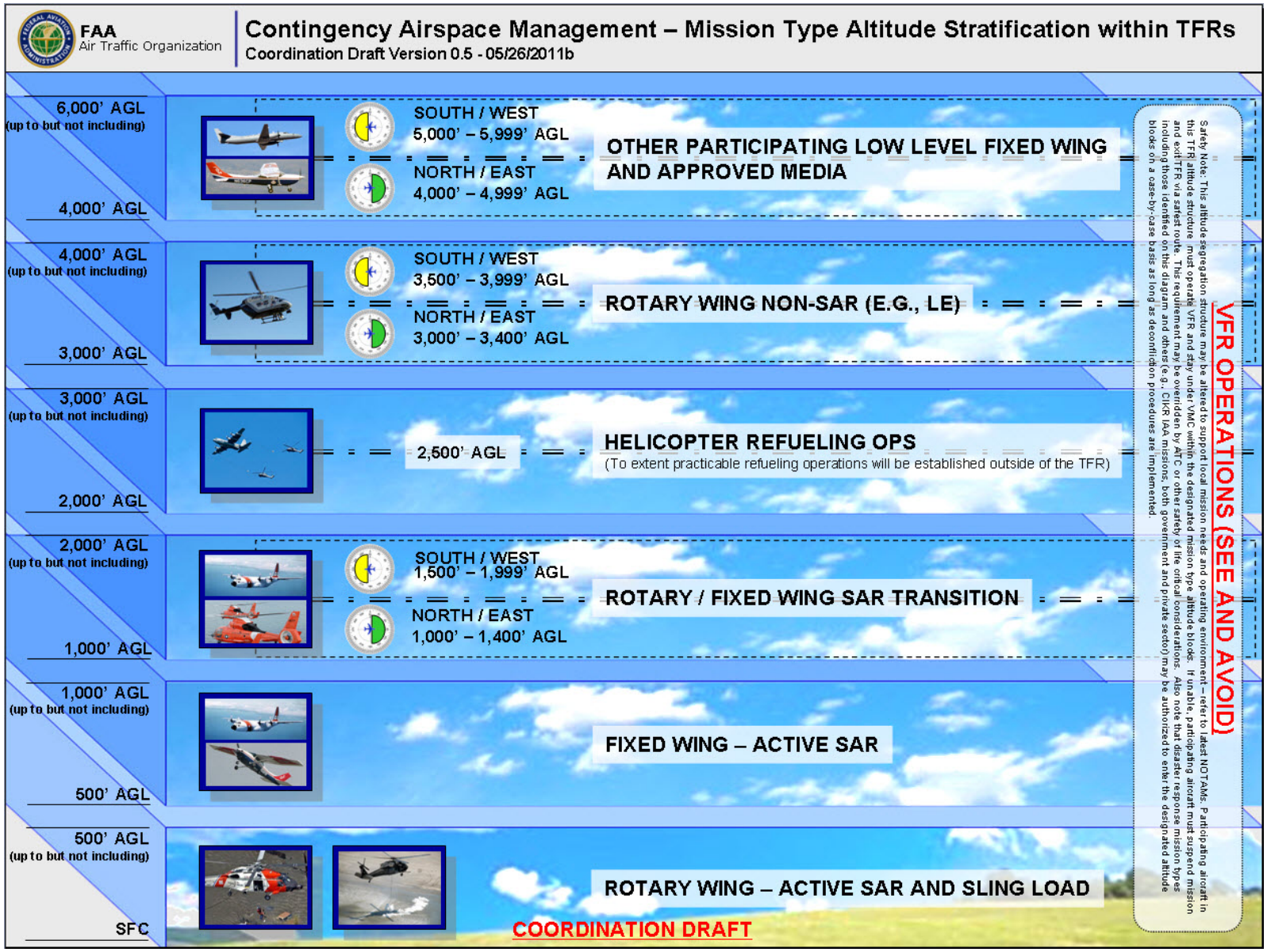


- **TFR Ingress / Egress Points and Routes** - The FAA may, in coordination with its FSLTT partners at the appropriate AOB/ACG, establish ingress/egress points (latitude / longitude and altitude) for VFR participating flights entering or leaving disaster ACAs and or TFRs. The agency may also expand the 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 a '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.

- **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/

Figure 3


FAA
Air Traffic Organization
Contingency Airspace Management – Mission Type Altitude Stratification within TFRs
Coordination Draft Version 0.5 - 05/26/2011b
6,000' AGL
(up to but not including)
4,000' AGL
SOUTH / WEST
5,000' – 5,999' AGL
NORTH / EAST
4,000' – 4,999' AGL
OTHER PARTICIPATING LOW LEVEL FIXED WING AND APPROVED MEDIA
4,000' AGL
(up to but not including)
3,000' AGL
SOUTH / WEST
3,500' – 3,999' AGL
NORTH / EAST
3,000' – 3,400' AGL
ROTARY WING NON-SAR (E.G., LE)
3,000' AGL
(up to but not including)
2,000' AGL
2,500' AGL
HELICOPTER REFUELING OPS
(To extent practicable refueling operations will be established outside of the TFR)
2,000' AGL
(up to but not including)
1,000' AGL
SOUTH / WEST
1,500' – 1,999' AGL
NORTH / EAST
1,000' – 1,400' AGL
ROTARY / FIXED WING SAR TRANSITION
1,000' AGL
(up to but not including)
500' AGL
FIXED WING – ACTIVE SAR
500' AGL
(up to but not including)
SFC
ROTARY WING – ACTIVE SAR AND SLING LOAD
COORDINATION DRAFT
VFR OPERATIONS (SEE AND AVOID)
Safety Note: This altitude segregation structure may be altered to support local mission needs and operating environment – refer to latest NOTAMs. Participating aircraft in this TFR altitude structure must operate VFR and stay under VMC within the designated mission type altitude blocks. If unable, participating aircraft must suspend mission and exit TFR via safest route. This requirement may be overridden by ATC or other safety of life critical considerations. Also note that disaster response mission types including those identified on this diagram and others (e.g., CIKR IAA missions, both government and private sector) may be authorized to enter the designated altitude blocks on a case-by-case basis as long as deconfliction procedures are implemented.

- **Disaster Specific Geospatial Reference** – As needed the FAA may collaborate with its FSLTT partners to establish a grid system to support access vetting and air mission assignment and deconfliction. Depending on the mission needs and capabilities of the participating operators, this grid system could be based on the Global Area Reference System (GARS), a standardized geospatial reference system established by the National Geospatial Agency, or a simple grid or operations zone system defined by latitude/longitude vertices established for a specific disaster. In all cases, it is important that all participating FSLTT agencies conducting air missions in the disaster area understand and use (or, at least, be able to cross reference) a common geospatial system governing defined areas and points, which is understood and used by response flight air crews.

- **Airborne Air Mission Coordination Platforms** - On a case-by-case basis, the FAA may request that DOD, CBP or other interagency partners provide an airborne Command, Control, Communications (C^3) type of aircraft such as an E-3, E-2, or P-3 AEW to provide air mission coordination and deconfliction related services within a TFR. The FAA may also ask that these aircraft provide flight advisory services to participating and non-participating aircraft operating within the TFR. Additionally, some interagency partners may have pre-established plans to use airborne tactical air mission managers such as the ATGSs routine employed for aerial firefighting.

  Any introduction of aircraft performing C^3 type of functions into the disaster airspace must be pre-approved by the FAA in coordination with the IC/UC in order to avoid the serious safety risks created by the potential for conflicting directions being provided to flights operating in shared airspace. At no time will these airborne platforms provide ATC. As appropriate, the FAA may direct these aircraft to depart the ACA/TFR, especially as FAA ANS capabilities are restored.

7. FINAL SAFETY NOTE

7.1 Aircrew safety is the number one priority. All FSLTT responding agencies must ensure that their air crews practice heads-up vigilance at all times. The potential for a near miss or mid-air collision may be increased in congested airspace being used by multiple VFR response and recovery flights being conducted by multiple participating agencies. The FAA's normal ANS, including ATC services, may be temporarily disrupted or degraded in some areas. Each participating agency is responsible for evaluating and implementing internal risk management controls for air crews, including private contractors, supporting disaster response and recovery air missions.

7.2 As noted above, the FAA may request and/or approve an airborne C^3 platform[16]. These assets may be used to provide tactical mission direction and, with FAA pre-approval, limited flight advisory services. These aircraft cannot assume ATM 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 PIC of the responsibility to conduct safe operations or adherence to any ATC issued instructions. Pilots must advise these C^3 platforms when they cannot follow a vector or assigned altitude for safety or tactical considerations. All low altitude contingency air missions should be conducted under Visual Meteorological Conditions (VMC) to the maximum extent feasible.

[16] In the event that this request is initiated by FEMA, the introduction of an airborne C3 platform into an established ACA/TFR still must be coordinated with and approved by the FAA.

7.3 If hazards to aviation are observed, participating air crews must 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 their respective command and control entity/agency, the responsible FAA ATC facility (if available), and ensure that the appropriate AOB/ACG is advised.

A. BASIC TFR EXAMPLES

A.1 91.137a2 – Example Language

! FDC 1/9001 ZHU…FLIGHT RESTRICTIONS…NEW ORLEANS, LA, – HURRICANE ZEBADIAH DISASTER RESPONSE AND RECOVERY EFFORTS. EFFECTIVE 110909013002 UNTIL FURTHER NOTICE.

PURSUANT TO 14 CFR SECTION 91.137(A)(2), TEMPORARY FLIGHT RESTRICTIONS (TFR) ARE IN EFFECT TO PROVIDE A SAFE ENVIRONMENT FOR AVIATION OPERATIONS CARRYING OUT DISASTER RESPONSE AND RECOVERY MISSIONS WITHIN THE AIRSPACE BOUNDED BY THE FOLLOWING COORDINATES: [FILL IN WITH LAT/LONG AND FRD DEFINED DIMENSIONS OF NEW ORLEANS TFR] FROM THE SURFACE UP TO BUT NOT INCLUDING [FILL IN WITH CEILING OF TFR IN MSL; USUALLY 6,000' PLUS ADJUSTMENT FOR TERRAIN AND OBSTACLES].

ALL FLIGHTS ARE PROHIBITED WITHIN THE IDENTIFIED TFR AIRSPACE EXCEPT FOR THOSE MEETING AT LEAST ONE OF THE FOLLOWING REQUIREMENTS:

1. THE FLIGHT OPERATION IS BEING CONDUCTED BY A FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCY OR THE U.S. MILITARY (INCLUDING NATIONAL GUARD) IN ACTIVE SUPPORT OF DISASTER RESPONSE AND RECOVERY EFFORTS AND UNDER THE DIRECTION OF THE APPROPRIATE INCIDENT COMMAND (IC) OR UNIFIED COMMAND (UC). THESE AIR MISSIONS (HEREAFTER REFERRED TO AS "PARTICIPATING") MAY INCLUDE PUBLIC AND CONTRACTED PRIVATE AIRCRAFT CARRYING OUT SEARCH AND RESCUE (SAR), AIR AMBULANCE, INCIDENT AWARENESS ASSESSMENT (IAA), LAW ENFORCEMENT, CRITICAL SUPPLY LOGISTICS, AIR EVACUATION, AND OTHER VITAL FLIGHTS; OR

2. THE FLIGHT OPERATION IS CARRYING LAW ENFORCEMENT OFFICIALS; OR

3. THE FLIGHT OPERATION IS OPERATING UNDER AN AIR TRAFFIC CONTROL (ATC) APPROVED FLIGHT PLAN; OR

4. THE FLIGHT OPERATION IS CONDUCTED DIRECTLY TO OR FROM AN AIRPORT WITHIN THE IDENTIFIED TFR AIRSPACE. THESE AIRCRAFT MUST CONTACT THE ATC COORDINATING FACILITY INDICATED BELOW TO RECEIVE ADVISORIES CONCERNING PARTICIPATING AIRCRAFT OPERATIONS. THESE FLIGHT OPERATIONS ALSO MUST ENSURE THAT THEY DO NOT INTERFERE OR ENDANGER DISASTER RESPONSE AND RECOVERY ACTIVITIES AND ARE NOT BEING CONDUCTED FOR THE PURPOSE OF OBSERVING THE DISASTER AREA; OR

5. THE FLIGHT OPERATION IS CARRYING ACCREDITED MEDIA AND, PRIOR TO ENTERING THE IDENTIFIED TFR AIRSPACE, A FLIGHT PLAN IS FILED WITH THE APPROPRIATE FAA FACILITY. THESE AIRCRAFT MUST ALSO ENSURE THAT THEY OPERATE ABOVE THE ALTITUDES USED BY PARTICIPATING AIR MISSIONS UNLESS AUTHORIZED BY THE IC.

6. PILOTS ARE ADVISED TO CHECK NOTAMS FREQUENTLY FOR POSSIBLE CHANGES PRIOR TO OPERATING WITHIN OR NEAR THE IDENTIFIED TFR AIRSPACE.

7. HOUSTON CENTER (ZHU) AT (817) 000-0000 IS THE FAA COORDINATING FACILITY FOR THIS TFR.

A.2 91.137a3 – Example Language

! FDC 1/9001 ZHU…FLIGHT RESTRICTIONS…NEW ORLEANS, LA, – HURRICANE ZEBADIAH DISASTER RESPONSE AND RECOVERY EFFORTS. EFFECTIVE 110909013002 UNTIL FURTHER NOTICE.

PURSUANT TO 14 CFR SECTION 91.137(A)(3), TEMPORARY FLIGHT RESTRICTIONS (TFR) ARE IN EFFECT TO PREVENT AN UNSAFE CONGESTION OF SIGHTSEEING AND OTHER AIRCRAFT OVER AN INCIDENT OR EVENT WHICH MAY GENERATE A HIGH DEGREE OF PUBLIC INTEREST WITHIN THE AIRSPACE BOUNDED BY THE FOLLOWING COORDINATES: [FILL IN WITH LAT/LONG AND FRD DEFINED DIMENSIONS OF NEW ORLEANS TFR] FROM THE SURFACE UP TO BUT NOT INCLUDING [FILL IN WITH CEILING OF TFR IN MSL; USUALLY 6,000' PLUS ADJUSTMENT FOR TERRAIN AND OBSTACLES].

ALL FLIGHTS ARE PROHIBITED WITHIN THE IDENTIFIED TFR AIRSPACE EXCEPT FOR THOSE MEETING AT LEAST ONE OF THE FOLLOWING REQUIREMENTS:

1. THE FLIGHT OPERATION IS CONDUCTED DIRECTLY TO OR FROM AN AIRPORT WITHIN THE IDENTIFIED TFR AIRSPACE OR IS NECESSITATED BY THE IMPRACTICABILITY OF VFR FLIGHT ABOVE OR AROUND THE IDENTIFIED TFR AIRSPACE, AND THE FLIGHT IS NOT BEING CONDUCTED FOR THE PURPOSE OF OBSERVING THE INCIDENT OR EVENT; OR

2. THE FLIGHT OPERATION IS OPERATING UNDER AN AIR TRAFFIC CONTROL (ATC) APPROVED FLIGHT PLAN; OR

3. THE FLIGHT OPERATION CARRYING INCIDENT OR EVENT PERSONNEL, OR LAW ENFORCEMENT OFFICIALS; OR

4. THE FLIGHT OPERATION IS CARRYING ACCREDITED MEDIA AND, PRIOR TO ENTERING THE IDENTIFIED TFR AIRSPACE, A FLIGHT PLAN AND NOTIFICATION IS FILED WITH THE APPROPRIATE FLIGHT SERVICE OR ATC FACILITY. THIS FILING MUST INCLUDE THE FOLLOWING INFORMATION:

4A. AIRCRAFT IDENTIFICATION, TYPE, AND COLOR; AND

4B. RADIO COMMUNICATIONS FREQUENCIES TO BE USED; AND

4C. PROPOSED TIMES OF ENTRY OF AND EXIT FROM THE IDENTIFIED TFR AIRSPACE; AND

4D. NAME OF THE MEDIA ORGANIZATION AND PURPOSE OF THE FLIGHT; AND

4E. ANY OTHER INFORMATION REQUESTED BY ATC.

OR

5. THE FLIGHT OPERATION IS BEING CONDUCTED BY A FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCY OR THE U.S. MILITARY (INCLUDING NATIONAL GUARD) ON AN ACTIVE MISSION ADDRESSING THE INCIDENT OR EVENT. THESE AIR MISSIONS MAY INCLUDE PUBLIC AND CONTRACTED PRIVATE AIRCRAFT CARRYING OUT SEARCH AND RESCUE (SAR), AIR AMBULANCE, INCIDENT AWARENESS ASSESSMENT (IAA), LAW ENFORCEMENT, CRITICAL SUPPLY LOGISTICS, AIR EVACUATION, AND OTHER VITAL FLIGHTS.

6. PILOTS ARE ADVISED TO CHECK NOTAMS FREQUENTLY FOR POSSIBLE CHANGES PRIOR TO OPERATING WITHIN OR NEAR THE IDENTIFIED TFR AIRSPACE.

7. HOUSTON CENTER (ZHU) AT (817) 000-0000 IS THE FAA COORDINATING FACILITY FOR THIS TFR.

B. ACA AND ADVANCED TFR EXAMPLES

Note: See Figure B-1 below for a visual depiction of a notional ACA and underlying 91.137a1 TFRs.

B.1 Special Notice for ACA – Example Language

! FDC 1/9000 ZHU…SPECIAL NOTICE…LOUISIANA AND MISSISSIPPI SOUTHERN COUNTIES AND COASTAL AREAS – HURRICANE ZEBADIAH DISASTER RESPONSE AND RECOVERY EFFORTS. EFFECTIVE 11090901300Z UNTIL FURTHER NOTICE.

PURSUANT TO 49 USC 40103(B), A SPECIAL NOTICE IS IN EFFECT TO SUPPORT A SAFE ENVIRONMENT FOR AVIATION OPERATIONS, INCLUDING ONGOING DISASTER RESPONSE AND RECOVERY FLIGHTS, WITHIN THE HURRICANE ZEBADIAH AIRSPACE COORDINATION AREA (ACA) BOUNDED BY THE FOLLOWING COORDINATES: [FILL IN WITH LAT/LONG AND FRD DEFINED DIMENSIONS OF ACA] FROM THE SURFACE UP TO BUT NOT INCLUDING [FILL IN WITH CEILING OF ACA IN MSL; USUALLY 6,000' PLUS ADJUSTMENT FOR TERRAIN AND OBSTACLES].

1. PILOTS FLYING IN THE HURRICANE ZEBADIAH ACA SHOULD EXERCISE EXTREME CAUTION DUE TO PRESENCE OF NUMEROUS FLIGHT OPERATIONS ENGAGED IN DISASTER RESPONSE AND RECOVERY EFFORTS (HEREAFTER, REFERRED TO AS "PARTICIPATING"), INCLUDING LOW ALTITUDE, VISUAL FLIGHT RULES (VFR) AIR TRAFFIC OVER CRITICAL LOCATIONS.

2. PARTICIPATING AIRCRAFT MAY NEED TO MAKE SUDDEN AND UNEXPECTED CHANGES IN DIRECTION, SPEED, AND ALTITUDE.

3. TEMPORARY FLIGHT RESTRICTIONS (TFR) HAVE BEEN ESTABLISHED OVER MAJOR METROPOLITAN AREAS AND OTHER CRITICAL LOCATIONS WITHIN THE ACA. EXPECT NUMEROUS FLIGHT OPERATIONS BY PARTICIPATING AIRCRAFT (BOTH FIXED WING AND ROTARY WING) WITHIN AND NEAR THESE TFRS, ESPECIALLY AT [FILL IN WITH 3,000' PLUS ADJUSTMENT FOR TERRAIN AND OBSTACLES] AND BELOW.

4. PILOTS SHOULD CHECK THE FOLLOWING NOTAMS FOR SPECIFIC PROCEDURES, INCLUDING ACCESS REQUIREMENTS, FOR OPERATIONS IN THESE TFRS: [1/9001, Y/NNNN, Y/NNNN]

5. HURRICANE ZEBADIAH DAMAGE MAY HAVE CREATED POTENTIAL AVIATION HAZARDS WITHIN AND NEAR TO THE ACA, INCLUDING THE DISRUPTION OF NORMAL AIR NAVIGATION SERVICES, INCLUDING AIR TRAFFIC CONTROL (ATC) AND NAVIGATION AIDS; EXPLOSIONS; AND FIRES RESULTING IN SMOKE PLUMES. IF AVIATION HAZARDS ARE OBSERVED, PILOTS SHOULD IMMEDIATELY TAKE NECESSARY PRECAUTIONARY (INCLUDING AVOIDING THE HAZARD AND ADVISING OTHER AIRCRAFT IN THE AREA) AND THEN PROVIDE THE POSITION (LAT/LONG) AND DESCRIPTION OF THE HAZARD TO ATC IF POSSIBLE.

6. PILOTS ARE ADVISED TO CHECK NOTAMS FREQUENTLY FOR POSSIBLE CHANGES PRIOR TO OPERATING WITHIN OR NEAR THE HURRICANE ZEBADIAH ACA.

B.2 91.137a1 – Example Language

! FDC 1/9001 ZHU…FLIGHT RESTRICTIONS…NEW ORLEANS, LA, AND ENVIRONS – HURRICANE ZEBADIAH DISASTER RESPONSE AND RECOVERY EFFORTS. EFFECTIVE 11090901300Z UNTIL FURTHER NOTICE.

PURSUANT TO 14 CFR SECTION 91.137(A)(1), TEMPORARY FLIGHT RESTRICTIONS (TFR) ARE IN EFFECT TO PROTECT PERSONS AND PROPERTY ON THE SURFACE OR IN THE AIR FROM HAZARDS ASSOCIATED WITH HURRICANE ZEBADIAH AND TO SUPPORT AVIATION OPERATIONS CARRYING OUT DISASTER RESPONSE AND RECOVERY MISSIONS WITHIN THE AIRSPACE BOUNDED BY THE FOLLOWING COORDINATES: [FILL IN WITH LAT/LONG AND FRD DEFINED DIMENSIONS OF NEW ORLEANS TFR] FROM THE SURFACE UP TO BUT NOT INCLUDING [FILL IN WITH CEILING OF TFR IN MSL; USUALLY 6,000' PLUS ADJUSTMENT FOR TERRAIN AND OBSTACLES].

1. ALL FLIGHTS ARE PROHIBITED WITHIN THE IDENTIFIED TFR AIRSPACE EXCEPT FOR THOSE MEETING THE FOLLOWING REQUIREMENTS AND PROCEDURES:

1-A. THE FLIGHT OPERATION IS BEING CONDUCTED BY A FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCY OR THE U.S. MILITARY (INCLUDING NATIONAL GUARD) IN ACTIVE SUPPORT OF DISASTER RESPONSE AND RECOVERY EFFORTS AND UNDER THE DIRECTION OF THE AVIATION COORDINATION GROUP (ACG) PART OF THE UNIFIED COMMAND (UC) IN BATON ROUGE. THESE AIR MISSIONS (HEREAFTER REFERRED TO AS "PARTICIPATING") INCLUDE PUBLIC AND CONTRACTED PRIVATE AIRCRAFT CARRYING OUT SEARCH AND RESCUE (SAR), AIR AMBULANCE, INCIDENT AWARENESS ASSESSMENT (IAA), LAW ENFORCEMENT, CRITICAL SUPPLY LOGISTICS, AIR EVACUATION, AND OTHER VITAL FLIGHTS; OR

1-B. THE FLIGHT OPERATION IS ENGAGED IN A PRIORITY LAW ENFORCEMENT, HOMELAND SECURITY, OR NATIONAL DEFENSE MISSIONS BEING CONDUCTED OUTSIDE OF THE DISASTER RESPONSE AND RECOVERY AIR MISSIONS UNDER THE DIRECTION OF THE BATON ROUGE ACG AND UC; OR

1-C. THE FLIGHT OPERATION IS ACTIVELY SUPPORTING DAMAGE ASSESSMENT OR RESTORATION OF CRITICAL INFRASTRUCTURE / KEY RESOURCES (CIKR), INCLUDING PETROLEUM, ELECTRICITY, AND OTHER ENERGY; DRINKING WATER SUPPLY; AGRICULTURE; AND PUBLIC HEALTH UNDER THE DIRECTION OF THE BATON ROUGE ACG AND UC; OR

1-D. THE FLIGHT OPERATION WILL BE USED TO RELOCATE AN AIRCRAFT OUTSIDE OF THE TFR AND/OR THE HURRICANE ZEBADIAH AIRSPACE COORDINATION AREA (ACA) – REFER TO SPECIAL NOTICE FDC 1/9001 – FOR THE DURATION OF THE DISASTER RESPONSE AND RECOVERY EFFORT. THIS RELOCATION FLIGHT MUST BENEFIT THE DISASTER RESPONSE AND RECOVERY EFFORT AND BE CONDUCTED IN ACCORDANCE WITH DIRECTION FROM THE BATON ROUGE ACG AND UC. IF THE PILOT IS UNABLE TO CONTACT ATC OR TO REQUEST APPROVAL THROUGH FAA AIRSPACE ACCESS RESPONSE CELL (AARC) THE PROCEDURES IN SECTION 2 BELOW, THE FLIGHT MAY PROCEED UNDER THE FOLLOWING CONDITIONS: 1) THE FLIGHT MUST BE CONDUCTED UNDER DAYTIME VFR; 2) AFTER DEPARTURE, THE FLIGHT MUST CLIMB TO 3,000 FEET AGL AND EXIT THE IDENTIFIED TFR AIRSPACE AS SOON AS POSSIBLE; AND 3) AFTER THE FLIGHT ARRIVES AT ITS DESTINATION, THE PILOT MUST ADVISE THE AARC AT (540) 000-0000 OR (800) 000-0000 OF THE FLIGHT WITHOUT DELAY.

1-E. THE FLIGHT OPERATION IS APPROVED BY THE FAA OPERATIONS SECURITY DIRECTORATE ON BEHALF OF THE THE BATON ROUGE ACG AND UC.

2. IN ADDITION TO MEETING AT LEAST ONE IF THE CONDITIONS LISTED IN SECTION 1 OF THIS NOTAM, ALL AIRCRAFT INTENDING TO OPERATE WITHIN THE IDENTIFIED TFR AIRSPACE MUST CONTACT THE FAA AARC AT (540) 000-0000 OR (800) 000-0000 TO REQUEST APPROVAL PRIOR TO DEPARTURE. AS NEEDED, THE AARC MAY PROVIDE SUPPLEMENTAL INSTRUCTIONS ON FLIGHT OPERATIONS WITHIN THIS AIRSPACE.

3. IN ADDITION TO MEETING THE REQUIREMENTS IN SECTIONS 1 AND 2 OF THIS NOTAM, ALL CIVILIAN AIRCRAFT INTENDING TO LAND AT LOUIS ARMSTRONG NEW ORLEANS INTERNATIONAL AIRPORT (MSY) MUST REQUEST APPROVAL FROM THE AARC PRIOR TO DEPARTURE, AND ALL MILITARY AIRCRAFT MUST CONTACT THE 601ST AIR AND SPACE OPERATIONS CENTER'S REGIONAL AIR MOVEMENT CONTROL CENTER AT (850) 000-0000 OR 0-0000.

4. PILOTS FLYING IN THE IDENTIFIED TFR AIRSPACE MUST EXERCISE EXTREME CAUTION DUE TO PRESENCE OF NUMEROUS PARTICIPATING AIRCRAFT, INCLUDING LOW ALTITUDE, VISUAL FLIGHT RULES (VFR) AIR TRAFFIC OVER CRITICAL LOCATIONS. PARTICIPATING AIRCRAFT MAY NEED TO MAKE SUDDEN AND UNEXPECTED CHANGES IN DIRECTION, SPEED, AND ALTITUDE.

4-A. HURRICANE ZEBADIAH DAMAGE MAY HAVE CREATED POTENTIAL AVIATION HAZARDS WITHIN AND NEAR TO THE IDENTIFIED TFR AIRSPACE, INCLUDING THE DISRUPTION OF NORMAL AIR NAVIGATION SERVICES, INCLUDING AIR TRAFFIC CONTROL (ATC) AND NAVIGATION AIDS; EXPLOSIONS; AND FIRES RESULTING IN SMOKE PLUMES. IF AVIATION HAZARDS ARE OBSERVED, PILOTS MUST IMMEDIATELY TAKE NECESSARY PRECAUTIONARY (INCLUDING AVOIDING THE HAZARD AND ADVISING OTHER AIRCRAFT IN THE AREA) AND THEN PROVIDE THE POSITION (LAT/LONG) AND DESCRIPTION OF THE HAZARD TO THE BATON ROUGE ACG AND, IF POSSIBLE ATC.

5. ALL AIRCRAFT INTENDING TO OPERATE WITHIN THE IDENTIFIED TFR AIRSPACE MUST CONTACT ARGUS1 ON FREQUENCY 13X.XX OR 13X.XX IMMEDIATELY BEFORE ENTERING FOR FLIGHT ADVISORIES.

6. PARTICIPATING AIRCRAFT FLYING WITHIN THE IDENTIFIED TFR AIRSPACE AT OR BELOW [FILL IN WITH CEILING OF TFR'S MISSION TYPE ALTITUDE STRATIFICATION STRUCTURE IN MSL], EXCEPT FOR FLIGHTS DIRECTLY TO OR FROM ACG AND UC DESIGNATED AIRPORTS / AIRFIELDS, MUST OPERATE IN ACCORDANCE WITH THE MISSION BASED ALTITUDE ASSIGNMENTS INDICATED BELOW UNLESS OTHERWISE DIRECTED BY ATC. THESE FLIGHT OPERATIONS MUST ALSO COMPLY WITH ANY SPECIAL INSTRUCTIONS (SPINS) PROVIDED BY THE BATON ROUGE ACG.

6-A. FLIGHT OPERATIONS WITHIN THIS ALTITUDE STRATIFICATION MUST BE CONDUCTED VFR (SEE AND AVOID) AND UNDER VISUAL METEOROLOGICAL CONDITIONS (VMC) WITHIN THE ASSIGNED ALTITUDES. IF A PARTICIPATING PILOT IS UNABLE TO COMPLY DUE TO INSTRUMENT METEOROLOGICAL CONDITIONS (IMC) OR OTHER SAFETY CONSIDERATIONS, THE PILOT MUST DEPART THE TFR AND/OR CLIMB ABOVE [FILL IN WITH CEILING OF TFR'S MISSION TYPE ALTITUDE STRATIFICATION STRUCTURE IN MSL] VIA THE SAFEST ROUTE POSSIBLE.

6-B. ROTARY WING AIRCRAFT PERFORMING ACTIVE SAR OR SLING LOAD OPERATIONS OPERATE BETWEEN THE SURFACE UP TO BUT NOT INCLUDING 500 FEET AGL IN A COUNTERCLOCKWISE FLOW.

6-C. FIXED WING AIRCRAFT PERFORMING ACTIVE SAR OPERATE FROM 500 FEET AGL UP TO BUT NOT INCLUDING 1,000 FEET AGL.

6-D. ROTARY WING AND FIXED WING AIRCRAFT ON SAR MISSIONS CONDUCT TRANSITIONS (INCLUDING RELOCATION WITHIN THE SEARCH AREA AND TRANSPORT OF RESCUED PERSONS) FROM 1,000 FEET AGL UP TO BUT NOT INCLUDING 2,000 FEET AGL. SPECIFICALLY, TRANSITIONING SAR AIRCRAFT HEADING NORTH/EAST (360 DEGREES TO 179 DEGREES) OPERATE FROM 1,000 FEET AGL UP TO 1,400 FEET AGL; TRANSITIONING SAR AIRCRAFT HEADING SOUTH/WEST (180 DEGREES THROUGH 359 DEGREES) OPERATE FROM 1,500 FEET AGL UP TO BUT NOT INCLUDING 2,000 FEET AGL.

6-E. HELICOPTER REFUELING OPERATIONS ARE CONDUCTED AT 2,500 FEET AGL WITHIN AN ALTITUDE BLOCK FROM 2,000 FEET AGL UP TO BUT NOT INCLUDING 3,000 FEET AGL.

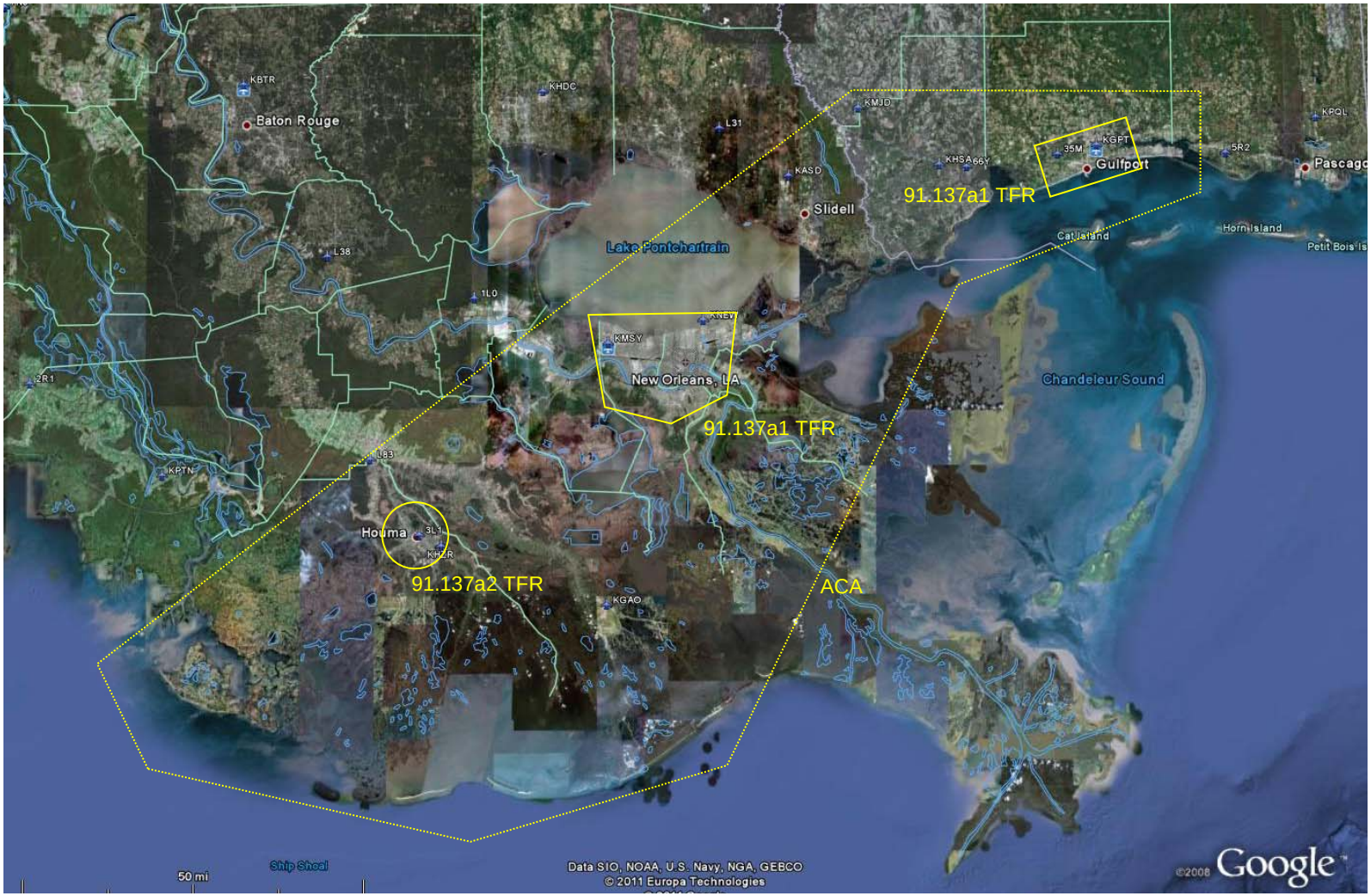
6-F. ROTARY WING AIRCRAFT CARRYING OUT NON-SAR MISSIONS (INCLUDING LAW ENFORCEMENT ACTIVITIES) OPERATE FROM 3,000 FEET AGL UP TO BUT NOT INCLUDING 4,000 FEET AGL. SPECIFICALLY, NON-SAR ROTARY WING OPERATIONS HEADING NORTH/EAST (360 DEGREES TO 179 DEGREES) OPERATE FROM 3,000 FEET AGL UP TO 3,400 FEET AGL; NON-SAR ROTARY WING OPERATIONS AIRCRAFT HEADING SOUTH/WEST (180 DEGREES THROUGH 359 DEGREES) OPERATE FROM 3,500 FEET AGL UP TO BUT NOT INCLUDING 4,000 FEET AGL.

6-G. OTHER PARTICIPATING LOW LEVEL FIXED WING AIRCRAFT (AS WELL AS ANY APPROVED MEDIA FLIGHTS) OPERATE FROM 4,000 FEET AGL UP TO BUT NOT INCLUDING 6,000 FEET AGL. SPECIFICALLY, THESE OTHER FIXED WING OPERATIONS AIRCRAFT HEADING NORTH/EAST (360 DEGREES TO 179 DEGREES) OPERATE FROM 4,000 FEET AGL UP TO 4,800 FEET AGL; THESE OTHER FIXED WING OPERATIONS AIRCRAFT HEADING SOUTH/WEST (180 DEGREES THROUGH 359 DEGREES) OPERATE FROM 5,200 FEET AGL UP TO BUT NOT INCLUDING 6,000 FEET AGL.

7. PILOTS ARE ADVISED TO CHECK NOTAMS FREQUENTLY FOR POSSIBLE CHANGES PRIOR TO OPERATING WITHIN OR NEAR THE IDENTIFIED TFR AIRSPACE.

8. THE FAA AARC AT (540) 000-0000 OR (800) 000-0000 IS THE FAA COORDINATING FACILITY FOR THIS TFR.

Figure B-1. Notional ACA and Disaster TFRs for Coastal Area from Houma to Pascagoula



C. AMP Glossary

1AF	1st Air Force / AFNORTH
AARC	Airspace Access Response Cell
ACA	Airspace Controlling Authority or Airspace Coordination Area
ACO	Airspace Control Order
ACG	Airspace Coordinating Group
ACP	Airspace Coordination Plan
AEW	Airborne Early Warning
AFNORTH	1AF / Air Forces Northern
AFRCC	Air Force Rescue Coordination Center
AIRMAC	Air Traffic Organization Incident Response Management Center
AMO	Air and Marine Operations
AMP	Airspace Management Plan for Disasters
AOB	Air Operations Branch
AOC	Air and Space Operations Center
ANG	Air National Guard
ANS	Air Navigation Services
ANSP	Air Navigation Services Provider
AOPA	Aircraft Owners and Pilots Association
APOE/D	Aerial Port of Embarkation / Debarkation
ARNG	Army National Guard
ATM	Air Traffic Management
ATA	Air Transport Association
ATGS	Air Tactical Group Supervisor
ATO	Air Tasking Order or Air Traffic Organization
BLM	Bureau of Land Management
C2	Command and Control
C3	Command, Control, Communications
CAP	Civil Air Patrol
CBP	Customs and Border Protection
CFR	Code of Federal Regulations
CIKR	Critical Infrastructure / Key Resources
CISAR	Catastrophic Incident Search and Rescue
CNS	Communications, Navigation, Surveillance
CoA	Certificate of Authorization
CONR	Continental U.S. NORAD Region
CRE	Contingency Response Element
CRG	Contingency Response Group
DHS	Department of Homeland Security
DOA	Department of Agriculture
DOC	Department of Commerce
DOD	Department of Defense
DOI	Department of Interior
DOT	Department of Transportation
DWH	Deepwater Horizon
EMA	Emergency Management Agency
EMAC	Emergency Management Assistance Compact
ESF-1	Emergency Support Function 1, Transportation
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FSLTT	Federal, State, Local, Territorial / Tribal
FSS	Flight Services Station

FTA	Fire Traffic Area
FWS	Fish and Wildlife Service
GA	General Aviation
GARS	Global Area Reference System
GOMEX	Gulf of Mexico
IC	Incident Command or Incident Commander
IAA	Incident Awareness Assessment
ICP	Incident Command Post
IFR	Instrument Flight Rules
IOF	Initial Operating Facility
IMC	Instrument Meteorological Conditions
ISR	Intelligence, Surveillance, Reconnaissance
J-CONOPS	Joint Concept of Operations
JFO	Joint Field Office
JOA	Joint Operations Area
LE	Law Enforcement
LZ	Landing Zone
MOG	Maximum on Ground
NAS	National Airspace System
NGB	National Guard Bureau
NMSZ	New Madrid Seismic Zone
NOAA	National Oceanic and Atmospheric Administration
NOM	National Operations Manager
NORAD	North American Aerospace Defense Command
NORTHCOM	U.S. Northern Command
NRCC	National Response Coordination Center
NRF	National Response Framework
NRF-CIS	National Response Framework – Catastrophic Incident Annex
NWS	National Weather Service
PIC	Pilot in Charge
RAMCC	Regional Air Movement Control Center
RAMP	Regional Aviation Management Plan
RPA	Remotely Piloted Aircraft
SAD	State Active Duty
SAO	State Aviation Officer
SAR	Search and Rescue
SEOC	State Emergency Operations Center
SLAP	State and Local Aviation Planning Guide
SPINS	Special Instructions
TACC	Tanker Airlift Coordination Center
TAG	The Adjutant General
TSA	Transportation Security Administration
UAC	Unified Area Command
UAS	Unmanned Aircraft System
UC	Unified Command
USAR	Urban Search and Rescue
USC	United States Code
USCG	United States Coast Guard
USFS	United States Forest Service
USTRANSCOM	United States Transportation Command
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions