# CHANGE U.S. DEPARTMENT OF TRANSPORTATION JO 74 FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

JO 7400.2N CHG 1

Effective Date: December 2, 2021

**SUBJ:** Procedures for Handling Airspace Matters

**1. Purpose of This Change**. This change transmits revised pages to Federal Aviation Administration Order JO 7400.2N, Procedures for Handling Airspace Matters.

2. Audience. This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives. This order also applies to all regional, service area, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids.

**3.** Where Can I Find This Change? This change is available on the FAA website at http://faa.gov/air\_traffic/publications and https://employees.faa.gov/tools\_resources/orders\_notices.

**4.** Explanation of Policy Change. See the Explanation of Changes attachment that has editorial corrections and changes submitted through normal procedures.

**5. Distribution**. This change is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA website at http://faa.gov/air\_traffic/publications.

6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

7. Page Control Chart. See the page control chart attachment.

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## Explanation of Changes Change 1

### Direct questions through appropriate facility/service center office staff to the Office of Primary Interest (OPI).

#### a. 1–1–2. AUDIENCE

4-5-6. CANCELLATION OF CONTROL AIRSPACE AND INSTRUMENT PROCE-DURES

5-5-2. PROCESSING

6-2-3. DIVISION COORDINATION

6–3–3. DETERMINING ADVERSE EF-FECT

6-3-6. RESPONSIBILITY

6–3–9. EVALUATING EFFECT ON IFR OPERATIONS

This change updates references throughout FAA Order JO 7400.2, and changes references from Flight Procedures Team (FPT) to Instrument Flight Procedure (IFP) Service Provider, which covers service providers, except when specifically referencing other duties of the Aeronautical Information Services' Obstacle Impact Team (OIT).

b. 1-2-6. ABBREVIATIONS

7–1–4. DETERMINATION CONTENT AND OPTIONS

14–1–6. EXAMPLES OF TERMINAL AIRSPACE LEGAL DESCRIPTIONS

16-2-4. TIME OF DESIGNATION

17-1-5. PART TIME SURFACE AREAS

17-2-11. LOSS OF COMMUNICATION

OR WEATHER REPORTING CAPABILITY 29-4-1. ISSUANCE OF NOTICES TO

AIRMEN (NOTAM)

31–3–2. NOTICE TO AIRMEN (NOTAM)

This editorial change complies with the Federal Women's Program (FWP) suggestions. The acronym NOTAM is updated from Notice to Airmen to the more applicable term Notice to Air Missions, which is inclusive of all aviators and missions.

#### c. 6–2–3. DIVISION COORDINATION 6–3–6. RESPONSIBILITY

This change deletes verbiage in paragraph 6-2-3 and 6-3-6b2 that references exclusion of obstruction evaluations (OE) beyond 3 NM, and adds verbiage that references exclusion of OE cases based on the Part 77 conical surface.

d. 21-1-1. PURPOSE

21–1–2. SCOPE

21-1-3. DEFINITION AND TYPES

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21–5–9. FAA INITIATED SUA PROPOS-ALS

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21-9-5. FOLLOW UP ACTION
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The Airspace Rules and Regulations Team, AJV–P21, requested input from the DoD and the three Service Centers, and then convened a FAA workgroup to incorporate changes and policy memos. This change proposes to implement editorial changes to clarify and improve the readability of the text, and to replace obsolete office references. It provides more detailed content and flow for a requested special use airspace (SUA) action while providing explanations of responsibilities for the requesting proponent and the Service Centers. Additionally, it adds Warning Areas to the required annual utilization reports for the using agency of the SUA.

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#### FICE ACTIONS

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#### 23–2–1. SUBMISSION OF PROPOSALS 23–2–2. TEMPORARY RESTRICTED AREA PROPOSALS

The Airspace Rules and Regulations Team, AJV–P21, requested input from the DoD and the three Service Centers, and then convened a FAA workgroup to incorporate changes and policy memos. This change proposes to implement editorial changes to clarify and improve the readability of the text, and to replace obsolete office references. It provides more detailed content and flow for a requested SUA action while providing explanations of responsibilities for the requesting proponent and the Service Centers. Additionally, it adds Warning Areas to the required annual utilization reports for the using agency of the SUA.

## FAA Order JO 7400.2N Change 1 Page Control Chart December 2, 2021

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## 12/2/21

# Part 1. General Procedures for Airspace Management Chapter 1. General

## Section 1. Introduction

### 1-1-1. PURPOSE OF THIS ORDER

**a.** This order prescribes policy, criteria, guidelines, and procedures applicable to the System Operations Services; Mission Support Services; Aeronautical Information Services; Technical Operations Services; Technical Operations Air Traffic Control Spectrum Engineering Services; Technical Operations Technical Services; the Office of Airport Planning and Programming, (APP); the Office of Airport Safety and Standards, (AAS); Airports District Office (ADO); and the Flight Standards Service.

**b.** While this order provides procedures for handling airspace matters, additional procedures and criteria to supplement those contained herein may be set forth in other directives and should be consulted.

#### 1-1-2. AUDIENCE

**a.** This order applies to all ATO personnel and anyone using ATO directives.

**b.** This order also applies to all regional, Service Centers, Instrument Flight Procedure (IFP) Service Providers, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids. States that participate in the State Block Grant Program (SBGP) assist the Office of Airport Safety and Standards in these actions, but the overall responsibility remains with the Office of Airports. Participating states include Georgia, Illinois, Michigan, Missouri, New Hampshire, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin.

### 1-1-3. WHERE TO FIND THIS ORDER

This order is available on the FAA website at http://www.faa.gov/air\_traffic/publications and

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http://employees.faa.gov/tools\_resources/ orders notices.

#### 1-1-4. WHAT THIS ORDER CANCELS

FAA Order JO 7400.2M, Procedures for Handling Airspace Matters, dated February 28, 2019, and all changes to it are canceled.

#### 1-1-5. CHANGE AUTHORITY

The Director of Policy (AJV–P) will issue changes to this directive after obtaining concurrence from the affected Headquarters offices/services/service units on the cover of this order.

#### 1-1-6. EXPLANATION OF CHANGES

**a.** The significant changes to this order are identified in the Explanation of Changes page(s). It is advisable to retain the page(s) throughout the duration of the basic order.

**b.** If further information is desired, please direct questions through the appropriate facility/service area/regional office to the headquarters office of primary responsibility.

# 1–1–7. SUBMISSION CUTOFF AND EFFECTIVE DATES

This order and its changes are scheduled to be published to coincide with AIRAC dates. However, due to the infrequent nature of changes submitted for this order, publishing may be postponed.

Publication Schedule		
Basic or Change	Cutoff Date for Submission	Effective Date of Publication
JO 7400.2N	12/31/20	6/17/21
Change 1	6/17/21	12/2/21
Change 2	12/2/21	5/19/22
Change 3	5/19/22	11/3/22

JO 7400.2P	11/3/22	4/20/23
Change 1	4/20/23	10/5/23
Change 2	10/5/23	3/21/24
Change 3	3/21/24	9/5/24

#### 1-1-8. DELIVERY DATES

This order will be available on the FAA website 30 days prior to its effective date.

All organizations are responsible for viewing, downloading, and subscribing to receive electronic mail notifications when changes occur to this order.

Subscriptions can be made at http://www.faa.gov/ air traffic/publications.

# 1–1–9. RECOMMENDATIONS FOR PROCEDURAL CHANGES

**a.** The responsibility for processing and coordinating revisions to this order is delegated to the Airspace Policy Group Manager.

**b.** Proposed changes or recommended revisions must be submitted, in writing, to the Airspace Policy Group. The proposal should include a description of the change or revision, the language to be inserted in the order, and the rationale for the change or revision.

c. The Airspace Policy Group will review and revise proposed changes as necessary and submit supported proposals to Policy (AJV–P). When appropriate, the Airspace Policy Group may convene a workgroup for this purpose. Composition of the workgroup will be determined by the subject matter and the expertise required. The Airspace Policy Group is responsible for the selection of the members of the workgroup, and for appointing the chairperson of the group. **d.** The Policy directorate is responsible for ensuring all approved revisions are published.

**e.** When revised, reprinted, or additional pages are issued, they will be marked as follows:

**1.** Each revised or added page will show the change number and effective date of the change.

2. Bold vertical lines in the margin of the text will mark the location of substantive procedural, operational, or policy changes (for example, when material that affects the performance of duty is added, revised, or deleted).

#### 1-1-10. DISTRIBUTION

This order is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA website at http://www.faa.gov/air\_traffic/publications.

#### 1-1-11. SAFETY MANAGEMENT SYSTEM

Every employee is responsible for ensuring the safety of equipment and procedures used in the provision of services within the National Airspace System (NAS).

**a.** Risk assessment techniques and mitigations, as appropriate, are intended for implementation of any planned safety significant changes within the NAS, as directed by FAA Order 1100.161, Air Traffic Safety Oversight.

**b.** Direction regarding the Safety Management System and its application can be found in the Air Traffic Organization Safety Management System Manual; FAA Order JO 1000.37, Air Traffic Organization Safety Management System; and FAA Order 1100.161, Air Traffic Safety Oversight.

## Section 2. Authority and Order Use

#### 1-2-1. POLICY

The navigable airspace is a limited national resource that Congress has charged the Federal Aviation Administration (FAA) to administer in the public interest as necessary to ensure the safety of aircraft and its efficient use. Although the FAA must protect the public's right of freedom of transit through the airspace, full consideration must be given to all airspace users, to include national defense; commercial and general aviation; and space operations. Accordingly, while a sincere effort must be made to negotiate equitable solutions to conflicts over the use of the airspace for non-aviation purposes, preservation of the navigable airspace for aviation must be the primary emphasis.

#### 1-2-2. AUTHORITY AND APPLICABILITY

The authority for the procedures and associated rules and regulations addressed in this order are provided in 49 U.S.C. Subtitle VII, Aviation Programs, Part A – Air Commerce and Safety, and Part B – Airport Development and Noise:

a. Section 40101, Policy.

b. Section 40102, Definitions.

**c.** Section 40103, Sovereignty and Use of Airspace, and the Public Right of Transit.

**d.** Section 40106(a), Deviations From Regulations.

e. Section 40109, Authority to Exempt.

**f.** Section 106(f), Authority of the Secretary and the Administrator.

**g.** Section 106(g), Duties and Powers of Authority.

h. Section 40113, Administrative.

**i.** Section 44501(a), Long Range Plans and Policy Requirements.

**j.** Section 44502, General Facilities and Personnel Authority.

**k.** Section 44502(c), Military Construction, Rockets, and Missiles.

**I.** Section 44718, Structures Interfering with Air Commerce.

**m.** Section 44719, Standards for Navigational Aids.

n. Section 44720, Meteorological Services.

o. Section 44721, Aeronautical Maps and Charts.

**p.** Section 46104(e), Designating Employees to Conduct Hearings.

q. Section 46301, Civil Penalties.

**r.** Section 46308, Interference with Air Navigation.

s. Chapter 471, Airport Development – All of Subchapters I and II.

t. Chapter 475, Noise – All of Subchapters I and II.

#### 1-2-3. FUNCTIONAL RESPONSIBILITIES

Functional responsibilities of headquarters and regional/service area organizations referred to in this order are detailed in Order 1100.1, FAA Organization–Policies and Standards.

#### 1–2–4. TITLE 14 CODE OF FEDERAL REGULATIONS (CFR) REFERENCES

a. Part 11, General Rulemaking Procedures.

**b.** Part 71, Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points.

c. Part 73, Special Use Airspace.

d. Part 77, Objects Affecting Navigable Airspace.

e. Part 91, General Operating and Flight Rules.

f. Part 93, Special Air Traffic Rules.

g. Part 95, IFR Altitudes.

**h.** Part 97, Standard Instrument Approach Procedures.

i. Part 101, Moored Balloons, Kites, Amateur Rockets, Unmanned Free Balloons, and Certain Model Aircraft.

j. Part 152, Airport Aid Program.

**k.** Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports.

I. Chapter III, Commercial Space Transportation.

**m.** Chapter V, National Aeronautics and Space Administration.

#### 1-2-5. WORD MEANING

As used in this Order:

**a.** "Must" means an action/procedure is mandatory.

**b.** "Must not" means an action/procedure is prohibited.

**c.** "Should" is used when application is recommended.

**d.** "May" and "need not" are used when application is optional.

**e.** "Will" is used only to indicate futurity, never to indicate any degree of requirement for application of a procedure.

**f.** "Navigable airspace" means airspace at or above the minimum flight altitudes prescribed by the Code of Federal Regulations, including airspace needed for safe takeoff and landing.

**g.** "Controlled airspace" is a generic term used to describe Class A, Class B, Class C, Class D, and Class E airspace.

**h.** "Uncontrolled Airspace" (Class G) is airspace that has not been designated by rule as Class A, B, C, D, or E.

#### 1-2-6. ABBREVIATIONS

See TBL 1–2–1 for a list of abbreviations used in this Order.

TBL 1-2-1 FAA Order JO 7400.2 Abbreviations

Abbreviation	Meaning
AAS	Office of Airport Safety and Standards
ADO	Airport District Office
AE	Airport Elevation
AFS	Flight Standards Service

Abbreviation	Meaning
AGC	Office of the Chief Counsel
AGL	Above Ground Level
AIM	Aeronautical Information Manual
AIS	Aeronautical Information Services
ALP	Airport Layout Plan
APO	Office of Aviation Policy and Plans
APP	Office of Airport Planning and Pro- gramming
ARP	Airport Reference Point
ARSR	Air Route Surveillance Radar
ARTCC	Air Route Traffic Control Center
ARU	Airborne Radar Unit
ASR	Airport Surveillance Radar
AST	Office of Commercial Space Transportation
ATC	Air Traffic Control
ATCAA	Air Traffic Control Assigned Airspace
ATCRBS	Air Traffic Control Radar Beacon System
ATCSCC	David J. Hurley Air Traffic Control System Command Center
ATCT	Airport Traffic Control Tower
ATO	Air Traffic Organization
ATREP	Air Traffic Representative
CARF	Central Altitude Reservation Function
CDRH	Center for Devices and Radiological Health
CFA	Controlled Firing Area
CFZ	Critical Flight Zone
CFR	Code of Federal Regulations
СР	Construction Permit
DF	Direction Finder
DME	Distance Measuring Equipment
DMS	Docket Management System
DNE	Does Not Exceed
DNH	Determination of No Hazard
DOD	Department of Defense
DOH	Determination of Hazard
EBO	Exceeds But Okay
EMI	Electromagnetic Interference

Abbreviation	Meaning
ERP	Effective Radiated Power
FAAO	Federal Aviation Administration Or- der
FACSFAC	Fleet Area Control and Surveillance Facility
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FL	Flight Level
FPT	Flight Procedures Team
FSDO	Flight Standards District Office
FSS	Flight Service Station
GAO	Government Accountability Office
HIL	High Intensity Light
IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organiza- tion
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IR	IFR Military Training Route
IRAC	Interdepartmental Radio Advisory Committee
J	Joule
L/MF	Low/Medium Frequency
LFZ	Laser Free Zone
LLWG	Local Laser Working Group
LMM	Middle Compass Locator
LOA	Letter of Agreement
LOD	Letter of Determination
LOM	Outer Compass Locator
LSO	Laser Safety Officer
MAJCOM	Military Major Command
MCA	Minimum Crossing Altitude
МСР	Minimum Crossing Point
MEA	Minimum En Route Altitude
MHA	Minimum Holding Altitude
MIA	Minimum IFR Altitude
MOA	Military Operations Area
MOCA	Minimum Obstruction Clearance Alti- tude

Abbreviation	Meaning
MPE	Maximum Permissible Exposure
MRAD	Milliradian
MRU	Military Radar Unit
MSA	Minimum Safe Altitude
MSL	Mean Sea Level
MSWLF	Municipal Solid Waste Landfill
MTR	Military Training Route
MVA	Minimum Vectoring Altitude
NAD	North American Datum
NAS	National Airspace System
NASA	National Aeronautics and Space Ad- ministration
NAVAID	Navigational Aid
NDB	Nondirectional Radio Beacon
NEPA	National Environmental Policy Act
NFDD	National Flight Data Digest
NFZ	Normal Flight Zone
NM	Nautical Mile
NPH	Notice of Presumed Hazard
NOHD	Nominal Ocular Hazard Distance
NOTAM	Notice to Air Missions
NPIAS	National Plan of Integrated Airport Systems
NPRM	Notice of Proposed Rulemaking
NR	Nonrulemaking
NRA	Nonrulemaking Airport
NSA	National Security Area
NWS	National Weather Service
OE	Obstruction Evaluation
OE/AAA	Obstruction Evaluation/Airport Airspace Analysis
OFZ	Obstacle Free Zone
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PL	Public Law
PSR	Project Status Request
RBS	Radar Bomb Scoring
REIL	Runway End Identifier Lights

Abbreviation	Meaning
RNAV	Area Navigation
ROFA	Runway Object Free Area
RPZ	Runway Protection Zone
RVR	Runway Visual Range
RVV	Runway Visibility Value
SFZ	Sensitive Flight Zone
SIAP	Standard Instrument Approach Pro- cedure
SMO	System Maintenance and Operations
SR	Scientific/Research Lasers
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TERABA	Termination/Abandoned Letter
TEREXP	Termination/Expired Letter

Abbreviation	Meaning
TERPS	United States Standard for Terminal Instrument Procedures
TERPSR	Termination Project Status Letter
TOFA	Taxiway Object Free Area
USC	United States Code
UTC	Coordinated Universal Time
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VGSI	Visual Glide Scope Indicator
VOR	Very High Frequency Omnidirectional Range
VORTAC	Very High Frequency Omni-Direc- tional Range/Tactical Air Navigation Aid
VR	VFR Military Training Route

# Section 5. Discontinuance of FAA NAVAIDs

#### 4-5-1. POLICY

Operational requirements, air traffic demand, and budgetary limitations are normally the basis for the retention or decommissioning of FAA NAVAIDs. Since economics are a necessary consideration, a NAVAID becomes a candidate for decommissioning when the activity level, or factors other than activity level on which it may have been justified, are eliminated or changed significantly. Discontinuance criteria are contained in the appropriate Airway Planning Standards (Orders 7031.2, Terminal, and 7031.3, En Route). Any discontinuance should be in accordance with the Federal Radio Navigation Plan.

#### 4-5-2. RESPONSIBILITIES

**a.** En Route and Oceanic Services and Terminal Services must ensure that FAA-funded NAVAIDs are allocated so that they benefit the greatest number of users consistent with safety and operational efficiency. The service area office must also evaluate the need for the retention of en route NAVAIDs and recommend candidates for decommissioning when their need can no longer be justified.

**b.** The FPT must ensure that FAA-funded NAVAIDs are allocated so that they benefit the greatest number of users consistent with safety and operational efficiency. The FPT must also evaluate the need for the retention of terminal NAVAIDs and recommend candidates for decommissioning when their need can no longer be justified.

**c.** ARN-1 must recommend navigational facilities to the Director of Mission Support, Policy as candidates for decommissioning when their function can be equally or better provided by more economically efficient alternatives.

#### 4-5-3. COORDINATION OF PROPOSALS

A navigational facility selected for decommissioning will be the subject of a nonrulemaking study. The appropriate service area office will coordinate the proposed action with personnel from the Technical Operations service area office, FPT, Airports Division, Flight Standards Division, and the regional military representative. If all concur, the service area office must circularize the proposed decommissioning to all interested persons for comment. Include in the circularization a brief description of the decommissioning effect on airspace and instrument procedures.

#### NOTE-

Advanced coordination should be accomplished with Transport Canada regarding facilities that would affect transborder operations. This coordination may be handled through headquarters, regional/service area offices, or direct facility to facility.

#### 4-5-4. OBTAINING APPROVAL

In accordance with Order 1100.1, FAA Organization – Policies and Standards, Paragraph 15, certain closings, consolidation, and decommissioning may require approval of the Administrator. Upon completion of the nonrulemaking study, if applicable, the appropriate regional/service area office must forward the study with a summary of comments and a recommendation to the Administrator through the concerned office or service.

#### 4-5-5. DISCONTINUANCE ACTION

Delay initiating steps for discontinuance of a navigational facility that requires approval from the Office of the Administrator until 10 working days after receipt of such approval.

#### 4–5–6. CANCELLATION OF CONTROLLED AIRSPACE AND INSTRUMENT PROCEDURES

The appropriate air traffic office must ensure the designated airspace based on the NAVAID is revoked or modified. The IFP Service Provider must coordinate the cancellation/amendment of any instrument approach procedure predicated on that NAVAID before the decommissioning date.

#### 4-5-7. DECOMMISSIONING DATE

To the extent possible, the date of decommissioning should coincide with the associated aeronautical charting dates.

# 4–5–8. DISCONTINUANCE OF NAVAIDS INCLUDED IN ICAO PLANS

To meet the operational requirements of United States and foreign aircraft, certain United States NAVAIDs are included in the Caribbean, North Atlantic, and Pacific Regional Air Navigation Plans of the International Civil Aviation Organization (ICAO). By international agreement, amendments to these plans cannot be made until the necessary coordination is effected through ICAO with all interested contracting states and international organizations.

# 4–5–9. INTERNATIONAL STAFF NOTIFICATION

The Office of International Affairs is the liaison on international issues between the FAA and U.S. Government elements and international organizations. Before action is initiated to discontinue any NAVAID included in an ICAO Air Navigation Plan, Technical Operations must notify ATO International. ATO International must then notify the Office of International Affairs of the proposed action. Notification must be made at least 90 days before the proposed effective date.

# Section 2. Notices

#### 5-2-1. REQUIREMENTS

**a.** Requirements for notifying the FAA of proposed construction or alteration are contained in Sections 77.9 (see FIG 5–2–1, FIG 5–2–2, FIG 5–2–3, FIG 5–2–4, and FIG 5–2–5).

**b.** No notice is required, as specified in Section 77.9(e), for certain equipment installations "of a type approved by the Administrator" when the equipment is installed in accordance with the established FAA siting criteria. Equipment installed in compliance with the siting criteria without waivers and which do not affect other runways do not have to be considered under Part 77 criteria.

**c.** Examples of equipment not requiring notice are:

**1.** Wind equipment (AWOS, ASOS, AWSS, etc.). Supplemental wind cones, wind turbines, and meteorological towers are not exempt from notice.

**2.** Transmissometers (Runway Visibility Value (RVV) and Runway Visual Range (RVR) equipment).

- 3. Instrument Landing Systems (ILS).
- 4. Visual Glide Slope Indicators (VGSI).

#### 5-2-2. PROCESSING

**a.** Obstruction Evaluation Group (OEG) personnel must administer aeronautical studies with the

coordinated assistance of Airports, Technical Operations Services, Frequency Management, Flight Standards, IFP Service Providers, Department of Defense, and Department of Homeland Security representatives.

**b.** The OEG must process notices received under the provisions of Sections 44718 and Part 77 as OE cases. The exception to this is notices received under those provisions that pertain to structures located on a public–use airport which must be processed by the Airports Division as a nonrulemaking airport (NRA) case (defined in Part 3, Airport Airspace Analysis, of this order).

**c.** If notice is required by any other FAA regulation, the appropriate division must process the notice under that regulation.

#### 5-2-3. FAA FORMS

Standard FAA forms are established for use in conducting aeronautical studies. The standard FAA forms are:

**a.** FAA Form 7460–1, Notice of Proposed Construction or Alteration (OE notice).

**b.** FAA Form 7460–2, Notice of Actual Construction or Alteration (Supplemental Notice).

#### NOTE-

An electronic system to collect notice(s) of proposed construction or alteration and actual construction is available online at https://oeaaa.faa.gov.

#### FIG 5-2-1 NOTICE REQUIREMENT RELATED TO 200 FEET IN HEIGHT Notice of Construction or Alteration

§77.9(a) – Any construction or alteration that is more than 200 feet AGL at its site.


# Section 2. Initial Processing/Verification

#### 6-2-1. VERIFICATION/E-FILING

**a.** The OEG must verify each obstruction evaluation case to ensure that the submitted site elevation and coordinates appear to be correct and that all necessary information has been included. Verification must include, as a minimum, the following actions:

**1.** Compare the submitted site depiction to the submitted coordinates when plotted.

2. Compare the submitted site elevation to the National Elevation Dataset (NED) in the area of the submitted coordinates when plotted. Other resources may include, but are not limited to, the topographical chart contour elevation intervals, publicly available geographic information systems, or nearby prior studies.

**3.** If a survey is submitted, compare the information contained on the survey, with the submitted information and the site as plotted.

4. If the submission involves an existing structure, compare the submitted information to the digital obstacle file, with the previous aeronautical study (if any), and possibly the FCC tower registration information.

**5.** Ensure that the submission provides a complete description and clearly explains the reason for submission. The submission should include sufficient information to allow each division/service area office to accomplish its specialized portion of the obstruction evaluation.

6. If the submission involves a structure that would normally radiate frequencies, ensure that the frequencies and effective radiated power are included.

**7.** If the submission involves a structure over 200 feet AGL, ensure marking and/or lighting preferences are part of the submission. Sponsors must be required to specifically request the type of marking and/or lighting they desire when submitting FAA Form 7460–1. They should be encouraged to become familiar with the different type of lighting systems available. The sponsor should obtain information about these systems from the manufacturers. The

sponsor can then determine which system best meets his/her needs based on purchase, installation, and maintenance costs. The FAA will consider the sponsor's desired marking and/or lighting system when conducting the aeronautical study.

**b.** If the submission contains errors, discrepancies, or lack of information, the OEG must request resolution by the sponsor and/or the sponsor's representative. If the sponsor does not resolve the issues within 30 days of the written request, the OEG may terminate the aeronautical study.

**c.** If the submission passes verification and there are no unresolved issues, initiate evaluation by other divisions by changing the status in the OE/AAA automation program to "WRK."

#### NOTE-

It is imperative that all data in the automated OE case file is reviewed and verified for accuracy before proceeding to "Division/Service Area Office Coordination." Any correction or change to the heights and/or coordinates after the divisions/service area offices begin evaluation must require initiating a new aeronautical study.

### 6-2-2. VERIFICATION/PAPER-FILING

**a.** Prior to assigning an aeronautical study into the OE/AAA automation program, review the submission for completeness. The following information should be considered:

**1.** Ground elevation of the site (site elevation).

**2.** Above ground elevation of the structure (AGL).

**3.** Latitude and longitude of the structure.

**4.** A 7.5–Minute U.S.G.S. Topographic Map (Quadrangle Chart) depicting the site of the structure.

**b.** If the submission package contains all of the required information, assign an aeronautical study number and initiate an obstruction evaluation study. Exceptions may be made for emergency situations in accordance with 77.17(d).

**c.** If the submission package does not contain the required information, the entire package may be returned to the sponsor with a clear explanation and a request for the sponsor to provide the information necessary to initiate the study.

**d.** For submission packages pertaining to structures that may be time critical, an effort should be made to obtain the required information by telephone. Information received by telephone conversation should be added to case notes. If written confirmation is received from the sponsor, it should be faxed/scanned into the file.

### 6-2-3. DIVISION COORDINATION

Each division described in paragraph 5-2-2 must evaluate all notices of proposed construction or alteration received regardless of whether notice was required under Part 77, except as follows:

#### NOTE-

For the purpose of division/service area office coordination, Frequency Management (FM) will be considered separately in addition to Technical Operations Services. It should also be noted that FM responds separately.

**a.** Side Mounted Non–Microwave Antennas. Airports, Flight Standards, IFP Service Providers, Technical Operations Services, and the military normally are not required to review OE cases that involve the addition of antennas to a previously studied structure that does not increase in overall height of the structure. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case.

**b.** Side Mounted Microwave Dishes. Airports, Flight Standards, IFP Service Providers, and the military normally must not be required to review OE cases that involve the addition of microwave dishes to a structure that does not increase in overall height. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case. c. Marking and Lighting Changes. Airports, Flight Standards, IFP Service Providers, FM, Technical Operations Services, and the military normally are not required to review OE cases which involve only marking and lighting changes. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the prior case.

**d.** Temporary Structures. Airports, FM, Department of Homeland Security, and the military normally must not be required to review OE cases which involve temporary structures of a 6 months or less duration. All appropriate divisions/service area offices must review temporary structures of a longer duration.

e. IFP OIT normally must not be required to review OE cases that are beyond 14 NM from the airport reference point of the nearest public–use or military airport and the height of the structure is not more than 200 feet above ground level.

**f.** Airports normally must not be required to review OE cases that are beyond the lateral limits of the Part 77 conical surface of a public–use or military airport.

**g.** Flight Standards may review OE cases that are circularized for public comment.

**h.** FM normally must only be required to review OE cases, that involve transmitting frequencies.

#### 6-2-4. ADDITIONAL COORDINATION

Air traffic may request any division to review an OE case on a case-by-case basis. For instance, Flight Standards may be requested to review a marking and lighting change, the DOD may be requested to review a temporary structure if the closest airport is a DOD base, or FM may be requested to review a temporary structure if it radiates a frequency.

# Section 3. Identifying/Evaluating Aeronautical Effect

## 6-3-1. POLICY

**a.** The prime objective of the FAA in conducting OE studies is to ensure the safety of air navigation, and the efficient utilization of navigable airspace by aircraft. There are many demands being placed on the use of the navigable airspace. However, when conflicts arise concerning a structure being studied, the FAA emphasizes the need for conserving the navigable airspace for aircraft; preserving the integrity of the national airspace system; and protecting air navigation facilities from either electromagnetic or physical encroachments that would preclude normal operation.

**b.** In the case of such a conflicting demand for the airspace by a proposed construction or alteration, the first consideration should be given to altering the proposal.

c. In the case of an existing structure, first consideration should be given to adjusting the aviation procedures to accommodate the structure. This does not preclude issuing a "Determination Of Hazard To Air Navigation" on an existing structure when the needed adjustment of aviation procedures could not be accomplished without a substantial adverse effect on aeronautical operations. In all cases, consideration should be given to all known plans on file received by the end of the public comment period or before issuance of a determination if the case was not circularized.

# 6-3-2. SCOPE

Part 77 establishes standards for determining obstructions to air navigation. A structure that exceeds one or more of these standards is presumed to be a hazard to air navigation unless the aeronautical study determines otherwise. An obstruction evaluation must identify:

**a.** The effect the structure would have:

**1.** On existing and proposed public-use, private use with at least one FAA-approved instrument approach procedure, and DOD airports and/or aeronautical facilities.

2. On existing and proposed visual flight rule (VFR)/instrument flight rule (IFR) aeronautical

departure, arrival and en route operations, procedures, and minimum flight altitudes.

**3.** Regarding physical, electromagnetic, or line–of–sight interference on existing or proposed air navigation, communications, radar, and control systems facilities.

**4.** On airport capacity, as well as the cumulative impact resulting from the structure when combined with the impact of other existing or proposed structures.

**b.** Whether marking and/or lighting is necessary.

## 6-3-3. DETERMINING ADVERSE EFFECT

If a structure first exceeds the obstruction standards of Part 77, and/or is found to have physical or electromagnetic radiation effect on the operation of air navigation facilities, then the proposed or existing structure, if not amended, altered, or removed, has an adverse effect if it would:

**a.** Require a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure.

**b.** Require a VFR operation, to change its regular flight course or altitude. This does not apply to VFR military training route (VR) operations conducted under Part 137, or operations conducted under a waiver or exemption to the CFR.

**c.** Restrict the clear view of runways, helipads, taxiways, or traffic patterns from the airport traffic control tower cab.

**d.** Derogate airport capacity/efficiency.

**e.** Affect future VFR and/or IFR operations as indicated by plans on file.

**f.** Affect the usable length of an existing or planned runway.

### 6–3–4. DETERMINING SIGNIFICANT VOLUME OF ACTIVITY

The type of activity must be considered in reaching a decision on the question of what volume of aeronautical activity is "significant." For example, if one or more aeronautical operations per day would be affected, this would indicate regular and continuing activity, thus a significant volume no matter what the type of operation. However, an affected instrument procedure or minimum altitude may need to be used only an average of once a week to be considered significant if the procedure is one which serves as the primary procedure under certain conditions.

## 6-3-5. SUBSTANTIAL ADVERSE EFFECT

A proposed structure would have, or an existing structure has, a substantial adverse effect if it causes electromagnetic interference to the operation of an air navigation facility or the signal used by aircraft, or if there is a combination of:

**a.** Adverse effect as described in paragraph 6–3–3; and

**b.** A significant volume of aeronautical operations, as described in paragraph 6-3-4, would be affected.

### 6-3-6. RESPONSIBILITY

The FAA's obstruction evaluation program transcends organizational lines. In order to determine the effect of the structure within the required notice period, each office should forward the results of its evaluation within 15 working days to the Obstruction Evaluation Group (OEG) for further processing. In cases of evaluating the effects of a proposed wind turbine farm, see Appendix 12 for field air traffic control facility responsibility and procedures. Areas of responsibility are delegated as follows:

a. OEG personnel must:

1. Identify when the structure exceeds Section 77.17 (a)(1), (a)(2), and (a)(5) (see FIG 6-3-1 thru FIG 6-3-6) and apply Section 77.17 (b) (see FIG 5-2-4).

2. Identify the effect on existing and planned aeronautical operations, air traffic control procedures, and airport traffic patterns and making recommendations for mitigating adverse effect including marking and lighting recommendations.

**3.** Identify when the structure would adversely affect published helicopter route operations as specified in paragraph 6-3-8 subparagraph e, of this order, and forward the case to Flight Standards.

**5.** Identify when negotiations are necessary and conduct negotiations with the sponsor. This may be done in conjunction with assistance from other division/service area office personnel when their subject expertise is required (for example, in cases of electromagnetic interference).

appropriate marking and/or lighting.

**6.** Identify when circularization is necessary and conduct the required circularization process.

**7.** Evaluate all valid aeronautical comments received as a result of the circularization and those received as a result of the division evaluation.

**8.** Issue the determination (except as noted in paragraph 7–1–2, subparagraph b).

**b.** Regional Airports Division personnel must:

**1.** Verify that the airport/runway database has been reviewed, is correct, and contains all plans on file pertaining to the OE case.

2. Identify the structure's effect on existing and planned airports or improvements to airports concerning airport design criteria including potential restrictions/impacts on airport operations, capacity, efficiency and development, and making recommendations for eliminating adverse effect. Airports Divisions are not normally required to perform evaluations on OE cases that are beyond the lateral limits of the Part 77 conical surface of a public–use or military airport.

**3.** Determine the effect on the efficient use of airports and the safety of persons and property on the ground. Airports will resist structures and activities that conflict with an airport's planning and/or\_design.

**4.** State what mitigations may be made to mitigate or eliminate any adverse effect of the structure on existing or planned airports.

c. IFP Service Providers must:

**1.** Identify when the structure exceeds Section 77.17(a)(3).

2. Identify the effect upon terminal area IFR operations, including transitions; holding; instrument departure procedures; any segment of a Standard Instrument Approach Procedure (SIAP) or Special Instrument Approach Procedure (IAP), including proposed instrument procedures and departure areas.

**3.** State what adjustments can be made to the procedure/structure to mitigate or eliminate any adverse effects of the structure on an instrument flight procedure. Include a "no effect height" and/or survey accuracy that, if negotiated, would mitigate or eliminate adverse effect on an instrument flight procedure.

**d.** IFP Service Providers. In addition to 6–3–6c, the IFP Service Providers must:

**1.** Identify when the structure exceeds Section 77.17(a)(4).

2. Identify the effect on any IFR procedure which may include, but is not limited to: minimum en route altitudes (MEA); minimum obstruction clearance altitudes (MOCA); minimum IFR altitudes (MIA); minimum safe altitudes (MSA); minimum crossing altitudes (MCA); minimum holding altitudes (MHA); turning areas and termination areas; and making recommendations for eliminating adverse effect.

e. Aeronautical Information Services' Obstacle Impact Team (OIT). In addition to 6–3–6c and d, the IFP OIT must identify the effect on any IFR procedure which may include minimum vectoring altitudes (MVA).

**f.** Flight Technologies and Procedures Division (FTPD) personnel must identify the effect on fixed-wing and helicopter VFR routes, terminal operations, and other concentrations of VFR traffic. When requested by OEG, FTPD must also evaluate the mitigation of adverse effect on VFR operations for marking and/or lighting of structures.

**g.** Technical Operations Services personnel must identify any electromagnetic and/or physical effect on air navigation and communications facilities including:

1. The presence of any electromagnetic effect in the frequency protected service volume of the facilities shown in FIG 6-3-16, FIG 6-3-17, and FIG 6-3-18.

2. The effect on the availability or quality of navigational or communications signals to or from aircraft including lighting systems (for example, VGSI), and making recommendations to eliminate adverse effect.

**3.** The effect on ground-based communications and NAVAID equipment, and the signal paths between ground-based and airborne equipment, and making recommendations to eliminate adverse effect.

4. The effect on the availability or quality of ground-based primary and secondary radar; direction finders; and air traffic control tower line-of-sight visibility; and making recommendations to eliminate adverse effect.

5. The effect of sunlight or artificial light reflections, and making recommendations to eliminate adverse effect.

**h.** Military personnel are responsible for evaluating the effect on airspace and routes used by the military.

i. Other applicable FAA offices or services may be requested to provide an evaluation of the structure on a case–by–case basis.

#### FIG 6-3-1 ANYWHERE

# 77.17 – Obstruction Standards. (a)(1) – A height of 499 feet AGL at the site of the object.



FIG 6-3-11 TRAFFIC PATTERN AIRSPACE CLIMB/DESCENT AREAS

CLIMB/ DESCENT AREA	CLIMB/ DESCENT AREA

e. HELICOPTERS – The special maneuvering characteristics of helicopters are recognized in Sections 91.119 and 91.155, provided operations are conducted without hazard to persons or property on the ground. Helicopter pilots must also operate at a speed that will allow them to see and avoid obstructions. Consequently, proposed or existing structures are not considered factors in determining adverse effect upon helicopter VFR operations except as follows:

1. En route. When the Administrator prescribes routes and altitudes for helicopters, the exemptions to Part 91 for helicopters do not apply. Thus, any structure would have an adverse effect if it penetrates an imaginary surface 300 feet below an established helicopter minimum flight altitude and is located within 250 feet either side of the established route's centerline.

2. Heliport Landing/Takeoff Area. Any structure would have an adverse effect if it would exceed any of the heliport imaginary surfaces. Although helicopter approach-departure paths may curve, the length of the approach-departure surface remains fixed.

**f.** AGRICULTURAL AND INSPECTION AIRCRAFT OPERATIONS – Rules that apply to agricultural dispensing operations, as prescribed in Part 137, allow deviation from Part 91 altitude restrictions. It is the pilot's responsibility to avoid obstacles because the agricultural operations must be conducted without creating a hazard to persons or property on the surface. Similar operations include pipeline, power line, and military low–level route inspections. Consequently, these operations are not considered in reaching a determination of substantial adverse effect.

#### NOTE-

# Before and after the dispensing is completed, the pilot is required to operate under the Part 91 minimum altitudes.

**g.** OPERATIONS UNDER WAIVER OR EXEMPTION TO CFR – Waivers and/or exemptions to CFR operating rules include provisions to ensure achievement of a level of safety equivalent to that which would be present when complying with the regulation waived or exempted. Additionally, waivers and exemptions do not relieve pilots of their responsibility to conduct operations without creating a hazard to persons and property on the surface. Accordingly, a determination of hazard to air navigation must not be based upon a structure's effect on aeronautical operations conducted under a waiver or exemption to CFR operating rules.

# 6–3–9. EVALUATING EFFECT ON IFR OPERATIONS

**a.** PURPOSE. This section provides general guidelines for determining the effect of structures, whether proposed or existing, upon IFR aeronautical operations.

**b.** STANDARDS. Obstruction standards are used to identify potential adverse effects and are not the basis for a determination. The criteria used in determining the extent of adverse affect are those established by the FAA to satisfy operational, procedural, and electromagnetic requirements. These criteria are contained in regulations, advisory circulars, and orders (for example, the 8260 Order series and FAA Order JO 7110.65). Obstruction evaluation personnel must apply these criteria in evaluating the extent of adverse effect to determine if the structure being studied would actually have a substantial adverse effect and would constitute a hazard to air navigation.

c. IFR MINIMUM FLIGHT ALTITUDES. Technical Operations Aviation System Standards is the principal FAA element responsible for establishing instrument procedures and minimum altitudes for IFR operations. FPT personnel must evaluate the effect of proposed structures on IFR aeronautical operations as outlined in Order 8260.19, Flight Procedures and Airspace.

#### **d.** EN ROUTE IFR OPERATIONS

1. Minimum En Route Altitudes (MEA). MEAs are established for each segment of an airway or an approved route based upon obstacle clearance, navigational signal reception, and communications. The MEA assures obstruction clearance and acceptable navigational signal coverage over the entire airway or route segment flown. Any structure that will require an MEA to be raised has an adverse effect. Careful analysis by the appropriate IFP Service Provider and air traffic personnel is necessary to determine if there would be a substantial adverse effect on the navigable airspace. Generally, the loss of a cardinal altitude is considered a substantial adverse effect. However, the effect may not be substantial if the aeronautical study discloses that the affected MEA is not normally flown by aircraft, nor used for air traffic control purposes

2. Minimum Obstruction Clearance Altitudes (MOCA). MOCAs assure obstacle clearance over the entire route segment to which they apply and assure navigational signal coverage within 22 NM of the associated VOR navigational facility. For that portion of the route segment beyond 22 NM from the VOR, where the MOCA is lower than the MEA and there are no plans to lower the MEA to the MOCA, a structure that affects only the MOCA would not be considered to have substantial adverse effect. Other situations require study as ATC may assign altitudes down to the MOCA under certain conditions.

**3.** Minimum IFR Altitudes (MIA). These altitudes are established in accordance with Order 7210.37, En Route Minimum IFR Altitude Sector Charts, to provide the controller with minimum IFR altitude information for off-airway operations. MIAs provide the minimum obstacle clearance and are established without respect to flight-checked radar or normal radar coverage. Any structure that would cause an increase in a MIA is an obstruction, and further study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

4. IFR Military Training Routes (IRs) -Operations on IR's provide pilots with training for low altitude navigation and tactics (see FAA Order JO 7610.4, Special Operations). Flight along these routes can be conducted below the minimum IFR altitude specified in Part 91, and the military conducts operational flight evaluations of each route to ensure compatibility with their obstructions clearance requirements. A proposed structure's location on an IR is not a basis for determining it to be a hazard to air navigation; however, in recognition of the military's requirement to conduct low altitude training, disseminate Part 77 notices and aeronautical study information to military representatives. Additionally, attempt to persuade the sponsor to lower, or relocate proposed structures that exceed obstruction standards and have been identified by the military as detrimental to their training requirement.

**5.** Radar Bomb Sites (RBS) – These sites are a vital link in the low level training network used by the

U.S. Air Force to evaluate bomber crew proficiency. They provide accurate radar records for aircraft flying at low altitudes attacking simulated targets along the RBS scoring line. An obstruction located within the flights' RBS boundaries may have a substantial adverse effect and a serious operational impact on military training capability.

e. TERMINAL AREA IFR OPERATIONS. The obstruction standards contained in Part 77 are also used to identify obstructions within terminal obstacle clearance areas. Any structure identified as an obstruction is considered to have an adverse effect; however, there is no clear-cut formula to determine what extent of adverse effect is considered substantial. Instrument approach and departure procedures are established in accordance with published obstacle clearance guidelines and criteria. However, there are segments of instrument approach procedures where the minimum altitudes may be revised without substantially effecting landing minimums. Thus, the determination must represent a decision based on the best facts that can be obtained during the aeronautical study.

1. Standard Instrument Approach Procedures (SIAP)/Special IAP. IFP Service Providers are responsible for evaluating the effect of structures upon any segment of, or departure restriction associated with, any FAA approved procedure they maintain. However, all personnel involved in the obstruction evaluation process should be familiar with all aspects of the terminal area IFR operations being considered. If any IFP Service Provider determines a structure will affect instrument flight procedures, their evaluation should include those procedural adjustments that can be made without adversely affecting IFR operations. When the study discloses that procedural adjustments to reduce or mitigate any adverse effect cannot be accomplished, then the comments to OEG must identify the significance of this effect on the procedure.

#### NOTE-

This paragraph applies to any SIAP and Special IAP at public–use and private–use airports.

2. Minimum Vectoring Altitudes (MVA). These altitudes are based upon obstruction clearance requirements only (see Order 8260.19). The area considered for obstacle clearance is the normal operational use of the radar without regard to the flight–checked radar coverage. It is the responsibility of individual controllers to determine that a target

return is adequate for radar control purposes. MVAs are developed by terminal facilities, approved by the Terminal Procedures and Charting Group and published for controllers on MVA Sector Charts. Any structure that would cause an increase in an MVA is an obstruction and a study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

**3.** Military Airports. With the exception of the U.S. Army, the appropriate military commands establish and approve terminal instrument procedures for airports under their respective jurisdictions. Consequently, the OEG must ensure that the military organizations are provided the opportunity to evaluate a structure that may affect their operations. While the military has the responsibility for determining the effect of a structure, it is expected that the FPT will assist air traffic in reconciling differences in the military findings.

4. Departure Procedures. TERPS, Chapter 12, Civil Utilization of Area Navigation (RNAV) Departure Procedures, contains criteria for the development of IFR departure procedures. An obstacle that penetrates the 40:1 departure slope is considered to be an obstruction to air navigation. Further study is required to determine if adverse effect exists. Any proposed obstacle that penetrates the 40:1 departure slope, originating at the departure end of runway (DER) by up to 35 feet will be circularized. If an obstacle penetrates the 40:1 departure slope by more than 35 feet, it is presumed to be a hazard, and a Notice of Presumed Hazard will be issued, and processed accordingly. Analysis by the Terminal Procedures and Charting Group and air traffic personnel is necessary to determine if there would be a substantial adverse effect on the navigable airspace.

5. Minimum Safe Altitudes (MSA). A MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These are either Minimum Sector Altitudes, established for all procedures within a 25-mile radius of the navigational facility (may be increased to 30 miles under certain conditions), or Emergency Safe Altitudes, established within a 100-mile radius of the navigation facility and normally used only in military procedures at the option of the approval authority. These altitudes are designed for emergency use only and are not routinely used by pilots or by air traffic control. Consequently, they are not considered a factor in determining the extent of adverse effect, used as the basis of a determination, or addressed in the public notice of an aeronautical study.

**f.** CONSIDERING ACCURACY. Experience has shown that submissions often contain elevation and/or location errors. For this reason, the IFP Service Providers use vertical and horizontal accuracy adjustments, as reflected below, to determine the effect on IFR operations.

**1.** Accuracy Application – Current directives require the IFP Service Provider to apply accuracy standards to obstacles when evaluating effects on instrument procedures. These accuracy standards typically require an adjustment of 50 feet vertically and 250 feet horizontally to be applied in the most critical direction. Normally, these adjustments are applied to those structures that may become the controlling obstructions and are applicable until their elevation and location are verified by survey.

2. Certified Accuracy – The IFP Service Provider must notify OEG whenever certified accuracy would lessen the adverse effect upon IFR procedures. The OEG will review and determine whether to request a surveyed verification of the elevation and location. The acceptable accuracy verification method must be provided and certified by a licensed engineer or surveyor. The survey must include the plus or minus accuracy required, as well as the signature of the engineer/surveyor and the appropriate seal.

**3.** Determination – A final determination based on improved accuracy must not be issued until after the certified survey is received and evaluated by the OEG.

**4.** Survey Information Distribution – When the certified survey is received, OEG personnel must ensure that the survey information is uploaded into the OE/AAA system and change the accuracy code within the study as appropriate.

#### 6-3-10. EVALUATING EFFECT ON AIR NAVIGATION AND COMMUNICATION FACILITIES

**a.** The FAA is authorized to establish, operate, and maintain air navigation and communications facilities and to protect such facilities from interference. During evaluation of structures, factors that may adversely affect any portion or component of the NAS must be considered. Since an electromagnetic interference potential may create adverse effects as serious as those caused by a physical penetration of the airspace by a structure, those effects must be identified and stated. Proposals will be handled, when appropriate, directly with FCC through Spectrum Assignment and Engineering Services.

**b.** Technical operations services personnel must evaluate notices to determine if the structure will affect the performance of existing or proposed NAS facilities. The study must also include any plans for future facilities, proposed airports, or improvements to existing airports.

**c.** The physical presence of a structure and/or the electromagnetic signals emanating or reflecting there from may have a substantial adverse effect on the availability, or quality of navigational and communications signals, or on air traffic services needed for the safe operation of aircraft. The following general guidelines are provided to assist in determining the anticipated interference.

1. Instrument Landing System (ILS) – Transmitting antennas are potential sources of electromagnetic interference that may effect the operation of aircraft using an ILS facility. The antenna height, radiation pattern, operating frequency, effective radiated power (ERP), and its proximity to the runway centerline are all factors contributing to the possibility of interference. Normally, any structure supporting a transmitting antenna within the established localizer and/or glide–slope service volume area must be studied carefully. However, extremes in structure height, ERP, frequency, and/or antenna radiation pattern may require careful study of structures up to 30 NM from the ILS frequency's protected service volume area.

(a) ILS Localizer. Large mass structures adjacent to the localizer course and/or antenna array are potential sources of reflections and/or re-radiation that may affect facility operation. The

shape and intensity of such reflections and/or re-radiation depends upon the size of the reflecting surface and distance from the localizer antenna. The angle of incidence reflection in the azimuth plane generally follows the rules of basic optical reflection. Normally, in order to affect the course, the reflections must come from structures that lie in or near the on-course signal. Large mass structures of any type, including metallic fences or powerlines, within plus/minus 15 degrees of extended centerline up to 1 NM from the approach end of the runway and any obstruction within 500 feet of the localizer antenna array must be studied carefully. (Refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

(b) ILS Glide Slope. Vertical surfaces within approximately 1,000 feet of the runway centerline and located up to 3,000 feet forward of the glide slope antenna can cause harmful reflections. Most interference to the glide slope are caused by discontinuities in the ground surface, described approximately as a rectangular area 1,000 feet wide by 5,000 feet long, extending forward from the glide slope antenna and centered at about the runway centerline. Discontinuities are usually in the form of rough terrain or buildings (refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

2. Very High Frequency Omni–Directional Radio Range and Tactical Air Navigation Aid (VOR/TACAN). Usually, there should be no reflecting structures or heavy vegetation (trees, brush, etc.) within a 1,000 foot radius of the VOR or the TACAN antenna. Interference may occur from large structures or powerlines up to 2 NM from the antenna. Wind turbines are a special case, in that they may cause interference up to 8 NM from the antenna. (Refer to FAA Order 6820.10, VOR, VOR/DME, and TACAN Siting Criteria).

**3.** Air Route Surveillance Radar/Airport Surveillance Radar (ARSR/ASR). Normally, there should be no reflecting structures within a 1,500–foot radius of the radar antenna. In addition, large reflective structures up to 3 NM from the antenna can cause interference unless they are in the "shadow" of topographic features. Wind turbines are a special case, in that they may cause interference up to the limits of the radar line of site.

4. Air Traffic Control Radar Beacon (ATCRB). The effects encountered due to reflections of the secondary radar main lobe are more serious than those associated with primary radar. Therefore, it is necessary to ensure that no large vertical reflecting surface penetrates a 1,500–foot radius horizontal plane located 25 feet below the antenna platform. In addition, interference may occur from large structures up to 12 miles away from the antenna. This distance will depend on the area of the reflecting surface, the reflection coefficient of the surface, and its elevation with respect to the interrogator antenna. (Refer to FAA Order 6310.6, Primary/Secondary Terminal Radar Siting Handbook).

**5.** Directional Finder (DF). The DF antenna site should be free of structures that will obstruct line–of–sight with aircraft at low altitudes. The vicinity within 300 feet of the antenna should be free of metallic structures which can act as re–radiators.

**6.** Communication Facilities. Minimum desirable distances to prevent interference problems between communication facilities and other construction are:

(a) 1,000 feet from power transmission lines (other than those serving the facility) and other radio or radar facilities.

(b) 300 feet from areas of high vehicle activity such as highways, busy roads, and large parking areas.

(c) One (1) NM from commercial broadcasting stations (e.g., FM, TV).

7. Approach Lighting System. No structure, except the localizer antenna, the localizer far field monitor antenna, or the marker antenna must protrude above the approach light plane. For approach light plane clearance purposes, all roads, highways, vehicle parking areas, and railroads must be considered as vertical solid structures. The clearance required above interstate highways is 17 feet; above railroads, 23 feet; and for all other public roads, highways, and vehicle parking areas, 15 feet. The clearance required for a private road is 10 feet or the highest mobile structure that would normally use the road, which would exceed 10 feet. The clearance for roads and highways must be measured from the crown of the road; the clearance for railroads must be measured from the top of the rails. For vehicle parking areas, clearance must be measured from the

average grade in the vicinity of the highest point. Relative to airport service roads substantial adverse effect can be eliminated if all vehicular traffic is controlled or managed by the air traffic control facility. A clear line–of–sight is required to all lights in the system from any point on a surface, one–half degree below the aircraft descent path and extending 250 feet each side of the runway centerline, up to 1,600 feet in advance of the outermost light in the system. The effect of parked or taxiing aircraft must also be considered when evaluating line–of–sight for approach lighting systems.

**8.** Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI). No structures or obstructions must be placed within the clearance zone for the particular site involved or the projected visual glide path.

#### NOTE-

#### VASI and PAPA now fall under the heading of VGSI.

**9.** Runway End Identifier Lights (REIL). No structures or obstructions must be placed within the established clearance zone.

**d.** Factors that modify the evaluation criteria guidelines require consideration. Some facility signal areas are more susceptible to interference than others. The operational status of some signals may already be marginal because of existing interference from other structures. In addition, the following characteristics of structures must be considered:

1. The higher the structure's height is in relation to the antenna, the greater the chance of interfering reflections. Any structure subtending a vertical angle greater than one degree from the facility is usually cause for concern. Tall structures, such as radio towers and grain elevators, can interfere from distances greater than those listed in the general criteria.

2. The type of construction material on the reflecting surface of the structure is a factor, with nonmetallic surfaces being less troublesome than metallic or metallic impregnated glass.

**3.** Aircraft hangars with large doors can be a special problem because the reflecting surface of the hangar varies appreciably with changes in the position of the doors.

**4.** Interference is usually caused by mirror reflections from surfaces on the structure. Orientation of the structure therefore plays an important part in

the extent of the interference. Reflections of the largest amplitude will come from signals striking a surface perpendicular to the signals. Signals striking a surface at a shallow angle will have a smaller amplitude.

e. Air traffic personnel must request technical operations services personnel to assist them in discussions with sponsors to explore alternatives to resolve the prospective adverse effects to facilities. These may involve design revisions, relocation, or reorientation depending on the character of the construction and facility involved.

**f.** Attempt to resolve electromagnetic interference (EMI) before issuing a hazard determination. Notify the sponsor by letter (automated DPH letter) that the structure may create harmful EMI and include in the letter the formula and values that were applied, the specific adverse effects expected, and an offer to consider alternatives. Provide the sponsor, as well as the FAA, ample time to exhaust all available avenues for positive resolution. The intent of this process is to allow the sponsor adequate time to consider the problems and the alternatives before a decision is rendered by the issuance of the FAA determination. Follow these guidelines in all situations where harmful EMI is projected by the study.

#### 6–3–11. EVALUATING PLANNED OR FUTURE AIRPORT DEVELOPMENT PROGRAMS

The national system of airports consists of public, civil, and joint-use airport facilities considered necessary to adequately meet the anticipated needs of civil aeronautics. Airport Planning and Programming Offices are the most accurate sources of up-to-date information on airport development plans. Consequently, Airports personnel are expected to extensively review structures in reference to the safe and orderly development of airport facilities, including what development will realistically be accomplished within a reasonable time. Areas of consideration in accomplishing this responsibility are:

**a.** Future Development of Existing Airports. A detailed review in this area requires looking at current planned airport projects, national airport plan data, and land–use planning studies in the vicinity of the

structure. The results of the study forwarded to air traffic must include appropriate comments regarding the extent of Federal aid, sponsor airport investments, the airport owner's obligations in existing grant-inaid agreements, and anticipated aeronautical activity at the airport and in the general area. If a structure would adversely impact an airport's efficiency, utility, or capacity, the responsible Airports Office should document this impact in its evaluation. Comments should include recommended new location(s) for the structure as appropriate.

**b.** New Airport Development. When a structure requiring notice under Part 77 and any new airport development are both in the same vicinity, Airports personnel must study the interrelationship of the structure and the airport. Additionally, supplemental information on the proposed airport site must be furnished to the OEG. If a substantial adverse effect is anticipated, Airports personnel must provide detailed comments and specific recommendations for mitigating the adverse effects.

# 6–3–12. EVALUATING TEMPORARY CONSTRUCTION

**a.** Temporary Construction Equipment. Construction of structures normally requires use of temporary construction equipment that is of a greater height than the proposed structure. Appropriate action is necessary to ensure that the temporary construction equipment does not present a hazard to air navigation. It is not possible to set forth criteria applicable to every situation; however, the following action examples may help to minimize potential problems:

**1.** If use of the temporary construction equipment is on an airport, it may be necessary to negotiate with airport managers/owners to close a runway, taxiway, temporarily move a runway threshold, or take other similar action.

2. Negotiate with equipment operators to raise and lower cranes, derricks, or other construction equipment when weather conditions go below predetermined minimums as necessary for air traffic operations or as appropriate for the airport runways in use.

**3.** Control the movement of construction vehicle traffic on airports.

4. Adjust minimum IFR altitudes or instrument procedures as necessary to accommodate the

construction equipment if such action will not have serious adverse effects on aeronautical operations.

**5.** Request that the temporary construction equipment be properly marked and/or lighted if needed.

b. Temporary Structures - OE notices for temporary structures are processed in the same manner as a permanent structure, but require special consideration in determining the extent of adverse effect. This is especially true of structures such as cranes and derricks that may only be at a particular site for a short time period. As a general policy, it is considered in the public interest to make whatever adjustments necessary to accommodate the temporary structure of 30 days or less if there is no substantial adverse affect on aeronautical operations or procedures. However, this policy does not apply if the aeronautical study discloses that the structure would be a hazard to aviation. Reasonable adjustments in aeronautical operations and modifications to the temporary structure should be given equal consideration.

### 6-3-13. CONSIDERING SHIELDING

Shielding as described below should not be confused with notice criteria as stated in Section 77.9(e).

**a.** Consideration. Shielding is one of many factors that must be considered in determining the physical effect a structure may have upon aeronautical operations and procedures. Good judgment, in addition to the circumstances of location and flight activity, will influence how this factor is considered in determining whether proposed or existing structures would be physically shielded.

**b.** Principle. The basic principle in applying the shielding guidelines is whether the location and height of the structures are such that aircraft, when operating with due regard for the shielding structure, would not collide with that structure.

**c.** Limitations. Application of the shielding effect is limited to:

1. The physical protection provided by existing natural terrain, topographic features, or surface structures of equal or greater height than the structure under study; and **2.** The structure(s) providing the shielding protection is/are of a permanent nature and there are no plans on file with the FAA for the removal or alteration of the structure(s).

**d.** Guidelines. Any proposed construction of or alteration to an existing structure is normally considered to be physically shielded by one or more existing permanent structure(s), natural terrain, or topographic feature(s) of equal or greater height if the structure under consideration is located:

1. Not more than 500 feet horizontal distance from the shielding structure(s) and in the congested area of a city, town, or settlement, provided the shielded structure is not located closer than the shielding structures to any heliport or airport located within 5 miles of the structure(s).

**2.** Such that there would be at least one such shielding structure situated on at least three sides of the shielded structure at a horizontal distance of not more than 500 feet.

**3.** Within the lateral dimensions of any runway approach surface but would not exceed an overall height above the established airport elevation greater than that of the outer extremity of the approach surface, and located within, but would not penetrate, the shadow plane(s) of the shielding structure(s).

**e.** OEG must coordinate with FPT before applying shielding criteria for precision approach surface penetrations.

*NOTE– See FIG 6–3–7 and FIG 6–3–12.* 

# 6-3-14. CONSIDERING SHADOW PLANE

The term "shadow plane" means a surface originating at a horizontal line passing through the top of the shielding structure at right angles to a straight line extending from the top of the shielding structure to the end of the runway. The shadow plane has a width equal to the projection of the shielding structure's width onto a plane normal to the line extending from the top and center of the shielding structure to the midpoint of the runway end. The shadow plane extends horizontally outward away from the shielding structure until it intersects or reaches the end of one of the imaginary approach area surfaces; see FIG 6–3–13, FIG 6–3–14, and FIG 6–3–15.

# 6–3–15. RECOMMENDING MARKING AND LIGHTING OF STRUCTURES

**a.** STANDARDS. FAA standards, procedures, and types of equipment specified for marking and lighting structures are presented in AC 70/7460–1, Obstruction Marking and Lighting. These standards provide a uniform means to indicate the presence of structures and are the basis for recommending marking and lighting to the public. These standards are the minimum acceptable level of conspicuity to warn pilots of the presence of structures. They must also apply when Federal funds are to be expended for the marking and lighting of structures.

**b.** AERONAUTICAL STUDY. All aeronautical studies must include an evaluation to determine whether obstruction marking and/or lighting are necessary and to what extent. The entire structure or complex, including closely surrounding terrain and other structures, must be considered in recommending marking and lighting. A subsequent study may indicate a need to change an earlier determination by recommending marking and/or lighting when such recommendation was not made in the original study or, in some cases, after a determination was issued.

**1.** Proposed Structures. A change in runway length or alignment, a new airport development project, a change in aeronautical procedures, or other similar reasons may be cause for additional study of proposed structures to determine whether marking and/or lighting are now appropriate even when not recommended in the original study.

2. Existing Structures. A marking and/or lighting recommendation may be made at any time. In making the recommendation consider changes that have occurred in the vicinity of the structure since the initial determination was made and include such factors as increased aircraft activity, the closing of an airport, changes in IFR and VFR routes, and shielding by taller structures.

**c.** RECOMMENDATIONS. Recommend the marking and/or lighting standard most appropriate for the height and location of any temporary or permanent structure that:

**1.** Exceeds 200 feet in overall height above ground level at its site or exceeds any obstruction standard contained in Part 77, Subpart C, unless an aeronautical study shows the absence of such

marking and/or lighting will not impair aviation safety.

**2.** Is not more than 200 feet AGL, or is not identified as an obstruction under the standards of Part 77, Subpart C, but may indicate by its particular location a need to be marked or lighted to promote aviation safety.

**d.** PARTIAL MARKING AND/OR LIGHTING. Omitting marking and/or lighting on the structure's bottom section; for example, the lowest 200 feet of a tall structure should be discouraged unless that part of the structure is shielded. Marking and lighting standards are based on a total system configuration and are only effective when used as intended. Therefore, the structure and its location must be given careful consideration before recommending partial marking and/or lighting.

e. OMISSION/DELETION OF MARKING AND/OR LIGHTING. When recommending that marking and/or lighting be omitted because the structure is sufficiently conspicuous by its shape, size, and/or color, include a judgment that the structure would not blend into any physical or atmospheric background that may reasonably be expected in the vicinity.

**f.** EXCESSIVE MARKING AND/OR LIGHTING. Recommend specific advisory circular chapters, paragraphs, and, when appropriate, specific intensities that address the minimum marking and/or lighting standards for safety. Recommendation of specific chapters allow for the use of those chapters only, although they may contain references to other chapters. If the sponsor insists on or the FAA finds that high intensity white lights would not be objectionable, indicate in the determination that the FAA does not object to increased conspicuity provided the lighting is in accordance with guidelines of AC 70/7460-1, Obstruction Marking and Lighting.

**g.** VOLUNTARY MARKING AND/OR LIGHTING. When it is determined not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However, marking and/or lighting should not be a condition of the determination, but instead, it must be recommended that, if voluntary, marking and/or lighting be installed and maintained in accordance with AC 70/7460–1.

# **h.** HIGH AND MEDIUM INTENSITY WHITE OBSTRUCTION LIGHTING SYSTEMS:

**1.** High intensity lighting systems should not be recommended for structures 700 feet above ground level or less, except when an aeronautical study shows otherwise. This does not apply to catenary support structures.

2. Use caution in recommending the use of high or medium intensity white obstruction lighting systems, especially in a populated area. Aircraft operations can be adversely affected where strobelighted structures are located in an area of limited visual cues. These situations can contribute to spatial disorientation when pilots are maneuvering in minimum visibility conditions. Marine or surface vessels and other vehicles, especially on nearby elevated roadways, could also experience operational difficulties from strobe lights. External shielding may minimize adverse effects. Examples are:

(a) At locations within the airport/heliport environment in a sparsely lighted rural setting.

(b) At an offshore installation.

**3.** Dual lighting systems should be considered when a structure is located in or near residential areas, especially in hilly terrain where some houses are higher than the base of the structure.

i. LIGHTED SPHERICAL MARKERS. Lighted spherical markers are available for increased night conspicuity of high-voltage (69kv or greater) transmission-line catenary wires. These markers should be recommended for increased night conspicuity for such wires when located near airports, heliports, across rivers, canyons, lakes, etc. Consider the following when recommending lighted spherical markers: aeronautical activity, nighttime operations, low level operations, local weather conditions, height of wires, length of span, etc. If the support structures are to be lighted, also consider lighting the catenary wires. Installation, size, color, and pattern guidelines can be found in Advisory Circular 70/7460-1, Obstruction Marking and Lighting.

**j.** DEVIATIONS AND MODIFICATION TO MARKING AND/OR LIGHTING. When the sponsor or owner of a structure requests permission to deviate from or modify the recommended marking and/or lighting, an appropriate aeronautical study should be made to determine whether the deviation/ modification is acceptable, and/or whether the recommended marking and/or lighting should be retained.

**1.** A deviation refers to a change from the standard patterns, intensities, flashing rates, etc. A marking and lighting deviation is considered to be marking patterns or colors and lighting patterns, intensities, flashing rates, or colors other than those specified in AC 70/7460–1.

(a) Examples of deviations are contained in the AC 70/7460–1 and requests for deviations must be forwarded to the OEG to conduct an aeronautical study for the proposal. The results of the evaluation will be sent to the Team Manager for review.

(b) Deviations require final approval by the OEG Group Manager. The Team Manager will forward the results of the study to the OEG Group Manager for approval or denial and the OEG must effect all coordination necessary for issuing the decision.

2. The OEG may approve a request for a modified application of marking and/or lighting. Examples of modified applications may be found in AC 70/7460–1. A modified application of marking and lighting refers to the amount of standard marking and/or lighting such as:

(a) Placing the standard marking and/or lighting on only a portion of a structure.

(b) Adding marking and/or lighting in addition to the standard marking and lighting to improve the conspicuity of the structure;

(c) Reducing the amount of standard marking and/or lighting to the extent of eliminating one or the other as may be considered appropriate.

(d) Adjusting the standard spacing of recommended intermediate light levels for ease of installation and maintenance as considered appropriate.

### 6-3-16. NEGOTIATIONS

Negotiations must be attempted with the sponsor to reduce the structure's height so that it does not exceed obstruction standards, mitigate any adverse effects on aeronautical operations, air navigation and/or communication facilities, or eliminate substantial adverse effect. If feasible, recommend collocation of the structure with other structures of equal or greater heights. Include in the aeronautical study file and determination a record of all the negotiations attempted and the results. If negotiations result in the withdrawal of the OE notice, the obstruction evaluation study may be terminated. Otherwise, the obstruction evaluation must be continued to its conclusion.

## 6-3-17. CIRCULARIZATION

**a.** Circularizing a public notice allows the FAA to solicit information that may assist in determining what effect, if any, the proposed structure would have to the navigable airspace. The OEG determines when it is necessary to distribute a public notice.

**1.** If a structure first exceeds obstruction standards, then a public notice should be circularized if:

(a) An airport is affected;

(b) There is possible VFR effect; or

(c) There is a change in aeronautical operations or procedures.

**2.** Circularization is not necessary for the following types of studies:

(a) A reduction in the height of an existing structure.

(b) A structure that would be located on a site in proximity to another previously studied structure, would have no greater effect on aeronautical operations and procedures, and the basis for the determination issued under the previous study could be appropriately applied.

(c) A proposed structure replacing an existing or destroyed structure, that would be located on the same site and at the same or lower height as the original structure, and marked and/or lighted under the same provisions as the original structure (this does not preclude a recommendation for additional marking/lighting to ensure conspicuity).

(d) A proposed structure that would be in proximity to, and have no greater effect than, a previously studied existing structure, and no plan is on file with the FAA to alter or remove the existing structure.

(e) A structure that would be temporary and appropriate temporary actions could be taken to accommodate the structure without an undue hardship on aviation.

(f) A structure found to have substantial adverse effect based on an internal FAA study.

(g) A structure that would exceed Part 77.17 (a)(2) and would be outside the traffic pattern.

(h) A structure that would affect IFR operations but would only need FAA comment. For instance a structure that:

(1) Would raise a MOCA, but not a MEA.

(2) Would raise a MVA.

(3) Would raise a MIA.

**3.** Circularization for existing structures will be determined on a case–by–case basis.

**b.** Each public notice (automated letter CIR) must contain:

**1.** A complete, detailed description of the structure including, as appropriate, illustrations or graphics depicting the location of the structure:

(a) On-airport studies. Use airport layout plans or best available graphic.

(b) Off-airport studies. Use the appropriate aeronautical chart. Additional illustrations may be included, as necessary.

**2.** A complete description of the obstruction standards that are exceeded, the number of feet by which the structure exceeds the standards.

**3.** An explanation of the potential effects of the structure in sufficient detail to assist interested persons in formulating comments on how the structure would affect aeronautical operations.

**4.** A date by which comments are to be received. The date established should normally allow interested persons 30 days in which to submit comments, but a shorter comment period may be established depending upon circumstances.

**c.** Public notices should be distributed to those who can provide information needed to assist in evaluating the aeronautical effect of the structure. As a minimum, the following governmental agencies, organizations, and individuals should be included on distribution lists due to their inherent aeronautical interests:

**1.** The sponsor and/or his representative.

2. All known aviation interested persons and groups such as state, city, and local aviation authorities; airport authorities; various military organizations within the DOD; flying clubs; national, state, and local aviation organizations; flight schools; fixed base operators; air taxi, charter flight offices; and other organizations or individuals that demonstrate a specific aeronautical interest such as county judges and city mayors.

**3.** Airport owners as follows:

(a) All public-use airports within 13 NM of the structure.

(b) All private-use airports within 5 NM of the structure.

**4.** The specific FAA approach facility, en route facility (ARTCC), and Flight Service Station (FSS) in whose airspace the structure is located.

5. Flight Standards.

**6.** An adjacent regional/service area office if the structure is within 13 NM of the regional state boundary.

7. As appropriate, state and local authorities; civic groups; organizations; and individuals who do not have an aeronautical interest, but may become involved in specific aeronautical cases, must be included in the notice distribution, and given supplemental notice of actions and proceedings on a case-by-case basis. Those involved should clearly understand that the public notice is to solicit aeronautical comments concerning the physical effect of the structure on the safe and efficient use of airspace by aircraft.

**8.** A proposed structure that penetrates the 40:1 by 35 feet or more, departure slope must be circularized to the following:

(a) Aircraft Owners and Pilots Association;

(b) National Business Aviation Association;

(c) Regional Air Line Association;

(d) Department of Defense;

(e) Air Transport Association;

(f) Air Line Pilots Association; and

(g) Other appropriate persons and organizations listed in this section.

**d.** Document and place in the obstruction evaluation file the names of each person and/or organizations to which public notice was sent. Reference to a distribution code, mailing list, or other evidence of circularization is sufficient provided a printout or list of each coded distribution is maintained for future reference. Also record the time period during which each printout or list is used. The retention schedule is listed in Order 1350.15, Records Organization, Transfer, and Destruction Standards.

**e.** Consider only valid aeronautical objections or comments in determining the extent of adverse effect of the structure. Comments of a non–aeronautical nature are not considered in obstruction evaluation as described in Part 77.

**f.** If the sponsor agrees to revise the project so that it does not exceed obstruction standards and would have no adverse effect, cancel the public notice, advise interested parties, as necessary, revise the obstruction evaluation study, and proceed as appropriate.

recommended, the sponsor must be required to notify Aeronautical Information Services (AJV–A) directly when the change has been accomplished. Use the following specific language: "So that aeronautical charts and records can be updated, please notify Aeronautical Information Services in writing when the new system is installed and operational. Notification should be addressed to: Aeronautical Information Services, AJV–A, 6500 South MacArthur Blvd, Oklahoma City, Oklahoma 73169. The sponsor may also indicate marking and/or lighting change with a Supplemental Notice, 7460–2 Actual Construction Notice, submitted electronically using the OEAAA website.

(d) If it is determined that marking and/or lighting are not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However, marking and/or lighting should not be a condition of the determination. Instead, it must be recommended that voluntary marking and/or lighting be installed and maintained in accordance with AC 70/7460–1. Use specific language as follows: "Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory Circular 70/7460–1."

**4.** SUPPLEMENTAL NOTICE. FAA Form 7460–2, Notice of Actual Construction or Alteration, Part 2, is the authorized form for sponsors to report the start, completion, or abandonment of construction, and the dismantlement of structures. Furnish this form to each sponsor when supplemental notice is required. Each service area office must take action to ensure that their return address is correct before sending the form to the sponsor.

(a) When deemed necessary, request sponsors to complete and mail Part 1 of FAA Form 7460–2, to be received at least 10 days before the start of construction or alteration, when:

(1) An aeronautical procedure or minimum flight altitude will be affected (supplemental notice earlier than 10 days may be requested to permit adjustments).

(2) The construction will be in progress over an extended period of time.

(3) The structure will exceed 500 feet AGL and will be erected within a relatively short period of time, as in the case of a TV tower.

(b) In addition, submission by the sponsor of FAA Form 7460–2, must be required when the structure is a new construction or involves a proposed physical alteration, and:

(1) Is more than 200 feet above ground level (AGL).

(2) Is less than 200 feet AGL but exceeds obstruction standards, requires a change to an established FAA procedure or flight minimum, requires certified accuracy so as not to exceed minimums.

(3) The FAA deems it necessary for any other reason.

(c) The information submitted on FAA Form 7460–2 is used for:

(1) Charting obstructions to air navigation on aeronautical charts.

(2) Giving notice to air missions, when applicable, of the construction of obstructions.

(3) Changing affected aeronautical procedures and operations.

(4) Revising minimum flight altitudes.

(5) Updating the AeroNav Obstacle Digital File.

(d) Do not require supplemental notice for existing structures that do not involve a proposed physical alteration. Instead, directly communicate the known information to AeroNav and other relevant persons or organizations, as necessary.

**5.** EXPIRATION DATE. Include an expiration date, if applicable.

(a) Assign an expiration date to all determinations that involve new construction or alterations.

(1) Normally all determinations, whether FCC construction permit related or not, must be assigned an expiration date 18 months from the effective/issued date. In the case of determinations involving petition rights, the expiration must be 18 months from the final date of the determination.

(2) If circumstances warrant, an expiration date not to exceed 18 months should be assigned.

(b) The determination expires on the date prescribed unless:

(1) Extended, revised, or terminated by the issuing office.

(2) The construction is subject to the licensing authority of the FCC and an application for a construction permit has been filed as required by the FCC within six months of the date of the determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application. A request for extension must be postmarked or delivered at least 15 days prior to expiration.

(c) If the date of a final determination is changed because of a petition or review, a new expiration date will be specified as appropriate.

(d) Determinations involving existing structures that do not involve a proposed physical alteration must not contain an expiration date.

**6.** SPECIAL CONDITIONS. Any condition upon which a no hazard determination is based must be specified in the determination. When FAA Form 7460–2 is requested, a condition of the determination will be for the sponsor to keep the FAA informed of the project's status. Use the following specific language: "As a result of this structure being critical to flight safety, it is required that the FAA be kept informed as to the status of the project. Failure to respond to periodic FAA inquiries could invalidate this determination."

**7.** SPECIAL STATEMENTS. To help prevent potential problems, all determinations must include the following statements:

(a) "This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any change in coordinates, heights, frequency(ies) or use of greater power will void this determination. Any future construction or alteration, including increase in heights, power, or the addition of other transmitters, requires separate notice to the FAA."

(b) "This determination does include temporary construction equipment, such as cranes, derricks, etc., which may be used during the actual construction of the structure. However, this equipment must not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA."

(c) "This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, state, or local government body."

**8.** ADVISORIES. Determinations may require advisory statements (available in the automated letters) to notify sponsors of potential issues.

(a) Issues pertaining to noise can be addressed as a statement in the determination with the following language: "The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport."

(b) When requested by the military, issues pertaining to military training areas/routes can be addressed in a determination with the following language: "While the structure does not constitute a hazard to air navigation, it would be located within or near a military training area and/or route."

(c) Issues pertaining to a runway protection zone can be addressed in the determination as follows: "While the structure does not constitute a hazard to air navigation, it would be located within the Runway Protection Zone (RPZ) of the airport/runway. Structures, which will result in the congregation of people within an RPZ, are strongly discouraged in the interest of protecting people and property on the ground. In cases where the airport owner can control the use of the property, such structures are prohibited. In cases where the airport owner exercises no such control, advisory recommendations are issued to inform the sponsor of the inadvisability of the project from the standpoint of safety to personnel and property."

(d) Issues pertaining to municipal solid waste landfills can be addressed in the determination as follows:

"The FAA has identified the need for an analysis of potential wildlife hazards to aircraft as described in Advisory Circular 150/5200–33, Hazardous Wildlife Attractants on or Near Airports, to be accomplished for this proposal in accordance with 40 Code of Federal Regulation (CFR) 258 section 258.10.

## 14–1–6. EXAMPLES OF TERMINAL AIRSPACE LEGAL DESCRIPTIONS

### NOTE-

For part-time areas add the following words to the basic legal description:

"This Class (add appropriate letter) airspace area is effective during the specific dates and times established in advance by a Notice to Air Missions. The effective date and time will thereafter be continuously published in the Chart Supplement."

# a. EXAMPLE 1–

### ANE MA B BOSTON, MA

Logan International Airport, MA (Primary Airport) (lat. 42°21'51"N., long. 70°59'22"W.)

Boston VORTAC

(lat. 42°21'27"N., long. 70°59'22"W.)

## Boundaries.

**Area A.** That airspace extending upward from the surface to and including 7,000 feet MSL within an 8-mile radius of the Boston VORTAC.

**Area B.** That airspace extending upward from 2,000 feet MSL to and including 7,000 feet MSL within a 10.5–mile radius of the Boston VORTAC, excluding Area A.

**Area C.** That airspace extending upward from 3,000 feet MSL to and including 7,000 feet MSL within a 20-mile radius of the Boston VORTAC, excluding Areas A and B previously described and that airspace within and underlying Area D described hereinafter.

**Area D.** That airspace extending upward from 4,000 feet MSL to and including 7,000 feet MSL between the 15– and 20–mile radii of the Boston VORTAC extending from the Boston VORTAC 230° radial clockwise to the Boston VORTAC 005° radial.

#### **b.** EXAMPLE 2– ANM MT C Billings, MT Billings Logan International Airport, MT (lat. 45°48'30"N., long. 108°32'38"W.)

That airspace extending upward from the surface to and including 7,700 feet MSL within a 5-mile radius of the Billings Logan International Airport; and that airspace extending upward from 4,900 feet MSL to and including 7,700 feet MSL within a 10-mile radius of the airport

### c. *EXAMPLE 3–* AGL MN D Duluth, MN Duluth International Airport, MN

(lat. 46°50'32"N., long. 92°11'38"W.)

That airspace extending upward from the surface to and including 3,900 feet MSL within a 4.9-mile radius of Duluth International Airport.

# d. EXAMPLE 4-

AEA VA E2 Danville, VA Danville Regional Airport, VA (lat. 36°34'22''N., long. 79°20'10''W.)

That airspace extending upward from the surface within a 5-mile radius of Danville Regional Airport and within 2.4-miles each side of a  $208^{\circ}$  bearing from the airport, extending from the 5-mile radius to 7 miles southwest of the airport, and within 2.4-miles each side of a  $016^{\circ}$  bearing from the airport, extending from the 5-mile radius to 7 miles northeast of the airport.

# Section 2. Class C Airspace Planning

#### 16-2-1. CRITERIA

**a.** The criteria for considering a given airport as a candidate for Class C designation is based on the volume of aircraft or number of enplaned passengers, the traffic density, and the type or nature of operations being conducted.

**b.** For a site to be considered as a candidate for Class C airspace designation, it must meet the following criteria:

**1.** The airport must be serviced by an operational airport traffic control tower and a radar approach control; and

**2.** One of the following applies:

(a) An annual instrument operations count of 75,000 at the primary airport.

(b) An annual instrument operations count of 100,000 at the primary and secondary airports.

(c) An annual count of 250,000 enplaned passengers at the primary airport.

**3.** Class C designation contributes to the efficiency and safety of operations and is necessary to correct a current situation or problem that cannot be solved without a Class C designation.

#### NOTE-

Operations counts are available from the Office of Aviation Policy and Plans, Statistics and Forecast Branch, APO-110. Enplaned passenger counts may be obtained by contacting the Office of Airport Planning and Programming, APP-1. Current validated counts are normally available in mid-October of the current year for the previous year.

#### 16-2-2. DESIGNATION

Class C airspace areas should be designated around a single primary airport.

### 16-2-3. CONFIGURATION

In general, airspace design identifies simplification and standardization of Class C airspace areas as prime requisites. Containment of instrument procedures within Class C airspace is not required. Lateral and vertical limits must be in accordance with the following, to the extent possible:

**a.** Lateral Limits. Class C airspace areas should initially be designed as two concentric circles centered on the airport reference point. The surface area should have a 5 NM radius, and the outer limits of the airspace area should not extend beyond a 10 NM radius. Wherever possible, use VOR radials and DME arcs to define the boundaries of the airspace and any of its sub–areas. It is important, however, that prominent visual landmarks also be considered to assist the VFR traffic preferring to remain clear of Class C airspace.

**b. Vertical Limits.** The ceiling of a Class C airspace should be 4,000 feet above the primary airport's field elevation. The surface area extends from the surface to the upper limit of the airspace. The floor of the airspace between the 5 and the 10 NM must extend from no lower than 1,200 feet AGL to the upper limit of the airspace.

**c. Variations.** Any variation from the lateral and vertical limits design guidance must be justified in the staff study and recommended by the Service Center. (The number of sub–areas must be kept to a minimum.)

#### NOTE-

Though not requiring regulatory action, an Outer Area is the procedural companion to Class C airspace. The normal radius of an Outer Area is 20 NM from the primary Class C airspace airport. Its vertical limit extends from the lower limits of radio/radar coverage up to the ceiling of the approach control's delegated airspace, excluding the Class C airspace itself, and other airspace as appropriate.

#### 16-2-4. TIME OF DESIGNATION

**a.** Class C airspace areas may be designated as continuous or part-time. If part-time, the effective time must be stated in local time. In order to designate a part-time Class C airspace area, the following statement must be included in the airspace description: "This Class C airspace area is effective during the specific dates and times established, in advance, by a Notice to Air Missions (NOTAM). The effective date and time will thereafter be continuous-ly published in the (*insert appropriate publication from below*)."

- 2. Chart Supplement Alaska; or
- **3.** Chart Supplement Pacific.

**b.** For permanent changes to existing part–time Class C airspace area designations, the following actions must be accomplished:

**1.** Issue an airspace NOTAM specifying the new part-time Class C effective hours.

**2.** Submit the new part-time Class C effective hours to AIS for publication in the Chart Supplement U.S., Chart Supplement Alaska, or Chart Supplement Pacific, as appropriate.

**3.** Retain the NOTAM specifying the new part-time Class C effective hours until the new hours are published in the appropriate chart supplement.

**c.** For unexpected events that affect the availability of part-time Class C services, issue a service NOTAM, in accordance with FAA Order 7930.2, Notices to Air Missions, describing the ATC service available and duration. No airspace NOTAM is issued.

**d.** Notices to Air Missions specifying the dates and times of a designated part-time area may be issued by the appropriate facility only after coordination with the Service Center. The Service Center must ensure that such action is justified and in the public interest.

# Chapter 17. Class D Airspace

# Section 1. General

#### 17-1-1. PURPOSE

Class D airspace areas are terminal airspace that consist of specified airspace (i.e., Surface Areas) within which all aircraft operators are subject to operating rules and equipment requirements. Service area offices are responsible for the coordination and implementation of Class D airspace designations.

**a.** Generally, a surface area is designated Class D airspace to provide controlled airspace for terminal VFR or IFR operations at airports having a control tower.

**b.** For non-towered airports requiring a surface area, the airspace will be designated Class E, see FAA Order JO 7400.9, Airspace Designations and Reporting Points.

**c.** The designation of navigable airspace outside of the United States is the responsibility of the Rules and Regulations Group (for example, U.S. territories).

#### 17-1-2. REGIONAL/SERVICE AREA OFFICE EVALUATION

**a.** Service area offices must biennially evaluate existing and candidate Class D airspace areas using the information contained in this chapter as a guideline.

**b.** If the conclusion of an evaluation indicates that airspace modifications should be made, regions/service area offices must follow the applicable procedures in this order.

#### 17-1-3. DESIGNATION

If the communications and weather observation reporting requirements of paragraphs 17-2-9 and 17-2-10 are met, a surface area:

**a.** Must be designated where a FAA control tower is in operation. Final rules will not be published in the Federal Register prior to a control tower becoming operational at the primary airport. **b.** May be designated where a non–FAA control tower is in operation.

**c.** Must be designated to accommodate instrument procedures (planned, published, special, arrival, and departure) if such action is justified and/or in the public interest. The following factors should be considered:

**1.** Type of procedure, including decision height or minimum descent altitude.

2. The actual use to be made of the procedure, including whether a certificated air carrier or an air taxi/commuter operator providing service to the general public uses it.

#### NOTE-

For special instrument procedures, consideration should be given to availability to other users.

**3.** The operational and economic advantage offered by the procedure, including the importance and interest to the commerce and welfare of the community.

4. Any other factors considered appropriate.

### 17-1-4. TIME OF DESIGNATION

Class D or surface areas may be designated full-time or part-time. If part-time, the effective time must be stated in Coordinated Universal Time (UTC). Service area offices must ensure effective times are forwarded to AIS to be published in the NFDD.

#### 17-1-5. PART TIME SURFACE AREAS

**a.** A provision may be incorporated in part-time Class D surface area designations (rules) to allow, by Notices to Air Missions, for changes when minor variations in time of designation are anticipated. To apply this provision a Notice of Proposed Rulemaking and final rule must be issued which provides the following statement in the specific airspace designation: "This surface area is effective during the specific dates and times established, in advance, by a Notice to Air Missions." **b.** The effective date and time will thereafter be continuously published. Information concerning these surface areas must be carried in the following publications as applicable:

**1.** The Chart Supplement U.S. for the contiguous United States, Puerto Rico, and Virgin Islands.

2. The Chart Supplement Alaska.

#### 3. The Chart Supplement Pacific

**c.** Notices to Air Missions specifying the dates and times of a designated part–time area may be issued by the appropriate facility only after coordination with the regional/service area office The service area office must assure that such action is justified and in the public interest.

# Section 2. Class D Airspace Standards

#### 17-2-1. CONFIGURATION

**a.** A Class D airspace area must be of sufficient size to:

**1.** Allow for safe and efficient handling of operations.

**2.** Contain IFR arrival operations while between the surface and 1,000 feet above the surface and IFR departure operations while between the surface and the base of adjacent controlled airspace.

**b.** Size and shape may vary to provide for 1 and 2 above. The emphasis is that a Class D area must be sized to contain the intended operations.

#### 17-2-2. AIRPORT REFERENCE POINT/ GEOGRAPHIC POSITION

**a.** The Class D airspace boundary should normally be based on the airport reference point (ARP) or the geographic position (GP) of the primary airport. The ARP/GP is the center of the airport expressed in coordinates and should be incorporated into the surface area's legal description.

**b.** If a Class E surface area is established in conjunction with a part-time Class D area, the areas should normally be coincident. Explain any differences in the rulemaking documents.

#### NOTE-

Under certain conditions, the ARP/GP can change. If this occurs, the airspace should be reviewed to ensure the instrument procedures are still contained within existing airspace.

#### 17-2-3. SATELLITE AIRPORTS

**a.** Using shelves and/or cutouts to the extent practicable, exclude satellite airports from the Class D airspace area (see FIG 17-2-3).

**b.** Satellite airports within arrival extensions may be excluded using the actual dimensions of the TERPs trapezoid.

**c.** Do not exclude airports inside the TERPs primary obstruction clearance area of the procedure(s) for which the surface area is being constructed or when the exclusion would adversely affect IFR operations.

# 17-2-4. ADJOINING CLASS D AIRSPACE AREAS

Designate separate Class D airspace area for airports in proximity to each other. A common boundary line must be used so that the airspace areas do not overlap. When operationally advantageous, the common boundary separating adjacent Class D areas may be eliminated if the areas are contained in an existing Class B or Class C airspace area controlled by the same IFR ATC facility.

### 17–2–5. DETERMINING CLASS D AREA SIZE

The size of a Class D area, and any necessary extensions, is determined by the use of a 200 feet per NM climb gradient and information obtained from the person responsible for developing instrument procedures (see FIG 17–2–1).

#### NOTE-

Normally, the person responsible for developing instrument procedures for civil and U.S. Army airports is a FAA Aviation Standards Airspace Evaluation Specialist. A military representative handles all other military procedures.

#### 17-2-6. DEPARTURES

**a.** When diverse departures are authorized, design the Class D area using a radius of 3.5 NM plus the distance from the ARP/GP to the departure end of the outermost runway (see FIG 17-2-1).

**b.** When specific departure routes are required, the routes will determine the shape of the Class D area. Use the 200 feet per NM climb gradient procedure in subparagraph a. above and FIG 17-2-2 plus 1.8 NM either side of the track(s) to be flown.

**c.** In areas with rising terrain, apply the procedures reflected in FIG 17–2–2.

#### 17-2-7. ARRIVAL EXTENSION

**a.** A Class D area arrival extension must be established to the point where an IFR flight on an instrument approach can be expected to descend to less than 1,000 feet above the surface.

**b.** When multiple approach procedures are established using the same initial approach course,

but with different 1,000-foot points, the extension length must be based on the approach requiring the greatest distance. Consistent with safety and operational feasibility, if an adjustment to the 1,000-foot point can be made to eliminate or shorten an extension, the specialist must coordinate with the person responsible for developing the instrument approach to request the adjustment.

**c.** The width of the extension must be equal to the width of the TERPs primary obstruction clearance area at the point where an IFR flight on an instrument approach can be expected to descend to an altitude below 1,000 feet above the surface. However, if the primary area widens between the point where the flight leaves 1,000 feet and the airport, the widened portion of the primary area located outside the basic surface area radius must be used for the extension. These extensions must, in all cases, extend to a minimum of 1 NM on each side of the centerline.

**d.** If all arrival extensions are 2 NM or less, they will remain part of the basic Class D area. However, if any extension is greater than 2 NM, then all extensions will be Class E airspace.

#### 17-2-8. VERTICAL LIMITS

Class D areas should normally extend upward from the surface up to and including 2,500 feet AGL. The altitude must be converted to MSL and rounded to the nearest 100 feet. However, in a low density or non-turbo aircraft traffic environment, a vertical limit of 2,500 feet AGL may be excessive and a lower altitude should be used.

#### NOTE-

The nearest 100 feet means that 49 feet and below must be rounded down and 50 feet and above must be rounded up.

### 17-2-9. COMMUNICATIONS

Communications capability must exist with aircraft, that normally operate within the Class D Surface Area down to the runway surface of the primary airport (the airport upon which the surface area is designated). This communication may be either direct from the ATC facility having jurisdiction over the area or by rapid relay through other communications facilities which are acceptable to the ATC facility having that jurisdiction.

# 17–2–10. WEATHER OBSERVATIONS AND REPORTING

**a.** Weather observations must be taken at the primary airport during the times and dates the Class D airspace is active. A federally certified weather observer or a federally commissioned automated weather observing system (this includes all FAA and NWS approved and certified weather reporting systems) can take the weather observation. The weather observer must take routine (hourly) and special observations. An automated weather observations serving system can provide continuous weather observations.

**b.** Scheduled record and special observations from weather observers or automated weather reporting systems must be made available to the ATC facility(s) having control jurisdiction over the Class D designated surface area. This can be accomplished through Flight Service Station (FSS), Longline Dissemination, National Weather Service (NWS), or other FAA-approved sources. Facilities that require weather reports from satellite airports may enter into a letter of agreement (LOA) with the associated FSS, airline/contract observer, airport management, etc.

#### NOTE-

**1.** At ATC sites where non-Federal employees perform weather duties, the appropriate FAA office must ensure that the reporting and dissemination requirements applicable to National Weather Service and FAA publication standards are followed.

**2.** In facilities where direct access to automated weather observing systems is not available, controllers will apply the provisions of FAA Order JO 7110.65, Air Traffic Control.

# 17–2–11. LOSS OF COMMUNICATION OR WEATHER REPORTING CAPABILITY

**a.** If the capabilities outlined in paragraph 17–2–9 and/or paragraph 17–2–10 are temporarily out of service for an active Class D Surface Area, a Notice to Air Missions must be issued stating the temporary loss of the affected service.

**b.** However, if it is determined that the capabilities are consistently unavailable, a Notice to Air Missions must be issued, as described above, and rulemaking action initiated to revoke the Surface Area, as appropriate.

# Part 5. Special Use Airspace Chapter 21. General

# Section 1. Policy

## 21-1-1. PURPOSE

The primary purpose of the Special Use Airspace (SUA) program is to establish/designate airspace in the interest of national defense, security, or interest. Charted SUA identifies to other airspace users where these activities occur.

#### NOTE-

SUA is not intended to benefit an individual or commercial operator over the public's right of transit through the navigable airspace.

# 21-1-2. SCOPE

In addition to the policy guidelines and procedures detailed in Part 1 of this order, this part prescribes specific policies and procedures for handling SUA cases.

### 21-1-3. DEFINITION AND TYPES

**a.** SUA is airspace of defined dimensions wherein activities must be confined because of their nature, or wherein limitations may be imposed upon aircraft operations that are not a part of those activities, or both.

**b.** The types of SUA areas are Prohibited Area, Restricted Area, Military Operations Area (MOA), Warning Area, Alert Area, Controlled Firing Area (CFA), and National Security Area (NSA).

### NOTE -

**1.** Air Traffic Control Assigned Airspace (ATCAAs) below FL 180, and Altitude Reservations (ALTRVs) must not be used as a substitute for SUA when conducting activities for which a SUA is designed to contain.

**2.** Since ATCAAs and ALTRVs are not depicted on aeronautical charts, they do not inform the flying public of the location of the activity as is provided by charted SUA.

**3.** Additionally, ATCAAs and ALTRVs are not to be used as an interim solution while a SUA proposal is pending.

# 21-1-4. CATEGORIES

There are two categories of SUA: regulatory (rulemaking) and other than regulatory (nonrulemaking). Prohibited Areas and Restricted Areas are rulemaking actions that are designated by amendment to part 73. MOAs, Warning Areas, Alert Areas, and NSAs are implemented by nonrulemaking action published in a National Flight Data Digest (NFDD). CFAs are implemented by nonrulemaking action published in an approval letter by the Operations Support Group (OSG).

# 21-1-5. SUA APPROVAL AUTHORITY

FAA Headquarters is the final approval authority for all permanent and temporary SUA, except CFAs. CFA approval authority is delegated to the Service Center OSG. The Service Center OSG must forward SUA proposals recommended for approval (except CFA) to FAA Headquarters for a final determination.

### NOTE-

Final approval of Warning Areas requires consultation with other agencies per Executive Order 10854. Warning Area proposals, except for controlling/using agency changes or minor editorial corrections, must be coordinated with the Department of State and the Department of Defense for concurrence. The Rules and Regulations Group, AJV-P2, is responsible for accomplishing this coordination.

# 21-1-6. MINIMUM VOLUME AND TIMES

The dimensions and time of designation/times of use of SUA must be the minimum required for containing the proposed activities, including safety zones required by the proponent. When it is determined that a specified SUA area is no longer required, the using agency, or their appropriate headquarters authority, must inform the Service Center OSG that action may be initiated to remove and return the SUA airspace to the NAS.

### 21-1-7. OPTIMUM USE OF AIRSPACE

**a.** To ensure the optimum use of airspace, military using agencies must, where mission requirements permit, make their assigned SUA available for the activities of other military units on a shared-use basis.

**b.** SUA should be located to impose minimum impact on nonparticipating aircraft and ATC operations, with consideration of the proponent's requirements. To the extent practical, SUA should avoid Air Traffic Service routes, major terminal areas, and known high volume VFR routes.

**c.** Large SUA areas should be subdivided, where feasible, in order to facilitate the real-time release of the airspace when activation of the entire area is not required by the using agency.

#### 21-1-8. JOINT-USE POLICY

**a.** SUA must be returned to the controlling agency and become available for access by nonparticipating aircraft during periods when the airspace is not needed by the using agency for its designated purpose.

**b.** Restricted areas, warning areas, and MOAs must be designated as joint-use unless it is demonstrated that this would result in negative impacts to the using agency's mission. For certain SUA areas, joint-use may be impractical because of the area's small size, geographic location, or high level of use. In these cases, the airspace proposal package must include specific justification addressing why joint-use is not appropriate.

**c.** Joint–use does not apply to prohibited areas. Alert areas and CFAs are joint–use by design because nonparticipating aircraft may transit these areas without limitation.

**d.** Joint-use procedures must be specified in a joint-use Letter of Agreement (LOA) or Letter of Procedure (LOP) between the using agency and the controlling agency. These letters should include provisions for the real-time activation/deactivation of the airspace and timely notification to the controlling agency when the scheduled activity has changed, been canceled, or was completed for the day.

#### 21-1-9. ENVIRONMENTAL ANALYSIS

a. SUA actions are subject to environmental impact analysis in accordance with the National Environmental Policy Act of 1969 (NEPA). Guidance for the environmental analysis of SUA proposals is contained in FAA Order 1050.1, Environmental Impacts; Policies and Procedures; Chapter 32 of this order; other relevant FAA directives; and the Memorandum of Understanding between the Federal Aviation Administration and the Department of Defense for Environmental Review of Special Use Airspace Actions at Appendix 7 of Chapter 32 of this order. All environmental impact analyses and reviews must be coordinated with the airspace specialist and the environmental specialist of the appropriate Service Center OSG to ensure that SUA using agencies' environmental impact review and documentation are consistent with known regulations, proposals, and applicable studies.

**b.** Advisory Actions. Designation of alert areas and warning areas are considered advisory actions under FAA Order 1050.1. Actions of this type are not considered major Federal actions under NEPA, and NEPA review is therefore not required.

**c.** Categorical Exclusions. The following SUA actions are categorically excluded, provided it is determined that no extraordinary circumstances, as specified in FAA Order 1050.1, exist:

**1.** Actions to return all or part of SUA to the NAS, such as revocation of airspace, a decrease in dimensions, or a reduction in times of use (e.g., from continuous to intermittent, or use by a NOTAM).

2. Modification of the technical description of SUA that does not alter the dimensions, altitudes, or times of designation of the airspace (such as changes in designation of the controlling or using agency, or correction of typographical errors).

3. Designation of CFAs.

**4.** Actions to increase the altitude of SUA.

#### 21-1-10. CONTROLLING AGENCY

The controlling agency is the FAA ATC facility that exercises control of the airspace when a SUA area is not activated. A military ATC facility may be assigned as the controlling agency, subject to the concurrence of the Service Center OSG and the concerned ARTCC. A controlling agency must be designated for each joint–use SUA area.

## 21-1-11. USING AGENCY

**a.** The using agency is the organization, or military command/unit whose activity established the requirement for the SUA. The using agency is responsible for ensuring that:

**1.** The airspace is used only for its designated purpose.

**2.** Scheduling procedures are established, utilized, and captured in an LOA/LOP.

**3.** The controlling agency is kept informed of changes in scheduled activity, to include the completion of activities for the day.

4. A point of contact is made available to enable the controlling agency to verify schedules, and coordinate access for emergencies, weather diversions, etc.

REFERENCE-

FAA Order JO 7400.2, Para 21-1-6, Using Agency.

REFERENCE-

FAA Order JO 7610.4, Chapter 9, Military Operations Requirements(For Official Use Only). .

**b.** Restricted area and MOA using agencies are responsible for submitting Restricted Area/MOA Annual Utilization Reports in accordance with Section 7 of this chapter.

**c.** An ATC facility may be designated as the using agency for joint–use areas when that facility has been granted priority for use of the airspace in a joint–use LOA/LOP.

### 21-1-12. WAIVERS

The establishment of SUA does not, in itself, waive compliance with any part of the Code of Federal Regulations. DOD has been granted a number of waivers, exemptions, and authorizations to accomplish specific missions. Information about current waivers, exemptions, and authorizations granted for military operations may be obtained from FAA Headquarters, Rules and Regulations Group, or the Office of Rulemaking (ARM).

### 21-1-13. PUBLIC NOTICE PROCEDURES

Public notice procedures invite the public to comment on the impact of SUA proposals on the safe and efficient use of the navigable airspace. In addition to the public notice procedures described in Chapter 2 of this order, SUA proposals are subject to the following:

**a.** All nonregulatory SUA proposals must be circularized, and an NPRM must be issued for all regulatory SUA proposals, except for those actions that clearly have no impact on aviation and are not controversial. A nonrulemaking circular or NPRM is not normally required for the following types of proposals:

**1.** Changes to the using or controlling agency.

**2.** Editorial changes to correct typographical errors.

**3.** Internal subdivision of an existing area to enhance real-time use of the SUA (provided there is no expansion of the existing external boundaries).

**4.** Actions that lessen the burden on the flying public by revoking the SUA areas or reducing the size or times of use of SUA.

**b.** SUA nonrulemaking circulars are prepared and distributed by the Service Center OSG. FAA Headquarters prepares SUA NPRMs. Normally, circulars and NPRMs provide a minimum of 45 days for public comment.

**c.** When comments or coordination show that the proposal may be controversial, or there is a need to obtain additional information relevant to the proposal, an informal airspace meeting may be considered (see Chapter 2 of this order).

#### 21–1–14. SUA NONRULEMAKING CIRCULARS

**a.** Prepare and distribute SUA nonrulemaking circulars as specified in Chapter 2 of this order and the additional requirements in this paragraph. Ensure wide dissemination to the potentially affected aviation user community within 50 NM (recommended) of the affected airspace. Send one copy of each SUA circular to the Rules and Regulations Group, AJV-P2, and to the appropriate Service Center OSG military representative(s).

**b.** CONTENT – Circulars should contain sufficient information to assist interested persons in preparing comments on the aeronautical impact of the proposal. SUA circulars should only address SUA areas and include:

**1.** A brief narrative that:

(a) Describes the purpose of the proposed airspace, the types of activities to be conducted, and the expected frequency of those activities. If the proposal modifies existing SUA, describe the changes and explain the desired result. For temporary MOA proposals, include a brief summary of the planned exercise or mission scenario.

(b) Discusses measures planned to minimize impact on nonparticipating aircraft, such as airport exclusions, joint-use procedures, limited activation times, etc. If there are known plans to provide real time area status information and/or traffic advisory services for nonparticipating pilots, include that information in the circular.

**2.** A complete description of the proposed area consisting of boundaries, altitudes, times of use, controlling agency, and using agency.

**3.** A copy of a sectional aeronautical chart depicting the boundaries of the proposed area.

4. The name and address (provided by the proponent) of the person to whom comments on the environmental and land-use aspects of the proposal may be submitted.

#### NOTE-

Do not include statements in the circular that certify NEPA compliance or state that environmental studies are complete. The proponent and/or FAA must consider any environmental issues raised in response to the circular before a final determination is made on the proposal.

**5.** The issue date of the circular and the specific date that the comment period ends. Provide at least 45–days for public comment.

#### NOTE-

When selecting the comment closing date, consider the time needed for the preparation, printing and release of the circular, plus a representative mailing time, in order to afford the public at least 45 days to submit comments.

**c.** SPECIAL DISTRIBUTION – In addition to the distribution requirements in Chapter 2 of this order, send copies of SUA nonrulemaking circulars to:

**1.** State transportation, aviation, and environmental departments (or the state clearing house if requested by the state).

**2.** Local government authorities, civic organizations, interest groups, or individuals that may not have an aeronautical interest, but are expected to become involved in a specific proposal. **3.** Persons or organizations that have requested to be added to the circularization list.

#### NOTE-

**1.** The Service Center OSG determines additional distribution requirements in accordance with Service Center OSG policies after considering the type of proposal, potential for controversy, and extent of possible aeronautical impact.

2. If the proposed airspace overlaps service area geographical boundaries or airspace jurisdictions, the lead Service Center OSG must coordinate with the affected adjacent Service Center OSG to ensure distribution of circulars to all appropriate parties.

# 21–1–15. CHARTING AND PUBLICATION REQUIREMENTS

**a.** All SUA areas except CFAs, temporary MOAs, and temporary restricted areas, must be depicted on aeronautical charts, and published as required in aeronautical publications.

**b.** Approved SUA actions normally become effective on the 56–day charting dates published in FAA Order 8260.26, Appendix A.

#### EXCEPTION-

Effective dates for temporary restricted areas, temporary MOAs, and CFAs are determined by exercise start dates/mission requirements instead of the 56-day charting dates.

c. Temporary areas must be described in the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website. Normally, issuance of the graphic notice will begin two issues prior to the exercise start date and will continue through completion of the exercise. The notice must include the area's legal description, effective dates, and a chart depicting the area boundaries. For large exercises, a brief narrative describing the exercise scenario, activities, numbers and types of aircraft involved, and the availability of in-flight activity status information for nonparticipating pilots should be included.

### NOTE-

The Service Center OSG must submit temporary SUA Domestic Notice information, along with the airspace proposal package, to the Rules and Regulations Group, AJV-P2, by the dates specified in the appropriate chapter of this order. All graphics submitted must be of high quality and in camera ready form. The Rules and Regulations Group, AJV-P2, will process and submit the Domestic Notice to Publications and Administration, AJV-P12 for download into the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website.

**d.** When a SUA action becomes effective before it appears on the affected sectional chart(s), a description and map of the area will be presented in the Domestic Notices found in the Federal NOTAM System (FNS) External Links or the Air Traffic Plans and Publications website. This information will be carried in the Domestic Notices until the change has appeared on the affected sectional chart(s). The Rules and Regulations Group, AJV–P2, is responsible for complying with this requirement.

#### NOTE-

**1.** *Minor editorial corrections to a SUA description or changes to the using or controlling agencies, will not be published in the Domestic Notices.* 

**2.** In addition to the above, SUA designations or amendments that occur after publication of the latest sectional chart(s) will be listed in the "Aeronautical Chart Bulletins" section of the appropriate volume of the Chart Supplement. This information will be carried in the Chart Supplement until the change is published on the affected sectional chart(s).

#### 21–1–16. CERTIFICATION OF SUA GEOGRAPHIC POSITIONAL DATA

**a.** Geographic positional data for all permanent and temporary SUA boundaries, except CFAs, must be certified for accuracy by the AIS. The Rules and Regulations Group, AJV–P2, is responsible for submitting proposed positional data to AIS for certification. Latitude and longitude positions used in SUA descriptions must be based on North American Datum 83 (NAD 83).

**b.** The Rules and Regulations Group, AJV-P2, must forward any corrections or recommended

changes made by AIS to the Service Center OSG. The Service Center OSG will forward the AIS recommended changes to the Service Center OSG military representative(s), or civil proponent, for review. The Service Center OSG military representative(s)/civil proponent will inform the Service Center OSG of its concurrence with the AIS recommended changes or reason for nonconcurrence. The Service Center OSG will advise the Rules and Regulations Group, AJV–P2, of the proponent's concurrence or nonconcurrence and rationale. A record of this coordination must be retained in the airspace docket or nonrulemaking study file.

# 21-1-17. LEAD SERVICE CENTER

**a.** The Service Center OSG that is responsible for the geographical area containing the affected airspace processes the SUA proposal. When a proposal overlaps Service Center geographical jurisdictions, the concerned Service Centers must coordinate to determine which office will serve as the lead Service Center for processing the proposal. Coordination between both Service Centers is also required when the SUA airspace and the using agency/controlling agency are under the jurisdiction of different Service Centers.

**b.** The lead Service Center OSG must ensure that:

**1.** All affected ATC facilities review the proposal and provide input to the aeronautical study, as required.

**2.** Distribution of nonrulemaking circulars include interested parties in each Service Center OSG jurisdiction, as necessary.

**c.** The airspace package(s) submitted to the Rules and Regulations Group, AJV–P2, include documentation confirming Service Center OSG coordination.

# Section 2. SUA Legal Descriptions

### 21-2-1. GENERAL

**a.** The legal description is the official airspace definition used for NAS database and charting purposes. This section provides guidelines and formats for preparing SUA legal descriptions. See TBL 21–2–1 for examples of regulatory and nonregulatory SUA legal descriptions.

**b.** All bearings and radials used in SUA legal descriptions are true from point of origin.

**c.** Mileages used in SUA legal descriptions must be expressed in nautical miles (NM).

**d.** Descriptions of approved SUA, except temporary areas and CFAs, are compiled and published once a year in FAA Order JO 7400.10, Special Use Airspace. Updates to the order are not published between editions and the descriptions are considered current only as of the date specified in the order. For this reason, FAA Order JO 7400.10 should be used as a general reference only and should not be relied upon as a sole source when accurate positional data are needed (e.g., video maps, letters of agreement, etc.). For up-to-date descriptions of SUA areas, contact the Rules and Regulations Group, AJV–P2 or AIS.

### 21-2-2. BOUNDARIES

**a.** SUA boundaries are normally defined by geographic (latitude/longitude) coordinates. All coordinates must be expressed in a "degrees, minutes, and seconds" format using whole numbers. Do not convert seconds to tenths of minutes. To reflect "zero" minutes or "zero" seconds, enter 00' or 00" respectively. See TBL 21–2–1 for examples.

**b.** Other methods may be used to define boundaries, if necessary, to simplify the description, such as defining the boundaries by reference to a NAVAID radial/DME or NAVAID arc.

**c.** To aid pilots in area identification, boundaries may be aligned along a prominent terrain feature, such as rivers, highways, railroad tracks, etc., provided the feature is clearly discernable from the air.

**d.** Except for temporary SUA areas, boundaries must not be described as "along the boundary" of another designated airspace area.

**e.** Consider subdividing SUA areas laterally to enhance joint–use of the airspace.

### 21-2-3. ALTITUDES

**a.** For SUA areas that contain aircraft operations exclusively, altitudes at or above 18,000 feet MSL must be expressed as flight levels (FL).

**b.** For SUA areas that contain other than aircraft operations, or a combination of aircraft and other than aircraft operations, altitudes at or above 18,000 feet MSL must be expressed in feet above MSL.

**c.** Where terrain considerations or other factors would make the use of an MSL altitude impractical, the floor of the area may be described in feet above ground level (AGL).

**d.** In describing SUA ceilings, unless otherwise specified in the description, the word "to" an altitude or flight level means "to and including" that altitude or flight level. If the upper vertical limit does not include the altitude or flight level, the ceiling must be stated as "to but not including" the altitude or flight level.

#### NOTE-

Do not use the word "up" in the altitude information of SUA legal descriptions.

e. Do not designate variable altitudes to describe the floor or the ceiling of an SUA area. When there is a requirement for the altitude of the floor or ceiling to change based on time of use, or geographic position within the SUA area, etc., the differing sections must be established as separate subdivisions.

#### EXCEPTION-

The floor of an area may be described using a combination of MSL and AGL altitudes if necessary due to terrain or operational considerations. For example, "5,000 feet MSL or 3,000 feet AGL, whichever is higher."

**f.** In limited situations, and provided a specific operational requirement exists, the same altitude may be used to describe both the ceiling of one SUA subdivision and the floor of an overlying subdivi-

sion. In this case, the same ATC facility must be designated as the controlling agency for both subdivisions.

**g.** Consider subdividing SUA areas vertically to enhance joint–use of the airspace.

#### 21–2–4. TIME OF DESIGNATION (RULE-MAKING SUA) / TIMES OF USE (NON-RULEMAKING SUA)

**a.** The time of designation/times of use indicate the period during which the using agency is authorized to schedule and use a SUA area. The time of designation applies to SUA rulemaking and times of use applies to SUA non-rulemaking. These times should reflect when normal operations are expected to occur. In determining the times of use, the proponent should select the minimum period needed to meet the using agency's requirements. The goal is to capture the majority of the day-to-day activities. When the using agency has a requirement for intermittent, less frequent use of the airspace (outside the specific published time period), a provision to activate the airspace by NOTAM may be stated in the SUA legal description.

#### NOTE-

The times of use should be based on the intended typical use of the area. These times are depicted on aeronautical charts to assist other airspace users in determining the most likely periods of area activation.

**b.** Times of use are stated using the options, or combination of options, shown below:

1. Specific hours/days. Local time using the 24-hour clock, and days of the week. If the time of use will change significantly on a seasonal basis, or mission requirements call for specific time blocks, variable times of use may be designated. NOTAMs will not be issued when the time of designation/times of use for a SUA area reflect specific hours/days only.

#### NOTE-

**1.** As used in SUA legal descriptions, the term "daily" means 7 days per week.

**2.** If the SUA area overlaps more than one local time zone, state the predominant time zone in the description, for example: "0700 – 1800 central time; Monday – Friday."

**3.** Include "local time" in rulemaking SUA time of designation information in accordance with 14 CFR 73.3(d).

#### EXAMPLE-

**1.** "0700 – 2200 local time, Monday – Friday."

**2.** "Sep – Apr, 0800 – 1700, Monday – Friday; an May – Aug, 0600 – 2400 Monday – Friday."

**3.** "0800 – 0930 and 1300 – 1600 local time, Monday – Friday."

4. "0700 - 1600, daily."

**2.** Continuous. Use only when justification exists for utilization 24 hours a day, 365 days a year.

#### **EXCEPTION-**

"Continuous" may also be used when the area will be utilized 24 hours per day over a specific period, such as "Continuous, Monday – Friday;" or "Continuous, April – June."

**3.** NOTAM activation. Use "By NOTAM" or "Other Times by NOTAM" to indicate when a NOTAM must be issued in order to activate the area. NOTAM options are:

(a) "Other times by NOTAM." Used along with specific times to provide for activation of the SUA area outside the specified times of use that were established according to b.1., above.

#### EXAMPLE-

"0700 – 1900 local time, Monday – Friday; other times by NOTAM."

(b) "By NOTAM," with specific times from b.1., above. Used when issuance of a NOTAM is required prior to activating the area during the specified hours.

#### EXAMPLE-

**1.** "By NOTAM, 0700–1800 local time, Monday – Friday."

**2.** "By NOTAM (x) hours in advance, 0700–1800 local time, Monday – Friday."

(c) "By NOTAM" without specific times. Used when anticipated usage times cannot be specifically determined, or when the user's mission requires infrequent or erratic use.

(d) The NOTAM provision must apply to the entire area and not only a portion thereof. If the time of designation or times of use will vary from one portion of the area to another, the dissimilar portions should be subdivided as separate areas.
(e) NOTAMs should be issued as far in advance as feasible to ensure widest dissemination of the information to airspace users.

#### NOTE-

Under no circumstances may SUA be activated by a NOTAM unless the words "By NOTAM" or "other times by NOTAM" are stated in the SUA legal description.

**4.** Sunrise to sunset. This option should be reserved for cases where seasonal sunrise/sunset time variations make publication of specific clock times impractical.

**5.** Intermittent. Must include an associated time-period or "by NOTAM" provision. In any case, intermittent for restricted areas must include a "by NOTAM" provision even if an associated time-period is identified.

#### EXAMPLE-

1. "Intermittent, 0700 - 2200, Monday - Friday."

**2.** *"Intermittent by NOTAM at least (x) hours in advance,* 0700 – 2200, Monday – Friday local time."

#### 21-2-5. CONTROLLING AGENCY

The ATC facility designated as the controlling agency (see paragraph 21–1–10).

#### NOTE-

A controlling agency is not designated for prohibited areas, alert areas, controlled firing areas, or national security areas.

#### 21-2-6. USING AGENCY

The using agency, is the organization, or military command/unit whose activity established the requirement for the SUA. For military using agencies, specify the military service, command/ unit, and location. For non-military using agencies, specify the organization name and location.

#### NOTE-

See paragraph 22–1–6 for prohibited area using agency requirements.

#### REFERENCE-

FAA Order JO 7400.2, Para 21-1-11, Using Agency.

## 21–2–7. SUA LEGAL DESCRIPTION AMENDMENTS

All changes to a published SUA legal description must be made through the appropriate regulatory or non-regulatory procedures described in this order. This includes minor changes, editorial corrections, internal subdivisions of an existing area, changes of the controlling or using agency, or reducing the area's dimensions or time of designation/times of use.

#### *TBL 21–2–1* EXAMPLES OF SPECIAL USE AIRSPACE LEGAL DESCRIPTIONS

#### **REGULATORY SUA DESCRIPTION:**

#### R-2305 Gila Bend, AZ

at lat. 32°50'25"N., long. 112°49'03"W.;
to lat. 32°50'52"N., long. 112°42'56"W.;
to lat. 32°49'00"N., long. 112°39'03"W.;
to lat. 32°29'00"N., long. 112°43'03"W.;
to lat. 32°29'00"N., long. 112°53'33"W.;
to the point of beginning.
Surface to FL 240.
0630–0000, local time, Monday–Saturday; other times by NOTAM.
FAA, Albuquerque ARTCC.
U.S. Air Force, 56th Fighter Wing, Luke AFB, AZ.

#### **NONREGULATORY SUA DESCRIPTION:**

#### Taiban MOA, NM

	Boundaries - Beginning	at lat. 34°34'36"N., long. 104°07'00"W.;
		to lat. 34°33'00"N., long. 103°55'02"W.;
		to lat. 34°10'00"N., long. 103°55'02"W.;
		to lat. 34°10'00"N., long. 104°07'00"W.;
		to the point of beginning.
	Altitudes	500 feet AGL to but not including 11,000 feet MSL.
	Times of use	0800–0000 Monday–Friday; other times by NOTAM.
_	Controlling agency	FAA, Albuquerque ARTCC.
	Using agency	U.S. Air Force, 27th Special Operations Wing,
		Cannon AFB, NM.

**COORDINATE FORMAT –** Do not round off latitude and longitude coordinates. Always use the full format consisting of degrees, minutes, and seconds, as follows:

<u>Correct</u>	<b>Incorrect</b>	
40°06'00"N.	40°06'N.	
104°35'30"W.	104°35.5'W.	
39°00'00"N.	39°N.	

## Section 3. SUA Proposals

#### 21-3-1. GENERAL

This section describes the requirements for SUA proposals submitted to the FAA. SUA proposals must be based on a specific airspace requirement. The need for the proposed airspace must be definitive and sufficient grounds must be provided to justify any resultant imposition on nonparticipating aircraft and/or to afford priority to the SUA user. Before proposing the establishment of new SUA, proponents must consider the use of existing SUA, or the modification of an existing SUA, to conduct their mission.

#### 21-3-2. CLASSIFIED INFORMATION

Do not include classified information in the proposal package. If any information required by this section is classified, the Service Center OSG military representative should contact the Service Center OSG to discuss the handling of that information.

#### 21-3-3. PROPOSAL CONTENT

SUA proposal packages must contain the following information, as applicable:

**a.** Proponent's Transmittal Letter. Summarize the proposal and provide a point of contact for further information. Military proposals must include a military representative indorsement.

**b.** Area Description. Using the guidelines in Section 1 and Section 2 of this chapter, describe the proposed area as follows:

**1.** Title. State type of area (restricted area, warning area, etc.). For MOA proposals, include proposed name of the MOA.

**2.** Boundaries. A description of the proposed SUA boundary and any subdivisions (see paragraph 21–2–2).

#### NOTE-

All geographic coordinates must be based on North American Datum 83 (NAD 83) (see paragraph 21-1-16).

**3.** Altitudes. State the floor and ceiling of the proposed SUA (see paragraph 21−2−3).

**4.** Time of designation/Times of use. State the time of designation/times of use to be published for the area(s) as determined in paragraph 21–2–4. Include an estimate of the expected SUA usage in number of hours per day and days per year. In cases where the unit plans to use the airspace during different blocks of time each day, but actual clock times may vary within the charted "time of designation/times of use," describe those planned operations to provide as accurate a picture as possible of the projected daily use of the airspace.

#### NOTE-

Time of designation/times of use of SUA must be the minimum required for containing the proposed activities (see paragraph 21-1-6).

**5.** Controlling agency. State the FAA or military ATC facility to be designated as the controlling agency for the proposed SUA.

#### NOTE-

A controlling agency is not designated for prohibited areas, alert areas, controlled firing areas, or national security areas.

6. Using agency. State the organization to be designated as the using agency for the proposed SUA. Specify the military service, unit or organization, and location. For non-military using agencies, specify the organization name and location.

c. Airspace Statement of Need and Justification.

**1.** Describe the purpose and need for the proposed SUA. Sufficient justification must be provided to support approval of the proposal. Additionally, any known or anticipated aeronautical impact(s) on other airspace users must be considered and addressed in the proposal, including proposed mitigations, if any, to lessen the impact(s).

(a) For new SUA areas, explain why the requirement cannot be met by using existing SUA or by modifying an existing area. List SUA areas that were considered and explain why each area is not acceptable.

(b) For proposals to increase the dimensions or time of designation/times of use of an existing area, explain the need for the increase.

(c) Coordinate with the Service Center Environmental Specialist to ensure the Airspace Statement of Need and Justification is consistent with the Statement of Purpose and Need and alternatives in the applicable NEPA document.

**2.** State whether the SUA will be available for joint–use in accordance with paragraph 21–1–8. Provide justification for non–joint–use SUA.

**d.** Air Traffic Control Assigned Airspace (AT-CAA). State whether an ATCAA will be requested to support the proposed SUA, including the ATCAA dimensions and times of use.

#### NOTE-

ATCAA information is requested in the proposal solely to assist the FAA in evaluating the overall aeronautical impact of the SUA proposal. Requests to establish an ATCAA are coordinated directly with the ATC facility having jurisdiction over the airspace and are handled separately from the SUA proposal process.

#### NOTE-

ATCAAs below FL 180, and ALTRVs) must not be used as a substitute for SUA when conducting activities for which a SUA is designed to contain. Since ATCAAs and ALTRVs are not depicted on aeronautical charts, they do not inform the flying public of the location of the activity as is provided by charted SUA.

Additionally, ATCAAs and ALTRVs are not to be used as an interim solution while a SUA proposal is pending.

**e.** Activities. List all activities to be conducted in the proposed SUA. Include the following information:

1. For areas that will contain aircraft operations:

(a) The number and types of aircraft that will normally use the area.

(b) A listing of the specific activities and the maximum altitudes required for each type of activity planned.

(c) State whether supersonic flight will be conducted.

(d) A chart depicting the location and the representative pattern of firing and/or ordnance delivery runs and weapons impact areas (if applicable).

**2.** For areas to contain surface–to–surface or surface–to–air weapons firing:

(a) Type weapon(s) to be fired.

(b) Maximum altitude required for each weapon listed.

(c) A chart depicting firing points, impact areas, firing fans and safety buffers for each type weapon used.

f. Environmental and land use information.

**1.** In coordination with the Service Center OSG Environmental Specialist, furnish the name, organization, and mailing address of the person to whom comments on environmental and land use aspects of the proposal may be sent.

2. Proposals to establish SUA with a floor below 1200 feet AGL, where there is underlying private or public use land, must include a statement that the proponent agrees to provide reasonable and timely aerial access to such land. Where applicable, describe provisions to be used to accommodate such access.

**3.** Proposals to designate the surface as the floor of a prohibited or restricted area must include a statement explaining how the proponent will exercise control of the underlying surface (i.e., by ownership, lease, or agreement with the property owner). Do not submit a copy of the deed, lease, or control agreement.

#### NOTE-

Restricted areas that were designated with the surface as the floor prior to December 1, 1967, are exempt from the "own, lease, or control" requirement. The exemption status remains valid until amendment actions are taken which would expand the dimensions or times of use, or change the designated purpose of the area. Nevertheless, using agencies of such restricted areas are encouraged to acquire sufficient control of the property to prevent possible disruption of that agency's activities.

g. Communications and Radar.

1. If known, state whether radar and/or radio communications will be used to monitor the airspace. Identify the facility or agency that will provide radio and/or radar monitoring, e.g., range control, military radar unit (MRU), airborne radar unit (ARU), Fleet Area Control and Surveillance Facility (FACSFAC).

2. If a military ATC facility will be designated as the controlling agency for the airspace, indicate whether area status information and traffic advisories will be provided to nonparticipating pilots. If applicable, provide a VHF frequency to be depicted on aeronautical charts.

**h.** Safety Considerations. Include an explanation of the following items, if applicable:

**1.** Measures taken to ensure containment of the activity within the proposed area.

2. Procedures for handling malfunctions.

**3.** Ordnance trajectory envelopes.

**4.** When an aircraft activity could measurably affect the safety of persons or property on the surface, the proponent must demonstrate that provisions have been made for their protection.

**i.** Proposal Pre–Coordination. List ATC facilities, military units, and/or other organizations contacted in developing the proposal. (See 21–4–2.)

**j.** Area Chart. Submit a sectional aeronautical chart depicting the boundaries of the proposed area and any subdivisions.

**k.** Environmental Documents. Submit applicable environmental documents. If the environmental analysis is incomplete, indicate the status and estimated completion date.

**I.** Graphic Notice Information. For temporary MOA or temporary restricted area proposals, include the graphic notice information required by paragraph 21–1–15, above.

**m.** Other. Include any additional information that should be considered by the FAA in making its determination on the proposal.

#### 21-3-4. ABBREVIATED PROPOSALS

**a.** For certain SUA proposals, it is not necessary to include in the proposal package all of the items specified in paragraph 21–3–3 above. Proponents should consult with the Service Center OSG to determine if an abbreviated proposal may be

submitted. Abbreviated proposals may be considered for:

1. Amendments of existing SUA to:

(a) Change the controlling or using agency.

(b) Reduce the dimensions or times of use.

(c) Subdivide or revoke the airspace.

(d) Make minor editorial corrections to the legal description.

**2.** Recurring proposals for temporary airspace supporting annual exercises provided the location is the same and activities are similar to previous exercises.

**3.** Renewal of an existing CFA.

**b.** Abbreviated proposals should include the following, as applicable:

**1.** The type, purpose, and reason(s) for the action.

**2.** The specific changes to be made in the area's legal description.

**3.** For recurring temporary MOAs or CFAs, written confirmation that the activities, times, altitudes, safety precautions, etc., are to be the same as for a previously approved area.

4. The proposed effective date.

**5.** A summary of proposal coordination accomplished.

**6.** Environmental documentation, or written re–evaluation/updates of environmental documents used to support a previous temporary MOA.

7. Additional items as determined by the Service Center.

## Section 4. Coordination of Proposals

#### 21-4-1. POLICY

The Service Center OSG military representatives are the points of contact for the coordination of the respective military service's SUA proposals for their designated geographic service area. The Service Center OSG will handle all coordination of nonmilitary SUA proposals.

#### 21-4-2. PRE-PROPOSAL COORDINATION

**a.** Before submitting a SUA proposal to the FAA Service Center OSG, military proponents will coordinate their proposal concept, at a minimum, with locally affected ATC facilities and military units, local FAA Air Traffic Representatives (ATREP) or liaison officers (where assigned), and the ARTCC having jurisdiction over the affected airspace.

**b.** Inquiries from nonmilitary sources regarding the establishment or amendment of SUA will be referred to the appropriate Service Center OSG for assistance.

#### 21-4-3. ATC FACILITY COORDINATION

**a.** The proponent will coordinate with affected ATC facilities as needed to discuss the proposal. Proponents should provide the facility with specific information about the mission requirement, desired airspace parameters, and why existing SUA within a reasonable distance are not suitable to accommodate the requirement (see paragraph 21-3-1).

**b.** Affected ATC facilities will review the proposal concept to evaluate its potential impact on aeronautical and facility operations. Following the review, facilities will inform the proponent whether the proposed airspace concept is operationally

feasible, adversely impacts aeronautical or facility operations, or the location is not acceptable to the FAA for aeronautical reasons. Facilities may suggest alternative locations or negotiate the design of the proposed SUA area to resolve or lessen any adverse impacts.

c. Proponents are cautioned that ATC facility favorable consideration with the proposal concept represents just the facility's preliminary assessment of the aeronautical and ATC operational feasibility of the proposal. The proposal will still be subject to the further processing requirements of this order (e.g., aeronautical study, safety risk management, public comment period, and environmental analysis) and the development of a letter of agreement. Therefore, ATC facility favorable consideration must not be interpreted as the FAA's endorsement or as a final approval of the proposal.

#### 21-4-4. SUBMISSION OF PROPOSALS

**a.** SUA proposals are submitted to the appropriate FAA Service Center OSG for formal processing. Military SUA proposals must be submitted to the appropriate Service Center OSG military representative. Before submitting the proposal to the Service Center OSG, the military representative will review the package to determine compliance with the requirements of this order and applicable military service policies.

**b.** SUA proponents must promptly notify the Service Center OSG if there is a change in requirements that would alter the requested effective date or cancel the need for the proposed airspace. Military SUA proponents must make this notification through their appropriate Service Center OSG military representative.

### Section 5. Service Center OSG Actions

#### 21-5-1. GENERAL

**a.** SUA proposals should be processed as expeditiously as possible, consistent with thorough analysis, public notice procedures, and environmental requirements. Lengthy delays in processing the proposal may result in the need for a supplemental public comment period, and/or the revalidation of the aeronautical and environmental studies.

**b.** The Service Center OSG will notify the appropriate military representative, in writing, if a significant processing delay is anticipated or major problems arise.

#### 21–5–2. SERVICE CENTER OSG PRO-CESSING REQUIREMENTS

This paragraph describes the basic SUA processing requirements accomplished by the Service Center OSG. The Service Center OSG may supplement or modify the sequence of these items as needed.

#### NOTE-

CFAs have a limited process identified in Chapter 27.

**a.** Assign a rulemaking docket number or nonrulemaking study number, as appropriate (see Chapter 2 of this order).

#### NOTE-

When amending any part of the legal description of an existing SUA area, a docket number, or study number must be assigned. This includes minor changes, editorial corrections, and the reduction or revocation of the airspace.

**b.** Review the proposal package for content and compliance with the requirements of this order.

**c.** Task affected FAA ATC facilities to conduct an aeronautical study of the proposal (see Section 6 of this chapter).

**d.** Determine if other airspace or airport actions are pending or on file at other FAA offices (e.g., Airports, Flight Standards, PBN, etc.) for possible conflict with the proposal.

e. Coordinate with other FAA offices (e.g., Airports, Flight Standards, PBN, QCG (Quality Control Group), etc.), as required, for assistance in identifying impacts on airport development plans, aviation safety, and IFR/VFR operations.

**f.** Coordinate the proposal with adjacent Service Centers, if necessary.

**g.** Circularize nonrulemaking proposals as specified in Chapter 2 and Chapter 21, Section 1, of this order. Send an information copy of each circular to the Rules and Regulations Group, AJV–P2.

**h.** For restricted area or prohibited area proposals, submit the proposal package and Service Center OSG recommended action to the Rules and Regulations Group, AJV–P2, to initiate rulemaking action.

**i.** Determine if an informal airspace meeting is necessary.

#### NOTE-

If informal airspace meetings or environmental public meetings are planned, and the schedule is known, include meeting information in the nonrulemaking circular, or in the rulemaking package for publication in the NPRM. Also, see meeting notification requirements in Chapter 2 of this order.

**j.** Review all public comments received. Evaluate comments with respect to the proposal's effect on the safe and efficient utilization of airspace. Where required, consider the proposal's impact on the safety of persons and property on the ground. All substantive aeronautical comments must be addressed in the final rule or nonrulemaking case file. The OSG is responsible for drafting the FAA's response to substantive public comments received.

k. Review aeronautical study results.

**I.** Evaluate aeronautical impacts identified through public comments, aeronautical study, or other sources. Coordinate with the proponent regarding ways to mitigate aeronautical impact and/or resolve problem areas. As additional impacts are identified during the processing of the proposal, provide the information to the proponent.

**m.** Review environmental or land-use comments addressed to the FAA, then forward them to the proponent and Service Center OSG Environmental Specialist for consideration in appropriate environmental documents.

**n.** If, after the publication of an NPRM or a non-rulemaking circular, the proposal is modified by the proponent or to mitigate aeronautical or environmental impacts, determine if the changes are significant enough to necessitate a supplemental public comment period.

**o.** Coordinate with the Service Center OSG Environmental Specialist for review of the proponent's environmental documents (see paragraph 21–5–4 below).

**p.** Determine whether to recommend FAA headquarters approve the proposal, or disapprove the proposal at the Service Center level (see paragraphs 21-5-6 and 21-5-7, below).

## 21–5–3. AERONAUTICAL IMPACT CONSIDERATION

There is no set formula for balancing the various competing user requirements for the use of airspace. If approval of the SUA proposal would result in an adverse aeronautical impact, every effort must be made to seek equitable solutions to resolve or minimize the adverse aeronautical effects. If the aeronautical impact cannot be mitigated, the Service Center OSG must carefully weigh the extent of that impact against the need and justification provided by the SUA proponent. The Service Center OSG's recommendation should include a discussion of how aeronautical issues were resolved or provide information addressing the Service Center OSG's analysis of the aeronautical impact that cannot be mitigated.

#### 21–5–4. ENVIRONMENTAL DOCUMENT REVIEW

In coordination with the <u>Service Center OSG</u> Environmental Specialist, the Airspace Specialist will review the proponent's draft and final environmental documents to ensure that the environmental analysis matches the proposed airspace parameters (e.g., time of use, lateral and vertical dimensions, types and numbers of operations, supersonic flight). Any environmental issues identified in this review must be forwarded to the proponent for consideration.

#### 21–5–5. SERVICE CENTER DETERMINA-TION

After considering all pertinent information, the Service Center OSG determines whether it is necessary to negotiate proposal changes with the proponent, disapprove the proposal or recommend approval to the Rules and Regulations Group, AJV–P2. All FAA environmental documentation requirements must be completed before a recommendation for approval can be forwarded to the Rules and Regulations Group, AJV–P2.

#### NOTE-

Supplemental public notice with an additional comment period may be necessary if significant changes are made to the proposal after it was advertised for public comment. If a FAA determination has not been issued within 36 months of the last aeronautical public comment period or, if it is known that the aeronautical conditions in the area have changed significantly from what existed at the time of that last comment period, a supplemental comment period is required.

#### 21-5-6. DISAPPROVAL OF PROPOSALS

a. The Service Center OSG may disapprove any SUA proposal, however, such disapproval should be based on valid aeronautical reasons or non-compliance with FAA policy. The Service Center OSG must notify the proponent, in writing, stating the reasons for disapproval. Reasonable efforts should be made to resolve problem areas before disapproving the proposal. Provide an information copy of the disapproval correspondence to the Rules and Regulations Group, AJV-P2.

**b.** If the proponent resubmits the proposal after resolving problem areas, the Service Center OSG should determine required actions and resume processing the proposal.

**c.** If the proponent resubmits the proposal without resolving problem areas, the Service Center OSG must forward the case along with their recommendation to the Rules and Regulations Group, AJV-P2, for further action.

#### 21–5–7. SUBMISSION OF APPROVAL RECOMMENDATIONS TO FAA HEADQUAR-TERS

Submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing. Include the following (as applicable): **a.** A Service Center OSG transmittal memorandum containing a brief overview of the proposal and their recommendation for headquarters action. Describe any amendments made to the original proposal in response to public comments, or negotiations to mitigate impacts, etc. Include the desired airspace effective date.

#### NOTE-

If coordination with the designated controlling agency indicates that plans exist to provide nonparticipating pilots with traffic advisories, or real-time area activity status information, the OSG must coordinate with AIS to depict that information on aeronautical charts.

**b.** An attachment that contains the recommended legal description of the area (e.g., boundaries, altitudes, times, controlling agency, and using agency). Use the format shown in TBL 21-2-1.

#### NOTE-

If only part of the description of an existing area is being amended, the attachment should show just the changed information rather than the full legal description.

**c.** A sectional aeronautical chart depicting the final boundaries of the proposed area, including any subdivisions.

**d.** A copy of the proponent's airspace request correspondence and proposal package, to include all applicable items required by Section 3 of this chapter.

e. A copy of aeronautical comments received in response to the NPRM or non-rulemaking circular, along with a discussion of how each substantive comment was resolved or the Service Center OSG's analysis of the aeronautical impacts that cannot be mitigated.

**f.** Identify any modifications made to the proposal to mitigate environmental effects.

g. A copy of the aeronautical study.

**h.** If an informal airspace meeting was held, include a summary of meeting discussions, issues raised at the meeting, and copies of written comments submitted at the meeting or during the associated comment period.

i. Copies of pertinent correspondence received from other FAA offices (e.g., Flight Standards, Airports, adjacent Service Centers, affected ATC facilities, etc.). **j.** FAA environmental documents. Do not submit an approval recommendation prior to completion of the FAA's final decision on environmental impacts, per procedures in Chapter 32 of this order.

**k.** Any other information that should be considered by the Rules and Regulations Group, AJV–P2, in making a final determination on the proposal.

## 21–5–8. HANDLING OF PROPOSALS TO REDUCE OR REVOKE SUA

**a.** Normally, proposals which lessen the burden on the public by reducing the boundaries, altitudes, or by revoking SUA, do not require advance public notice and comment. An abbreviated proposal package may be submitted in accordance with paragraph 21–3–4.

**b.** SUA reduction or revocation normally does not require an environmental impact statement or environmental assessment because it is covered by the categorical exclusion in FAA Order 1050.1.

#### 21-5-9. FAA INITIATED SUA PROPOSALS

**a.** Proposals to establish or modify SUA are normally initiated by a DOD proponent. However, the FAA may initiate SUA proposals when such actions are necessary to resolve a safety issue, enhance joint–use, or enhance the capability of the SUA to accommodate the using agency's mission. Prior to initiating a SUA proposal, the Service Center OSG must exhaust every avenue to resolve the issues by other means. When modification of an existing SUA area is contemplated, full consideration must be given to providing the affected using agency with an equivalent capability to perform its mission.

**b.** When initiating a proposal, the Service Center OSG will prepare the SUA proposal package and required documentation. The proposal will be coordinated with affected military using agencies through the appropriate military representative, or non-military using agencies directly, to identify and document the impact of the proposed change. If an environmental analysis is required, the Service Center OSG will determine responsibility assignment.

**c.** If the using agency objects and agreement cannot be reached, but there is strong justification to proceed with the proposal, the Service Center OSG must send the proposal package to the Rules and

Regulations Group, AJV–P2. Include with the proposal package, the reason for the proposal, a copy of the objections, a summary of efforts to resolve the objections, and the Service Center OSG's recommendation including their analysis of the proposal in light of the using agency's objections. Do not initiate public notice procedures for such proposals without concurrence from the Rules and Regulations Group, AJV–P2.

#### 21-6-1. PURPOSE

An aeronautical study must be conducted to identify the impact of the SUA proposal on the safe and efficient use of airspace and ATC procedures.

#### 21-6-2. POLICY

**a.** An aeronautical study is required for all prohibited area, restricted area, MOA, and warning area proposals, except those which reduce or revoke SUA, change the controlling or using agency, or make minor corrections to the legal description. The <u>Service Center OSG determines whether to</u> require an aeronautical study for alert area or NSA proposals. CFAs do not require an aeronautical study.

**b.** The Service Center OSG must task the affected appropriate office(s) to conduct the aeronautical study. When applicable, coordinate with adjacent Service Centers for input. Appropriate offices must submit the completed study to the Service Center OSG. When input to the study from a military ATC facility is needed, the Service Center OSG must submit a request to the appropriate Service Center OSG military representative.

**c.** For recurring temporary restricted area and MOA actions, such as periodic military exercises, a previous study may be used provided it has been reviewed for currency and updated as necessary.

**d.** The Service Center OSG will review the study to determine if there are any aeronautical impacts to be resolved. The Service Center OSG may supplement the study as needed to include Service Center OSG perspective, cumulative effect analysis, etc. Coordinate the study findings with the proponent to explore possible options to mitigate any identified aeronautical impact.

**e.** A copy of the study must be included with the SUA proposal package submitted to the Rules and Regulations Group, AJV–P2.

#### 21-6-3. CONTENT OF STUDY

The Service Center OSG may specify the content and format of the study based on the type and extent of the SUA proposal. Suggested items include: **a.** Introduction. An overview of the existing airspace structure, airports, and types and volume of aeronautical activities currently operating in the airspace affected by the proposal.

**b.** Impact on IFR and VFR Terminal Operations. Consider the proposal's impact on existing and proposed terminal procedures.

**1.** Arrival and departure flows, SIDs/STARs, and approach and departure procedures.

**2.** Airport traffic patterns, and Class C, D, and Class E airspace surface areas.

**c.** Impact on public use and charted private airports (airports with FAA Form 5010 on file).

1. Number and types of aircraft based.

2. Amount of operations.

**3.** The proposal's effect on airport access, capacity, and operations.

**d.** Impact on IFR en route operations, including:

1. IFR traffic flow.

**2.** Existing ATS routes.

**3.** Average daily traffic count on affected ATS routes.

**4.** Feasibility of realigning ATS routes to accommodate the proposed SUA.

5. Direct IFR routings.

e. Impact on VFR operations, routes, and flyways. Consider the effect on charted VFR routes, and known, but uncharted, high–volume VFR routes or VFR flyways.

#### NOTE-

Although VFR pilots are not denied access to MOAs, the potential for aeronautical impact due to VFR pilots electing to deviate around the MOA when active should be evaluated when processing a MOA proposal. Consider the proposed MOA's size and location, and the extent of current non-participating VFR operations in the affected airspace.

**f.** Impact on other pending proposals. Consider known airport development plans, ATC facility resectorization plans, other airspace or ATS route proposals, or instrument procedures currently being processed or on file. **g.** Cumulative Aeronautical Impact Assessment. Establishment of the proposed airspace may have broader effects beyond the immediate vicinity of the proposed airspace. Consider the overall impact of the proposal on aviation operations when combined with:

**1.** Existing adjacent airspace such as Class B, C, or D areas, or other SUA.

2. Existing geographical features such as large bodies of water, mountainous terrain, or obstructions that could influence the flight paths of nonparticipating aircraft or affect the ability of nonparticipating aircraft to circumnavigate the proposed SUA.

**3.** Aviation safety issues, compression of air traffic, etc.

#### NOTE-

If the proposed SUA will contain aircraft operations, also consider the impact of routes to be used by the participating aircraft to enter/exit the SUA area. **h.** Associated ATCAA. If it is known that an ATCAA will be requested in conjunction with the proposed SUA, determine if use of the ATCAA would result in any additional aeronautical impact that should be considered.

**i.** Alternatives. When adverse aeronautical impacts are identified consider measures or alternatives that could mitigate or lessen the impacts.

**j.** ATC Facility Assessment. The ATC facility's assessment of a proposal's impact on aeronautical and facility operations.

**k.** ATC services. Indicate whether the controlling agency plans to provide real-time SUA status information, allow transitions through the area by nonparticipating aircraft, or provide traffic advisories to nonparticipating pilots requesting such services. If the controlling agency agrees to advertise such service, provide facility identification and a VHF frequency to be depicted on aeronautical charts.

**I.** Recommendations. Provide a recommendation for FAA action on the proposal.

# Section 7. Restricted Area and MOA Annual Utilization Reports

#### 21-7-1. PURPOSE

Annual utilization reports provide the FAA with information regarding the times and altitudes used, and the types of activities conducted in restricted areas and MOAs. These reports assist the FAA in its management of the SUA program.

#### 21-7-2. REPORTING REQUIREMENTS

**a.** Using agencies are required to submit annual reports to the FAA detailing the use of all assigned restricted areas and/or MOAs. Actual utilization data are required. See FIG 21–7–1 for report format. Instructions for preparing the report are contained in FIG 21–7–2.

**b.** Reports must cover each fiscal year period (October 1 through September 30). If the area was assigned to the using agency for only part of the fiscal year, report the utilization for that partial period.

**c.** For areas that are subdivided by legal description, a separate report is required for each officially designated sub-area published in FAA Order JO 7400.10, Special Use Airspace.

**d.** Do not include classified information in the report.

**e.** Submit reports by January 31 following the end of each fiscal year, to the Service Center OSG having jurisdiction over the airspace being reported.

 f. Military using agencies must submit reports to the FAA through the appropriate Service Center OSG military representative. The military representative will ensure that an information copy of each report is sent to the Manager, Rules and Regulations Group, AJV-P2, 800 Independence Avenue, SW, Washington, DC 20591. Electronic reporting is acceptable.

**g.** Non-military using agencies must submit reports directly to the FAA Service Center OSG having jurisdiction over the airspace being reported. The Service Center OSG will send an information copy of nonmilitary reports to the Manager, Rules and Regulations Group, AJV-P2.

#### 21-7-3. SUPPLEMENTARY REPORTS

The Service Center OSG may request the using agency submit a supplementary report if it determines that additional information is needed to evaluate the use of a restricted area or MOA. Requests will be submitted through the appropriate military representative. Using agencies should provide the requested information within 60 days of receiving the request.

#### 21-7-4. UTILIZATION REPORT TERMS

Terms as used in Restricted Area and MOA Annual Utilization Reports are defined as follows:

**a.** ATCAA. Airspace assigned by ATC to segregate air traffic between the specified activities being conducted within the assigned airspace and other IFR traffic.

**b.** Activated. The time-period during which the controlling agency has released the restricted area or MOA airspace to the using agency; regardless of whether any activity is actually occurring.

c. Controlling Agency. The designated ATC facility having jurisdiction over the SUA airspace when it is not in use by the using agency. Also, the facility that authorizes transit through, or flight within, special use airspace, in accordance with joint-use procedures contained in a letter of agreement.

**d.** Joint–Use. A term applied to SUA which is returned to the controlling agency for public access during periods when the airspace is not needed by the using agency for its designated purpose. It also means airspace wherein access may be granted to non–participating aircraft subject to the joint–use procedures specified in a letter of agreement between the controlling and using agencies.

**e.** Nonparticipating aircraft. An aircraft, civil or military, which is not a part of the activities being conducted within a SUA area.

**f.** Scheduled. The using agency's planned time period(s) of intended use of a SUA area as submitted in advance to the controlling agency (for military using agencies, see the scheduling requirements

contained in FAA Order JO 7610.4, Chapter 9, Military Operations Requirements (For Official Use Only)).

**g.** Using agency – The agency, organization, or military command/unit whose activity established the requirement for the SUA and the agency responsible for compilation and submission of Restricted Area/MOA Annual Utilization Reports.

**h.** Utilized – Amount of time (hours or days) that activities were actually conducted in the SUA area (for example, when participating aircraft were operating, or other designated activities were conducted, in the airspace).

#### 21-7-5. REVIEW REQUIREMENT

**a.** The Service Center OSG must perform a thorough review of all annual utilization reports for restricted areas and MOAs within its jurisdiction. At a minimum, the following utilization report items should be analyzed:

**1.** Activities. Are the reported activities appropriate for the airspace type and consistent with the area's designated purpose?

**2.** Altitudes. Do the reported activities and altitudes reflect a requirement for the altitudes published in the area's legal description?

**3.** Utilization Data. Consider whether actual use supports the published times in the legal description, or if discussions should be held with the using agency to determine if an airspace amendment action is appropriate. Calculate the following percentages for reference in comparing the published times of the area with its reported actual utilization.

(a) Hours scheduled as a percentage of hours published in the area's legal description.

(b) Hours activated as a percentage of hours scheduled.

(c) Hours actually utilized as a percentage of hours activated.

(d) Days actually utilized as a percentage of days activated.

**4.** Joint –Use Information. Is the airspace being made available for joint–use (if applicable)?

**5.** Remarks. Consider any mitigating factors that explain or clarify reported data. Are any other issues identified that require further action?

**b.** If additional information is needed to complete the utilization report review, request the using agency submit a supplementary report as described in paragraph 21-7-3.

**c.** As required, initiate discussions to resolve issues or forward recommendations for corrective action, to the military representative or responsible official for nonmilitary SUA.

**d.** Refer to Section 8 of this chapter for additional information regarding SUA review procedures and utilization standards.

#### 21-7-6. REVIEW SUMMARY

The Service Center OSG must prepare a summary of the results of its annual utilization report review. The summary should document the findings, recommendations, and actions taken, as appropriate. Submit review summaries to the Rules and Regulations Group, AJV–P2, by March 31 of each year. It is not necessary to submit copies of the actual utilization reports with the summary.

#### FIG 21-7-1

### RESTRICTED AREA AND MILITARY OPERATIONS AREA ANNUAL UTILIZATION REPORT (RCS: 1412–DOT–AN)

2. Reporting period dates:
3. Reporting Unit Name and Phone:
4. Aircraft Activities:
(a) Aircraft types:
(b) Types of activities conducted:
(c) Altitude/flight levels used for each type of activity:
(d) Supersonic flight:
(1) Area used for supersonic:
(2) Altitudes/flight levels:
5. Artillery/Mortar/Missile Activities (Restricted Area only):
(a) Type activities:
(b) Maximum altitude used for each activity:
6. Other activities not reported in 4 or 5 above:
(a) Type activity:
(b) Maximum altitude used for each activity:
7. Utilization information:

- (a) Total number of aircraft sorties:
- (b) Total number of days the area was:

1. Restricted area number or MOA name:

- (1) Scheduled for use:
- (2) Activated:
- (3) Actually utilized:
- (c) Total number of hours the area was:
- (1) Scheduled for use:
- (2) Activated:
- (3) Actually utilized:

#### 8. Joint-use information:

(a) Total number of hours the area was returned to the controlling agency:

(b) Letter of agreement provisions:

(c) Number of hours access was granted by the Using Agency to non-participating aircraft in accordance to the joint-use procedures agreement between the controlling and using agencies

#### 9. New chart Submitted/No Change:

10. Remarks:

#### FIG 21-7-2

### INSTRUCTIONS FOR PREPARING RESTRICTED AREA and MOA ANNUAL UTILIZATION REPORTS

**GENERAL:** Restricted area and MOA annual utilization reports provide information needed by FAA airspace managers to confirm airspace requirements and evaluate the efficiency of airspace utilization. It is essential that this report document actual utilization of the airspace as completely and as accurately as possible. The following format is used to report restricted area and MOA utilization. If an item does not apply, enter "N/A" for that item. A "Remarks" section is provided to document additional pertinent information. Do not include classified information in this report. Refer to FAA Order JO 7400.2, Procedures for Handling Airspace Matters, for definitions of terms used in this report, and for additional reporting and submission instructions.

#### **REPORT FORMAT:**

**1. Restricted area number or MOA name:** State the Restricted Area number or MOA name. Report only one area per form. For areas that are officially subdivided by legal description (See FAA Order JO 7400.10), prepare a separate report for each subdivision.

**2. Reporting Period Dates:** Enter the fiscal year dates (1 Oct [enter applicable fiscal year] to 30 Sept [enter applicable fiscal year]), or period covered if other than a full fiscal year.

**3. Reporting Unit:** Provide name of organization preparing the report and DSN, commercial and FAX numbers (as available).

#### 4. Aircraft Activities:

(a) Aircraft types: List the specific types of aircraft, which used the area during the reporting period (e.g., F–15, B–1, etc.). Include ROA activities in this section.

(b) **Types of activities conducted:** List each specific type of activity conducted. Do not use general terms such as "air operations," etc.

(c) Altitudes/flight levels used for each type activity: State the highest altitude/flight level used for each activity listed in 5.(b), above.

#### (d) Supersonic flight:

(1) Area used for supersonic: Indicate yes/no.

(2) Altitudes/Flight levels: State altitudes/flight levels used for supersonic flight.

#### 5. Artillery/Mortar/Missile Activities (Restricted Areas only):

(a) Type of activities: Indicate type(s) of weapon(s) fired.

(b) Maximum altitude used for each activity: State the highest altitude used for each activity/weapon.

#### 6. Other activities not reported in 4 or 5 above:

(a) **Type activity:** List any other activities conducted in the area, but not already covered in other sections of the report.

(b) Maximum altitude for each activity: State highest altitude used for each type activity.

#### 7. Utilization information:

(a) Total number of aircraft sorties: Enter the total number of aircraft sorties that utilized the area during the reporting period.

(b) Total number of DAYS the area was: Count a "day" as being scheduled, activated, or utilized, regardless of the amount of time involved on that particular day. The intent of this item is to document the number of different days during the year that the area was needed in order to accomplish the mission, whether it was needed for only 10 minutes or a full 24 hours.

#### (1) Scheduled for use:

- (2) Activated:
- (3) Actually utilized:
- (c) Total number of HOURS area was:

(1) Scheduled for use: Hours the area was activated by NOTAM may be included in this item.

(2) Activated:

(3) Actually utilized: When computing "actually utilized" time, do not provide a cumulative total of individual aircraft hours flown in the area. Hours reported cannot exceed the area's total available published hours.

#### 8. Joint-use information:

(a) Total number of hours the area was returned to the controlling agency: To compute this figure, subtract the hours reported in 8(c)(2) from 8760 hours (use 8784 hours for "leap year" reporting).

(b) Letter of agreement provisions: Note whether the letter of agreement between the controlling agency and the using agency includes any joint-use provisions which permit the controlling agency to route nonparticipating aircraft through the airspace.

**9. New chart Submitted/No Change:** Attach a chart of the area depicting, as applicable, aircraft operating areas, flight patterns, ordnance delivery areas, surface firing points, and target, fan, and impact areas. After once submitting an appropriate chart, annual charts are not required unless there is a change in the area, activity, or altitudes used, which would alter the depiction of the activities originally reported. If no change is to be submitted, indicate "No change."

**10. Remarks:** Include any other information that should be considered by airspace reviewers. Explain reasons for apparent low utilization rates or large differences between "scheduled," "activated," and/or "utilized" data (e.g., extensive weather or maintenance cancellations and delays, unit deployments, etc.); or note recurring airspace denials or restrictions on use of the area imposed by the controlling agency.

## Section 8. SUA Review and Analysis

#### 21-8-1. GENERAL

Under Title 49 U.S.C. 40103(b), the FAA is charged with ensuring the safe and efficient use of the nation's airspace. In carrying out this responsibility, the FAA must periodically review existing SUA and take appropriate airspace amendment action, if warranted, based on the findings of its review. The following paragraphs set forth SUA review policy and provide suggested analysis techniques for use by Service Center OSG and the Rules and Regulations Group, AJV–P2.

#### 21-8-2. POLICY

**a.** The Service Center OSG must conduct an annual review of restricted areas, MOAs, and warning areas under its jurisdiction. CFAs, Alert Areas, and NSAs may be reviewed as deemed necessary by the Service Center OSG. The purpose of the annual review is to:

**1.** Confirm that the using agency has a continuing requirement for the airspace.

**2.** Determine if the airspace is being used for its designated purpose.

**3.** Determine if actual use supports the designated dimensions and times of use.

**4.** Determine if joint-use airspace is being returned to the controlling agency when not needed for its designated purpose.

**5.** Determine if any adjustments should be considered to enhance the efficient use or management of the airspace.

**b.** When the review indicates that airspace amendment or other corrective action should be considered, the Service Center OSG must discuss the findings with the appropriate military representative, or responsible official for non-military SUA, and determine an appropriate course of action.

#### 21-8-3. SOURCES OF INFORMATION

There are a variety of sources of information pertinent to SUA utilization. Using agencies are required to submit annual reports on restricted area and MOA utilization as described in Section 7 of this chapter. Additional information may be obtained through coordination and research to augment these reports or to compile specific information about SUA areas that are not covered by the annual reporting requirement. Coordination with controlling agencies may be necessary to obtain detailed information regarding real-time use and area scheduling practices, or to identify airspace operational problems. The Military Airspace Data Entry/Special Use Airspace Management System (MADE/SAMS) will provide a more centralized and comprehensive source of SUA data for review purposes. MADE/ SAMS data should be incorporated into the review process. Additional sources of SUA information include:

**a.** Center Scheduling Enterprise (CSE), Data Collection and Scheduling Tool (DCAST), and Range Facility Management Support System (RFMSS).

**b.** Controlling agency or using agency input.

**c.** Service Center OSG SUA onsite review team reports, if available.

**d.** FAA Air Traffic Representative (ATREP) inputs.

e. SUA Letters of Agreement.

f. User meeting feedback.

**g.** Routine use of restrictions imposed by the controlling agency on the activation of SUA, or frequent denials of using agency scheduling/activation requests.

**h.** Recurring ATC problems, spill outs, or NMAC reports associated with the SUA being reviewed.

#### 21-8-4. UTILIZATION STANDARDS

a. The Government Accountability Office (GAO) recommended that the FAA establish standards to be used to measure the effectiveness of SUA utilization, and to serve as a starting point for Service Center OSG discussions with the using agency about the possible need for an airspace amendment or revocation action. In fulfillment of the GAO recommendation, this paragraph presents a limited, basic standard to be considered when reviewing SUA utilization data. It applies primarily to the review of restricted area and MOA annual utilization reports, but may be used to evaluate other SUA areas where sufficient utilization data is available.

**b.** Times of Use. Hours actually utilized should equal at least 75 percent of the hours the area was activated, discounted for weather cancellations and delays, controlling agency preference to keep SUA activated between blocks scheduled by the using agency, or loss of use for reasons beyond the using agency's control (as documented in the utilization report Remarks section).

**c.** The following standard may be applied in reviewing SUA utilization data:

**1.** Activities. The activities conducted must be appropriate for the type and designated purpose of the SUA.

2. Times of Use. Hours actually utilized should equal at least 75 percent of the hours the area was activated, discounted for weather cancellations and delays, or loss of use for reasons beyond the using agency's control (as documented in the utilization report Remarks section).

**3.** Designated Altitudes. Activities conducted/ altitudes used indicate a need for retaining the published altitude structure of the SUA area.

#### 21-8-5. SUA REVIEW GUIDE

This paragraph may be used as a framework for conducting a review of SUA. It applies primarily to the review of restricted areas and MOAs for which annual reports are submitted. This should not be considered an all-inclusive list. Reviewers may modify the factors to be examined or the extent of the review based on the availability of information or to fit the specific area/situation under review. The following items should be evaluated:

**a.** Activities. Are the activities conducted appropriate for the type and purpose of the SUA area? If inappropriate activities are conducted, notify the military representative, or responsible official, that the activity must be terminated in that SUA area or an airspace proposal must be submitted to establish the proper category of SUA to accommodate the activity.

**b.** Boundaries. Do the boundaries support the mission requirements? Should the using agency consider subdivision of the airspace for better utilization of the airspace and joint–use policy? If the

answers indicate a need for change, action must be initiated to amend the description.

c. Altitudes. Does the actual use of altitudes support those specified in the descriptions? Are there less frequently used portions that could be subdivided as separate areas to enhance real-time joint-use of the airspace? Are any portions of the vertical dimensions no longer required for the mission? If the answers indicate a need for change, action must be initiated to amend the description.

**d.** Times of Use. Compare scheduled, activated, and actual utilized data. Low usage rates do not necessarily indicate a need to revoke or amend airspace. Consideration must be given to the designated purpose of the area and whether limitations were imposed on its use as a condition for the original establishment of the SUA. SUA may be established to accommodate less frequent activities such as certain research, test, and development profiles. Determining the continued requirement for, or validity of, such areas will require discussions with the using agency and cannot be determined strictly based on utilization times. Additionally, low or infrequent use may result from factors beyond the using agency's control, such as adverse weather, unit deployments, maintenance delays, ATC-imposed restrictions, etc.

1. Compare time actually utilized to time activated. This is the most important factor in analyzing SUA utilization. Significant disparity between the time activated and actually utilized may indicate inefficient airspace use and the need to improve real-time use procedures so that the airspace is returned to the controlling agency for joint use when not needed by the user for its designated purpose. Determine whether the published times of use are valid or should be amended to match current mission requirements. If actual utilization is less than 75 percent of the time activated, coordinate with the appropriate military representative to determine the reason and whether corrective action is required. If information is available, the impact of weather and/or ATC delays on the actual utilization of the area should be considered when evaluating this item.

2. Compare scheduled use to published times of use. If scheduled use is significantly less than or greater than (e.g., by use of NOTAMs) the published times, discussions should be held with the using

agency to determine if the published times should be amended to reflect current mission requirements.

**3.** Compare scheduled time to activated time. Is the amount of time the area is being activated consistent with the amount of scheduled use? A significant difference between these times may indicate a need to discuss real-time use or revalidate published times of use with the user. Consideration should be given to the effects of weather or maintenance cancellations, or other factors limiting the using agency's use of the area.

4. NOTAM Activation. If a NOTAM provision is included in the SUA legal description, and activation by NOTAM is extensive or routine, consider whether it would be advantageous to designate/publish specific times of use to reflect the routine NOTAM period. This action may better inform the flying public of expected area usage periods, and reduce NOTAM system workload.

5. Intermittent Time of Use. If regular use of the area occurs during a set time period daily, or if use has become other than sporadic, consider whether specific times of use should be published to better inform the flying public of expected area usage periods and reflect current mission requirements.

e. Non-utilization of SUA. A using agency is required to explain in the remarks section of its annual utilization report why it did not use the SUA area during an entire reporting period. If no such explanation is provided, request that the appropriate military representative or using agency provide the reasons and the using agency's plans for future use of the SUA.

**1.** If the using agency r responds that the SUA is no longer required, initiate action to revoke the airspace.

2. If the using agency validates a continuing need for the airspace, coordinate with them to determine if the SUA area's dimensions and/or times of use remain valid or should be amended to reflect current mission requirements.

**3.** If the SUA remains unused for a second consecutive fiscal year period, inform the appropriate military representative of the FAA's intent to revoke the area unless additional justification for retaining the airspace is submitted.

**f.** Joint-use Procedures. Evaluate the effectiveness of joint-use procedures and real-time activation/deactivation procedures (if applicable). Obtain input from the controlling agency as needed.

**1.** Are procedures for timely return of joint–use airspace to the controlling agency contained in a letter of agreement?

**2.** Are real-time activation/deactivation procedures specified and used?

**g.** Aeronautical Charts and Publications. Check the accuracy of SUA information shown on aeronautical charts and contained in applicable publications. Submit required corrections to the Rules and Regulations Group, AJV–P2,or Aeronautical Information Services, AJV–A, as appropriate, for processing.

**h.** Other Issues. Determine if there are any other issues that require further investigation, such as:

1. Adverse impact on NAS operations.

2. Recurring spill outs.

**3.** Frequent instances of limitations on the use or activation of the SUA by the controlling agency.

## 21–8–6. SUA REVIEW FOLLOW UP ACTION

The Service Center OSG's annual SUA review forms the basis for further discussions with using agency representatives to resolve any discrepancies noted or other issues that were identified. Results of the review should be documented and maintained on file in accordance with current administrative guidance. Service Center OSG follow up actions are dependent on the results of the review as follows:

**a.** If it is determined that the existing SUA parameters (boundaries, altitudes, times) are valid, no further action is required other than documenting the review results.

**b.** If any existing SUA parameters are found to exceed the using agency's requirements or it is determined that the SUA does not accommodate the using agency's current mission requirements, then the Service Center OSG should discuss the finding with the appropriate military representative or non-military using agency representative. When appropriate, the Service Center OSG must request the using agency to submit an airspace proposal to amend the SUA description.

## Chapter 22. Prohibited Areas

### Section 1. General

#### 22-1-1. DEFINITION

A prohibited area is airspace designated under 14 CFR part 73, within which no person may operate an aircraft without permission of the using agency.

#### NOTE-

In accordance with paragraph 22–1–5, operations within a prohibited area require a certificate of waiver/authorization.

#### 22-1-2. PURPOSE

Prohibited areas are designated when necessary to prohibit flight over an area on the surface in the interest of national security.

#### NOTE-

The restrictions imposed by a prohibited area are often highly controversial and potentially disruptive to National Airspace System operations. Therefore, proposed prohibited areas require strong justification and the designation of such areas must be limited.

#### 22-1-3. IDENTIFICATION

Identify prohibited areas with the prefix letter "P" followed by a dash, a two-digit number and location (City, State), (e.g., "P-47, Amarillo, TX"). Identification numbers are assigned by the Airspace Rules and Regulations Team, AJV-P21.

#### 22-1-4. DESCRIPTION

Prohibited areas normally extend from the surface upward to a specified altitude, with a "continuous" time of designation

#### 22-1-5. WAIVERS/AUTHORIZATION

No person may conduct operations within a prohibited area without permission of the using agency and a certificate of waiver/authorization issued by the FAA Administrator. FAA Headquarters, System Operations Security, is responsible for processing waiver requests for operations in a prohibited area.

#### NOTE-

Operations are permitted for emergency purposes such as search and rescue and active law enforcement situations without a certificate of waiver/authorization. Prohibited areas are not intended to provide an airspace area free of other aircraft in which to conduct routine operations, research, and test activities.

#### 22-1-6. USING AGENCY

The using agency is the agency, organization or military command that established the requirements for the prohibited area.

## Section 2. Processing

#### 22-2-1. SUBMISSION OF PROPOSALS

**a.** Submit prohibited area proposals to the Service Center OSG at least 10 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that are non–controversial, without significant aeronautical impact, and only require routine coordination.

#### NOTE-

Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 22–2–1.

**b.** Prohibited area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

c. After the notice of proposed rulemaking comment period ends and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21-5-7.

#### TBL 22-2-1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initiat- ed in accordance with paragraph 21–5–2; proposal request sent to the Rules and Regulations Group, AJV– P2, to begin Rulemaking Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV– P2; NPRM drafted, coordinated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Register. Public comment period begins.
D+150	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by the Service Center OSG; proposal de- termination made in accordance with paragraph 21–5–5. Submit approval recommendations to the Rules and Regulations Group, AJV–P2, in ac- cordance with paragraph 21–5–7.
D+240	Service Center OSG recommenda- tions and all pertinent information re- viewed by the Rules and Regulations Group, AJV–P2. FAA final determi- nation made. If approved, rule draft- ed, coordinated and submitted to the Federal Register for publication.
D+250	Rule published in Federal Register (at least 58 days prior to effective date).

## **Chapter 23. Restricted Areas**

### Section 1. General

#### 23-1-1. DEFINITION

A restricted area is airspace designated under 14 CFR part 73 provisions, within which the flight of aircraft, while not wholly prohibited, is subject to restriction.

#### 23-1-2. PURPOSE

Restricted areas are designated when determined necessary to confine or segregate activities considered hazardous to nonparticipating aircraft.

#### NOTE-

Restricted areas are not designated for non-hazardous activities or the benefit of an individual or commercial operator over the public's right of transit through the navigable airspace.

#### 23-1-3. IDENTIFICATION

Identify restricted areas with the letter "R" prefix followed by a dash, a four-digit number, a location, and the two-letter state abbreviation (e.g., R-2309, Yuma, AZ). Restricted Area subdivisions may be identified by a suffix consisting of a letter, a cardinal point, the terms "high" or "low," or a combination (e.g., R-2309A, R-2501W). The Airspace Rules and Regulations Team, AJV-P21, assigns identification numbers.

#### 23-1-4. RESTRICTED AREA FLOOR

**a.** The restricted area floor may be established to the surface only when the using agency owns, leases, or by agreement, controls the underlying surface.

#### NOTE-

Existing restricted areas established from the surface before December 1, 1967, are exempt from the "own, lease, or control" requirement. This remains valid until amendment action is taken which would expand the boundaries, altitudes, or times of use, or changes the designated purpose of the area. Nevertheless, using agencies of such restricted areas are encouraged to acquire sufficient control of the property to prevent possible disruption of that agency's activities.

**b.** Provisions must be made for aerial access to private and public use land beneath the restricted

area, and to accommodate instrument arrivals/departures at affected airports with minimum delay.

**c.** The restricted area must exclude the airspace 1,500 feet AGL and below within a 3 NM radius of airports available for public use. This exclusion may be increased if necessary based on unique circumstances.

#### 23-1-5. JOINT-USE

**a.** Restricted areas are established for joint-use by assigning an ATC facility as the controlling agency (see 21–1–10), and by executing a joint-use letter of agreement/letter of procedure between the controlling and using agencies. The letter of procedure/letter of agreement provides for the operation of nonparticipating IFR and/or VFR aircraft within the area. Flight within an active restricted area is controlled by the using agency except when the area has been returned to the controlling agency. During such periods, the controlling agency may permit nonparticipating aircraft operations in the restricted area.

b. Prepare letters of agreement/procedure in accordance with FAA Order JO 7210.3, Facility Operation and Administration. The format of the letter may be modified as needed based on local requirements. The joint-use letter must include procedures for the timely activation, return, or recall of the airspace. The letter may also specify conditions and procedures whereby the controlling agency may route traffic through the area while in use provided approved separation can be maintained between nonparticipating aircraft and the using agencies' activities.

**c.** The Service Center OSG is the approval authority for joint-use letters of agreement/procedure. This authority may be delegated to a FAA ATC facility designated as the controlling agency.

**d.** Requirements for coordination and communications between the controlling and using agencies concerning the activation, return, or recall of joint–use restricted areas must be outlined in the letters of agreement/procedure.

## 23–1–6. TEMPORARY RESTRICTED AREAS

**a.** Temporary restricted areas may be designated when necessary to accommodate a proponent's need for additional restricted area airspace to periodically conduct hazardous activities associated with short-term military exercises, test programs, etc. When existing restricted area airspace is inadequate to accommodate these short-term military exercises, test programs, etc., temporary restricted areas may be established for a period not to exceed 30 consecutive days. On a case-by-case basis, the Rules and Regulations Group, AJV-P2, may approve a longer period if the proponent provides justification for the increase.

**b.** Proponents are encouraged to seek permission

from using agencies to conduct their activities within existing permanent restricted areas before submitting a request for designation of a temporary restricted area.

**c.** The duration of a temporary restricted area must be specified in the NPRM/final rule.

**d.** Once a temporary restricted area is approved, the military must be responsible for publicizing the exercise, test program, etc. within 50 miles of the affected airspace. The publicity may be accomplished through the public media, pilot forums, distribution of information bulletins to known aviation interests, etc.

**e.** Pointer NOTAMs should be issued in accordance with FAA Order 7930.2.

## Section 2. Processing

#### 23-2-1. SUBMISSION OF PROPOSALS

**a.** Submit restricted area proposals to the Service Center OSG at least 9 months prior to the desired effective date (see paragraph 21-3-3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that require only routine coordination.

#### NOTE-

Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 23–2–1.

**b.** Permanent restricted area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26. To the extent practicable, restricted area rules should become effective on a sectional chart date.

c. After the notice of proposed rulemaking comment period ends and review of all pertinent information is complete, Service Centers must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 23-2-1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Cen- ter OSG; processing requirements initiated in accordance with para- graph 21–5–2; proposal request sent to the Rules and Regulations Group, AJV–P2, to begin Rulemak- ing Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV–P2; NPRM drafted, coordi- nated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Regis- ter. Public comment period begins.

D+150	Public comment period ends. Ser- vice Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by the Service Center OSG; pro- posal determination made in accor- dance with paragraph 21–5–5. Sub- mit approval recommendations to the Rules and Regulations Group, AJV–P2, in accordance with para- graph 21–5–7.
D+240	Service Center OSG recommenda- tions and all pertinent information reviewed by the Rules and Regula- tions Group, AJV–P2. FAA final determination made. If approved, rule drafted, coordinated and sub- mitted to the Federal Register for publication.
D+250	Rule published in Federal Register (at least 58 days prior to effective date).

## 23–2–2. TEMPORARY RESTRICTED AREA PROPOSALS

**a.** Temporary restricted areas are subject to the same rulemaking processing (e.g., NPRM and final rule) and environmental analysis requirements as permanent areas. Temporary restricted area effective dates are determined by the exercise or mission requirements rather than the standard 56–day chart cycle and are published in the Domestic Notices found in the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide the public 28 days notification.

**b.** The FAA will attempt to accommodate changes in temporary restricted area proposals; however, rulemaking requirements may not permit late changes to the airspace proposed in the NPRM without causing a delay in the planned exercise start date. Significant changes to the proposal after the NPRM is published could necessitate an additional public comment period, further study of the aeronautical impact, and/or supplemental environmental analysis. Early planning, careful ground site

selection, and close coordination between concerned parties throughout the entire planning process are essential.

#### TBL 23-2-2

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Cen- ter OSG processing requirements ini- tiated in accordance with paragraph 21–5–2; proposal request sent to the Rules and Regulations Group, AJV– P2, to begin Rulemaking Process.
D+95	Proposal request reviewed by the Rules and Regulations Group, AJV– P2; NPRM drafted, coordinated, and submitted to the Federal Register for publication.
D+105	NPRM published in Federal Regis- ter. Public comment period begins.
D+150	Public comment period ends. Service Center OSG initiates review of all pertinent information received.
D+180	All pertinent information reviewed by Service Center OSG; proposal de- termination made in accordance with paragraph 21–5–5. Submit approval recommendations to the Rules and Regulations Group, AJV–P2, in ac- cordance with paragraph 21–5–7.
D+240	Service Center OSG recommenda- tions and all pertinent information reviewed by the Rules and Regula- tions Group, AJV–P2. FAA final determination made. If approved, rule drafted, coordinated and submit- ted to the Federal Register for publi- cation.
D+250	Publish in the Federal NOTAM Sys- tem (FNS) External Links on the Air Traffic Plans and Publications web- site early enough to provide public 28 days notification.

## Chapter 24. Warning Areas

### Section 1. General

#### 24-1-1. BACKGROUND

**a.** Warning areas were originally established only over international waters, beyond the U.S. territorial limit. Until 1988, U.S. territorial waters extended out to 3 NM from the shoreline. On December 27, 1988, President Ronald Reagan signed Presidential Proclamation No. 5928 that extended the territorial sea of the U.S. outward to 12 NM from the shoreline. In order to expand the U.S. domestic air traffic control authority to cover the newly designated domestic airspace, the FAA issued a final rule that extended controlled airspace, and the applicability of 14 CFR parts 71 and 91, to the airspace overlying the waters between 3 and 12 NM from the U.S. shoreline.

**b.** At that time, most warning areas extended outward from 3 NM from the shoreline. Because the Proclamation converted the airspace between 3 and 12 NM from international to domestic airspace, this jeopardized the status of the existing warning areas inside the new 12 NM limit. Additionally, the extension of part 91 operating rules to this airspace would have required DoD to either request exemptions to the CFR to continue conducting hazardous activities in the airspace between 3 to 12 NM or those warning area segments inside 12 NM would have to be redesignated as restricted areas under 14 CFR part 73. However, if those segments were redesignated, nonparticipating aircraft (such as fish spotters, exploration, offshore oil platform support flights, etc.) would be excluded from airspace where they had safely operated for decades. This would result in adverse impact on those operators.

c. Accordingly, the FAA issued Special Federal Aviation Regulation (SFAR) No. 53 that established "warning areas" overlying the waters between 3 and 12 NM from the shoreline, and defined "non-regulatory warning areas" as those areas beyond 12 NM over international waters. The SFAR permitted the continuation of military training activities in the warning areas overlying the waters between 3 and 12 NM. The SFAR was made effective for a period of one year to provide time for the FAA to consider the need for additional action to meet military training requirements without creating an unacceptable impact on either DoD or civilian flight operations overlying the waters inside 12 NM. The SFAR was subsequently extended three times. The warning areas established by the SFAR were unique airspace designations intended solely to allow the continuation of military training activity and maintain the right of nonparticipating aircraft to fly through such areas.

**d.** The FAA and the DoD worked for several years to move the inner boundaries of pre–existing warning areas outward to 12 NM. However, DoD determined that the boundaries of selected warning areas could not be moved because of the need for continued connectivity to existing range resources (e.g., DoD missile launches).

e. In 1996, the FAA resolved the issue by creating a new warning area definition that combined the SFAR definitions of "warning area" and "non-regulatory warning area." This allowed selected warning areas to remain over domestic waters. The FAA codified the new warning area definition by adding it to 14 CFR §1.1, General Definitions. The new definition applies equally to those warning area segments within domestic airspace (from 3 to 12 NM from the shoreline), and to those in international airspace (beyond 12 NM from the shoreline). In effect, the new definition grandfathered a select number of warning areas to remain within domestic airspace between 3 and 12 NM of the shoreline. But, the rule also stated that any new SUA requirements overlying the waters within 3 to 12 NM from the shoreline would have to be the appropriate domestic type of SUA (e.g., restricted areas or MOAs).

#### REFERENCE-

Presidential Proclamation No. 5928 (54 FR 777; December 27, 1988) (See Fig 24–1–1).Final Rule – Applicability of Federal Aviation Regulations in the Airspace Overlying the Waters Between 3 and 12 Nautical Miles for the United States Coast (54 FR 264; January 4, 1989). Special Federal Aviation Regulation No. 53 – Establishment of Warning areas in the Airspace Overlying the Waters Between 3 and 12 Nautical Miles from the United States Coast (54 FR 260; January 4, 1989). Final Rule – Definitions of Special Use Airspace (61 FR 2080; January 24, 1996).

#### 24-1-2. DEFINITION AND PURPOSE

A warning area is airspace of defined dimensions, extending from 3 nautical miles outward from the coast of the United States that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both. (14 CFR section 1.1, General Definitions)

#### NOTE-

Only those pre-existing grandfathered warning areas listed in fig. FIG 24-1-2 extend over domestic waters between 3 NM and 12 NM from the shoreline. All other warning areas extend over international waters from 12 NM outward from the shoreline.

#### 24-1-3. POLICY

Based on the provisions of Presidential Proclamation No. 5928 (See Fig 24–1–1), historical SFAR No. 53 (54 FR 260; January 4, 1989), and the Definitions of Special Use Airspace final rule (61 FR 2080; January 24. 1996), the following policies apply:

**a.** Forty-five existing warning areas were "grand-fathered" permitting them to retain the segments overlying the domestic waters between 3 and 12 NM from the U.S. shoreline. The military training activities, non-participant aerial access, and operating procedures in the grandfathered warning areas are the same as those in the warning areas extending beyond 12 NM outward from the shoreline. No new operating restrictions were imposed on the grandfathered warning areas. (See FIG 24–1–2).

**b.** No new warning areas may be established in, or existing warning areas expanded into, domestic airspace overlying the waters between 3 and 12 NM from the shoreline. For new requirements that arise for SUA within 12 NM from the shoreline, the appropriate type of domestic SUA, (i.e., prohibited area, restricted area or MOA) must be designated or established.

**c.** Participating aircraft. Participating pilots conducting aircraft operations within a grandfathered warning area segment, (i.e., between 3 and 12 NM from the shoreline) and operating with the approval of the using agency, may deviate from the rules of Part 91, Subpart B, to the extent that the rules are not compatible with approved operations.

**d.** Nonparticipating aircraft. Nonparticipating VFR pilots, while not excluded from warning areas, are on notice that military activity, which may be hazardous to nonparticipating aircraft, is conducted in those areas.

#### 24-1-4. IDENTIFICATION

Identify warning areas with the letter "W" prefix followed by a dash; a two- or three-digit number; a location; and the two-letter state abbreviation (e.g., W-291, San Diego, CA). Warning area subdivisions may be identified by a suffix consisting of a letter, a cardinal point, the terms "High" or "Low", or a combination (e.g., W-105A; W-220A High; W-13A Low). The Airspace Rules and Regulations Team, AJV-P21, assigns identification numbers.

#### 24-1-5. JOINT-USE

Warning areas must be considered for joint-use if the area, or portions thereof, can be returned to the controlling agency during periods when it is not required for its designated purpose, and provided the warning area is located in airspace wherein the FAA exercises ATC authority under ICAO agreements. When designating a warning area for joint-use, a letter of agreement must be executed between the controlling and using agencies to define the conditions and procedures under which the controlling IFR aircraft to transit or operate within the area. Apply the provisions of paragraph 23–1–5, Joint-Use, as appropriate.

#### FIG 24-1-1 Presidential Proclamation No. 5928 December 27, 1988, (54 F.R. 777)

Territorial Sea of the United States of America International law recognizes that coastal nations may exercise sovereignty and jurisdiction over their territorial seas. The territorial sea of the United States is a maritime zone extending beyond the land territory and internal waters of the United States over which the United States exercises sovereignty and jurisdiction, a sovereignty and jurisdiction that extends to the airspace over the territorial sea, as well as to its bed and subsoil. Extension of the territorial sea by the United States to the limits permitted by international law will advance the national security and other significant interests of the United States.

Now, therefore, I, Ronald Reagan, by the authority vested in me as President by the Constitution of the United States of America, and in accordance with international law, do hereby proclaim the extension of the territorial sea of the United States of America, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Mariana Islands, and any other territory or possession over which the United States exercises sovereignty. The territorial sea of the United States henceforth extends to 12 nautical miles from the baselines of the United States determined in accordance with international law. In accordance with international law, as reflected in the applicable provisions of the 1982 United Nations Convention on the Law of the Sea, within the territorial sea of the United States, the ships of all countries enjoy the right of innocent passage and the ships and aircraft of all countries enjoy the right of transit passage through international straits. Nothing in this Proclamation:

(a) extends or otherwise alters existing Federal or State law or any jurisdiction, rights, legal interests, or obligations derived therefrom; or

(b) impairs the determination, in accordance with international law, or any maritime boundary of the United States with a foreign jurisdiction. IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of December, in the year of our Lord nineteen hundred and eighty–eight, and of the Independence of the United States of America the two hundred and thirteenth.

/s/ Ronald Reagan

FIG 24-1-2 Grandfathered Warning Areas (between 3 & 12 NM from the coast) W-50A Dam Neck, VA W-50B Dam Neck, VA W-50C Dam Neck, VA W-59B New Orleans, LA W-72A North Carolina, NC W-74 Beaufort, SC W-102H Machias, ME W-102L Machias, ME W-103 Casco Bay, ME W-122 Cherry Point, NC W-135 Mayport, FL (formerly W-158E) W-137A Charleston, SC W-151A Valparaiso, FL W-151B Valparaiso, FL W-155A Pensacola, FL W–161A Myrtle Beach, SC W-177A Myrtle Beach, SC W-186 Hawaii, HI W-187 Hawaii, HI W-188A Hawaii, HI W-188B Hawaii, HI W–188C Hawaii, Hi W-189A Hawaii, HI W-189B Hawaii, HI W-237A Washington Coastal, WA (Note: W-237A Low and W-237B High and Low were combined in W-237A. There is no longer a B) W-289N Point Mugu, CA W-289S Point Mugu, CA W-289E Point Mugu, CA W-289W Point Mugu, CA W-291E San Diego, CA W-292E San Diego, CA W-371 Ponce, PR W-386 Virginia Capes, VA W-412 Santa Cruz Island, CA W-453A Gulfport, MS W-453B Gulfport, MS W-470A Panama City, FL W-497A Patrick AFB, FL W-497B Patrick AFB, FL W-513 Point Reyes, CA W-517 Guam W-532N Point Arguello, CA W-532S Point Arguello, CA W-532E Point Arguello, CA W-537 Santa Barbara, CA
# Section 2. Processing

#### 24-2-1. SUBMISSION OF PROPOSALS

**a.** Submit warning area proposals to the Service Center OSG at least 8 months prior to the desired effective date (see paragraph 21-3-3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that require only routine coordination.

#### NOTE-

Proposals that are complex or controversial could require significantly longer processing time than that shown in TBL 24–2–1.

**b.** Effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

**c.** After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 24-2-1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Cen- ter OSG; processing requirements initiated in accordance with para- graph 21–5–2; nonrule circular pub- lished; circular information copy sent to the Rules and Regulations Group, AJV–P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.

D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit ap- proval recommendation to the Rules and Regulations Group, AJV–P2, in
D+165	accordance with paragraph 21–5–7. Service Center OSG recommenda- tion and all pertinent information re- viewed by the Rules and Regulations Group, AJV–P2. FAA final determi- nation made. If approved, NFDD in- put drafted, coordinated and submit- ted to Aeronautical Information Ser- vices, AJV–A, for publication (at least 58 days prior to effective date).

# 24–2–2. EXECUTIVE ORDER 10854 COORDINATION

In accordance with Executive Order 10854, all warning area proposals (except changes to using/controlling agencies, and minor corrections) must be coordinated with the Departments of State and Defense. This coordination will be accomplished by the Airspace Rules and Regulations Team, AJV–P21; (see Chapter 2, FIG 2–2–1, of this Order).

### 24-2-3. ENVIRONMENTAL REVIEW

The designation of warning areas is considered an advisory action that is not subject to environmental review.

#### REFERENCE-

FAA Order 1050.1, Environmental Impacts: Policies and Procedures.

# **Chapter 25. Military Operations Areas**

# Section 1. General

#### 25-1-1. DEFINITION

A military operations area (MOA) is airspace established outside of Class A airspace to separate or segregate certain non-hazardous military flight activities from IFR aircraft and to identify for VFR aircraft where these activities are conducted.

#### 25-1-2. PURPOSE

MOAs are established to contain nonhazardous, military flight activities including, but not limited to, air combat maneuvers, air intercepts, low altitude tactics, etc.

#### 25-1-3. IDENTIFICATION

Identify a MOA by a name followed by the acronym MOA and the two-letter state abbreviation (e.g., Dome MOA, AZ). MOA subdivisions may be identified by a suffix consisting of a number, letter, cardinal point, the terms "High" or "Low," or a combination (e.g., Moody 3; Gamecock B; Tiger North; Smoky High; Coastal 1 East). Either the proponent or the Service Center OSG selects MOA names.

#### NOTE-

Select an easily understood name. Lengthy or composite names are cumbersome and tend to be confusing in radio communications and in charting.

#### 25-1-4. MOA FLOOR

MOAs may extend below 1,200 feet AGL if a mission requirement exists and there is minimal adverse aeronautical effect. Provisions must be made to enable aerial access to private and public use land beneath the area, and for terminal VFR and IFR flight operations. Provisions must also be made to accommodate instrument arrivals/departures at affected airports with minimum delay. The MOA must exclude the airspace 1,500 feet AGL and below within a 3 NM radius of airports available for public use. This exclusion may be increased if necessary based on unique circumstances. If the MOA floor

extends below 1,200 feet AGL over a charted private airport, coordination should be effected with the airport operator to accommodate airport operations.

### 25-1-5. LOCATION

MOAs should be located to create minimum adverse impact on nonparticipating aircraft operations. MOAs must not be established offshore beyond the United States 12 NM territorial limit. To the extent possible, locate MOAs:

**a.** Within 100 miles of the user's base of flight origin.

**b.** Outside terminal area airspace, ATS Routes, charted terminal VFR routes, and uncharted known high volume VFR routes.

**c.** Within radar and communications coverage of an ATC facility or MRU.

#### 25-1-6. JOINT USE

**a.** In effect, MOAs are always joint use in that VFR aircraft are not denied access, and IFR aircraft may be routed through the airspace, by agreement between controlling and using agencies, when approved separation can be provided from the MOA activity.

**b.** Procedures for access to the airspace by nonparticipating IFR traffic must be specified in a letter of agreement between the controlling and using agencies.

### 25-1-7. TEMPORARY MOAs

**a.** Temporary MOAs are established to accommodate the military's need for additional airspace to periodically conduct short-term exercises that supplement routine training. When existing airspace is inadequate to accommodate these short-term military exercises, temporary MOAs may be established for a period not to exceed 45 days. On a case-by-case basis, the Rules and Regulations Group, AJV-P2, may approve a longer period if the proponent provides justification for the increase. **b.** Once a temporary MOA is approved, the military is responsible for publicizing the exercise within 50 miles of the affected airspace. The publicity may be accomplished through the public media, pilot forums, distribution of information bulletins to known aviation interests, etc. Additionally, the FAA will publish a graphic notice into the Federal NOTAM System (FNS) External Links on the Air Traffic Plans and Publications website early enough to provide public 28 days notification prior to the exercise start date in accordance with paragraph 21–1–15, Charting and Publication Requirements.

**c.** Pointer NOTAMs should be issued in accordance with FAA Order 7930.2.

**d.** When it is determined that the need for a temporary MOA supporting multiple short-term military exercises will occur on a regular and continuing basis each calendar year, the airspace should be considered for establishment as a

permanent MOA with provisions for activation by NOTAM. Anticipated usage, supporting the short– term military exercises, must be included in the legal description times of use.

#### 25-1-8. MOAs IN CLASS G AIRSPACE

MOAs may be established in Class G airspace. Using agencies and participating pilots operating in such MOAs should be aware that nonparticipating aircraft may legally operate IFR or VFR without an ATC clearance in this airspace. Pilots of nonparticipating aircraft may operate VFR in Class G airspace in conditions as low as 1 statute mile flight visibility and clear of clouds (see 14 CFR, § 91.155 for complete Class G airspace VFR minima). Any special procedures regarding operations within MOAs that encompass Class G airspace should be included in a letter of agreement between the controlling and using agencies.

# Section 2. Processing

### 25-2-1. SUBMISSION OF PROPOSALS

**a.** Submit MOA proposals to the Service Center OSG at least 8 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals that are non-controversial, without significant aeronautical impact, and only require routine coordination.

#### NOTE-

Proposals that are complex, controversial, or require extensive environmental analysis could need additional processing time beyond that shown in TBL 25–2–1.

**b.** Permanent MOA effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

**c.** After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval, including graphic notice information and the proposal package, to the Rules and Regulations, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

#### TBL 25-2-1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initi- ated in accordance with paragraph 21–5–2; nonrule circular published; circular information copy sent to the Rules and Regulations Group, AJV– P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.

D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit ap- proval recommendation to the Rules and Regulations, AJV–P2, in accor- dance with paragraph 21–5–7.
D+165	Service Center OSG recommendation and all pertinent information re- viewed by the Rules and Regulations Group, AJV–P2. FAA final determi- nation made. If approved, NFDD in- put drafted, coordinated and submit- ted to AJV–A for publication (at least 58 days prior to effective date).

### 25-2-2. TEMPORARY MOA PROPOSALS

**a.** Submit temporary MOA proposals to the Service Center OSG at least 6 months prior to exercise start date (See TBL 25–2–2). Proposals should include environmental documentation in accordance with Chapter 32 of this Order. When there is a known requirement for multiple activations of the same temporary MOA within a calendar year, proponents are encouraged to combine the requests into a single proposal covering the entire period. This will provide notice to the public that is more effective and reduce administrative processing workload.

**b.** Temporary MOA effective dates must coincide with the exercise start date.

**c.** After circularization of pertinent information, Service Center OSGs must submit a recommendation memo, including graphic notice information and the proposal package to the Rules and Regulations Group, AJV-P2, for final determination and processing in accordance with paragraph paragraph 21–1–5.

**d.** For recurring temporary MOAs, an abbreviated proposal package may be submitted at the discretion of the Service Center OSG. See paragraph 21–3–4 of this order for details.

TBL 25-2-2

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing requirements initi- ated in accordance with paragraph 21–5–2; nonrule circular published; circular information copy sent to Rules and Regulations Group, AJV– P2.
D+75	Public comment period ends. Service Center OSG initiates review of all pertinent information received.

D+105	All pertinent information reviewed by the Service Center OSG; proposal determination made in accordance with paragraph 21–5–5. Submit ap- proval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with paragraph 21–5–7.
D+135	Service Center OSG recommendation and all pertinent information re- viewed by the Rules and Regulations Group, AJV–P2. FAA final determi- nation made. If approved, graphic no- tice reviewed, coordinated and sub- mitted to the Federal NOTAM Sys- tem (FNS) External Links on the Air Traffic Plans and Publications web- site early enough to provide public 28 days notification.

# Chapter 26. Alert Areas

# Section 1. General

#### 26-1-1. DEFINITION

An alert area is established to inform pilots of a specific area wherein a high volume of pilot training or an unusual type of aeronautical activity is conducted.

### 26-1-2. PURPOSE

**a.** Alert areas are established to inform nonparticipating pilots of areas that contain a high volume of pilot training operations, or an unusual type of aeronautical activity, that they might not otherwise expect to encounter. Pilots are advised to be particularly alert when flying in these areas.

**b.** Alert areas should not be established in lieu of other special use airspace expressly defined and established for nonhazardous activities (e.g., MOAs) or for activities where other approved charting symbols are more appropriate (e.g., Parachute Jumping Areas, Glider Operating Areas).

#### 26-1-3. IDENTIFICATION

Alert areas must be identified by the letter "A" prefix followed by a dash, a two or three digit number, a location, and the two-letter state abbreviation (e.g., A-292, Pensacola, FL). A letter suffix is used to indicate subdivisions. Identification numbers are assigned by the Airspace Rules and Regulations Team, AJV–P21. Aeronautical charts must be annotated to reflect the type of activity conducted in the alert area.

### 26-1-4. LOCATION

Alert areas must not extend into Class A, B, C, and D airspace, or Class E airport surface areas. To the extent possible, alert areas should avoid ATS routes, major terminal areas, charted terminal VFR routes, and uncharted known high volume VFR routes. Once an alert area is established, the designation of ATS routes through such areas should be kept to a minimum.

#### 26-1-5. ACTIVITIES

**a.** Only those activities that do not pose a hazard to other aircraft may be conducted in an alert area.

**b.** All alert area activities must be conducted in accordance with VFR and in compliance with applicable Sections of 14 CFR, without waiver.

**c.** Flight Service Stations may broadcast information regarding alert area activities upon request.

#### REFERENCE-

FAA Order JO 7110.10, Para 3–2–1, Types of Data Recorded, Subpara c.

# Section 2. Criteria

### 26-2-1. ESTABLISHMENT

**a.** Alert areas may established for either military or civil aviation activities.

#### NOTE-

Before proposing an alert area, consider whether the publication of an advisory note on aeronautical charts near the affected location would provide satisfactory notice of the activity to nonparticipating pilots.

**b.** Establish of an alert area is not a prerequisite to conduct any type of flight activity and does not restrict IFR or VFR traffic.

**c.** Alert areas do not impose any flight restrictions or communications or ATC clearance requirements on pilots either operating within, or transiting the area.

#### 26-2-2. TYPES OF OPERATIONS

Limit the establishment of alert areas to the following types of operations:

a. Concentrated Student Pilot Training.

1. A high volume of flight training operations at one or more airports in a given area. The volume of activity should exceed 250,000 local operations (as defined in FAA Order JO 7210.3, Chapter 13, Facility Statistical Data, Reports, and Forms) annually and be generated primarily by student pilot training in fixed-wing and/or rotary-wing aircraft.

**2.** A student pilot training area beyond a 20 NM radius of the airport that contains unusually intensive training operations.

**b.** Unusual Aeronautical Activity. There are no specific criteria established for this category. Alert areas should not be established in lieu of other special use airspace expressly defined and established for nonhazardous activities (e.g. MOAs). Each proposal will be evaluated on a case-by-case basis to determine its significance to the flying public and aviation safety.

#### NOTE-

One example of an alert area fitting this category is A-381, designated to identify the unusual concentration and volume of aviation activity in the U.S. Gulf Coast/Gulf of Mexico area.

# **Section 3. Processing**

#### 26-3-1. ALERT AREA PROPOSALS

Alert area proposals must contain all applicable items listed in Chapter 21, Section 3 of this Order, except designation of a controlling agency. Environmental and land use studies are not required.

#### 26-3-2. SUBMISSION OF PROPOSALS

**a.** Submit alert area proposals to the Service Center OSG at least 7 months prior to the desired effective date (see paragraph 21–3–3 for proposal content). The following schedule is an estimate of the minimum time needed to process proposals.

**b.** Alert area effective dates must coincide with the 56–day charting dates published in FAA Order 8260.26.

**c.** After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval, including graphic notice information and the proposal package, to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Cen- ter OSG; processing requirements initiated in accordance with para- graph 21–5–2; non–rule circular published; circular information copy sent to the Rules and Regula- tions Group, AJV–P2.
D+75	Public comment period ends. Ser- vice Center OSG initiates review of all pertinent information received.
D+105	All pertinent information reviewed by the Service Center OSG; propos- al determination made in accor- dance with paragraph 21–5–5. Sub- mit approval recommendation to the Rules and Regulations Group, AJV–P2, in accordance with para- graph 21–5–7.
D+145	Service Center OSG recommenda- tion and all pertinent information reviewed by the Rules and Regula- tions Group, AJV–P2. FAA final determination made. If approved, NFDD input drafted, coordinated and submitted to AJV–A for publi- cation (at least 58 days prior to ef- fective date).

# **Chapter 27. Controlled Firing Areas**

# Section 1. General

#### 27-1-1. DEFINITION

A controlled firing area (CFA) is established to contain activities, which if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft.

### 27-1-2. PURPOSE

CFAs provide a means to accommodate, without impact to aviation, certain hazardous activities that can be immediately suspended if a nonparticipating aircraft approaches the area. Activities conducted in CFAs are not segregated from IFR or VFR traffic. Additionally, a CFA is not intended to be a long term supplement to hazardous activities conducted in an adjacent restricted area.

### 27-1-3. CRITERIA

**a.** CFAs should be considered only when necessary to accommodate activities that are capable of being immediately suspended, and it has been specifically determined that designation of a restricted area is not warranted. CFAs are not to be used as an interim solution while a restricted area proposal is pending.

**b.** The distinguishing feature of a CFA, compared to other SUA, is that CFA activities must be suspended immediately when a nonparticipating aircraft approaches the area. The responsibility lies totally with the CFA user to terminate activities so that there is no impact on aviation. There is no requirement for nonparticipating aircraft to avoid the airspace, nor are any communications or ATC separation requirements imposed.

### 27-1-4. CHARTING

CFAs are not depicted on aeronautical charts because the user terminates the activities when required to prevent endangering nonparticipating aircraft.

### 27-1-5. DIMENSIONS

Although there are no set limits to the dimensions of a CFA, the size of the area must be reasonable con-

sidering the types of activities conducted, visual surveillance, communications capabilities and activity termination requirements.

#### 27-1-6. ACTIVITIES

**a.** Only those ground–based hazardous activities that can be immediately suspended on notice that a nonparticipating aircraft is approaching are appropriate for a CFA. Examples of such activities include:

- 1. Ordnance disposal.
- 2. Blasting.
- **3.** Static testing of large rocket motors.

**b.** CFAs are not intended to contain aerial activities including aircraft ordnance delivery and ground-to-air fires targeting aircraft or other objects in the air. Observer or surveillance aircraft are permitted.

**c.** Other activities may be considered provided they can meet the criteria and comply with the safety precautions prescribed in this chapter.

**d.** CFAs may be established for either military or civil activities.

### 27-1-7. APPROVAL

The Service Center OSG is the approval authority for CFAs. For other than one-time events, CFAs should be approved for a specific period in support of the activity being conducted as determined by the Service Center OSG. An expiration date must be assigned for each CFA.

### 27-1-8. SUSPENSION OR REVOCATION

The Service Center OSG may suspend or revoke a CFA if a question arises about the safety of the operation, compliance with safety precautions or conditions of approval, or if unforeseen impact on nonparticipating aeronautical operations occurs.

# Section 2. Processing

#### 27-2-1. SUBMISSION REQUIREMENTS

Submit CFA proposals and renewal requests to the appropriate Service Center OSG at least 4 months prior to the desired effective date.

### 27-2-2. CFA PROPOSALS

CFA proposals must include the applicable items from Chapter 21, Section 3. In addition, provide the following information:

**a.** Justification for establishing a CFA instead of a restricted area. This justification should be included in the DoD proponent's environmental documentation drafted in accordance with FAA Order 1050.1 and Chapter 32 of this Order when the FAA is designated cooperating agency for the DoD's proposed action that requires the use of FAA-controlled airspace.

**b.** Visual surveillance and safety procedures to be applied.

### 27-2-3. SERVICE CENTER OSG ACTION

Upon receipt of a CFA proposal, the Service Center OSG must:

a. Assign a nonrulemaking study number.

**b.** Determine if circularization of the proposal is required.

**c.** Review the proposal for justification and compliance with CFA criteria.

**d.** Determine if the proposed CFA would conflict with the requirements of other airspace users. Consider proximity of ATS routes, VFR flyways, etc.

**e.** Evaluate the adequacy of surveillance and safety procedures.

**f.** Determine limitations, safety precautions, or other requirements to be observed as conditions of approval.

**g.** Issue an approval letter to the proponent (see paragraph 27–2–4), or inform the proponent in writing if the CFA is disapproved.

### 27-2-4. APPROVAL LETTER

Inform the proponent in writing of the approval or renewal of the CFA. Include the following information as required:

**a.** CFA description (boundaries, altitudes, and times of use).

**b.** Activity for which the CFA is approved.

c. Using agency name.

d. Effective/expiration date(s).

**e.** Conditions, operating limitations, and safety precautions to be observed (see Section 3 of this chapter).

f. Additional provisions, if needed.

**g.** Instructions for the user to notify the operators of airports in the vicinity of the CFA of the activities to be conducted, if required.

**h.** Instructions and suspense date for submitting a CFA renewal request, if applicable.

# Section 3. Safety Precautions

### 27-3-1. USER RESPONSIBILITIES

The CFA user must:

**a.** Ensure that the activity is confined within the CFA.

**b.** Maintain visual surveillance of the area in accordance with paragraph 27–3–3.

**c.** Cease ground-based hazardous activity immediately upon observation or notification that a nonparticipating aircraft is approaching the area. Resume the activity only after the aircraft is clear of the CFA.

**d.** Make provisions to ensure the safety of persons and property on the surface, if applicable.

**e.** Retain full legal responsibility in event of any incident resulting from the activity conducted in the CFA.

#### 27-3-2. PRECAUTIONARY MEASURES

**a.** The Service Center OSG must be satisfied that adequate safety precautions are in place for each CFA. Specific precautionary measures established to protect nonparticipating aircraft and persons and property on the surface will depend on various factors such as the type of activity, terrain, CFA dimensions, etc. The following measures are considered the minimum required and are mandatory for all CFAs:

**1.** The user must appoint a safety officer to ensure that operations are conducted according to the requirements of this chapter and the CFA approval letter.

**2.** The base of the clouds must be at least 1,000 feet above the highest altitude affected by the hazardous activity.

**3.** Visibility must be sufficient to allow visual surveillance of the entire CFA, plus a distance of 5 miles beyond the CFA boundary in all directions.

**4.** The CFA must be clear of nonparticipating aircraft or personnel before starting, and while conducting hazardous activities.

5. Projectiles must not enter any cloud formation.

**b.** The Service Center OSG may establish increased ceiling and visibility requirements, or additional precautionary measures, as required by the specific case.

#### NOTE-

CFA activities are terminated to avoid conflict with nonparticipating aircraft, therefore, there is no requirement for the issuance of a NOTAM.

#### 27-3-3. AREA SURVEILLANCE

**a.** Visual surveillance must be continuously maintained immediately prior to and during the time that hazardous activity is in progress.

**b.** Visual surveillance may be accomplished by trained ground observers, observer aircraft, surface vessels, or a combination of them. Radar may be used to supplement visual surveillance of the area, not in lieu of visual surveillance.

**c.** A sufficient number of trained observers must be used to ensure adequate coverage of the required area.

**d.** Observers must be provided with continuous, effective communications with all firing points. If at any time communication is lost, hazardous activity must cease until reliable communication is reestablished.

# **Chapter 28. National Security Areas**

# Section 1. General

#### 28-1-1. DEFINITION

A National Security Area (NSA) consists of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities.

#### 28-1-2. PURPOSE

An NSA is established to identify locations where voluntary flight avoidance is requested.

### 28-1-3. CRITERIA

An NSA may be considered when a need to request flight avoidance of national assets or an area in the interest of national security is identified. When it is necessary to provide a greater level of security, flight in an NSA may be temporarily prohibited pursuant to the provisions of 14 CFR 99.7, Special Security Instructions. Where there is a need to restrict flight operations in an NSA, the required restriction will be issued by FAA Headquarters, System Operations Security, and disseminated via NOTAM.

### 28-1-4. DIMENSIONS

There are no standard dimensions for an NSA. The dimensions should be the minimum necessary to promote the protection of the area identified.

### 28-1-5. CHARTING

NSAs are depicted on aeronautical charts to inform pilots regarding their vertical and lateral dimensions. Additionally, a note must be included for publication on the chart adjacent to the NSA stating the requested avoidance altitude.

### 28-1-6. REVOCATION

An NSA does not expire. However, it may be revoked upon using agency request or at the discretion of the Rules and Regulations Group, AJV-P2, after consultation with the Service Center OSG.

# Section 2. Processing

#### 28-2-1. SUBMISSION OF PROPOSALS

**a.** Submit NSA proposals to the Service Center OSG at least 7 months prior to the desired effective date (see paragraph 21-3-3 for proposal content). The area description only requires title, boundaries, altitudes, and using agency. The following schedule (TBL 28-2-1) is an estimate of the minimum time needed to process proposals.

**b.** Effective dates coincide with the 56–day chart dates.

**c.** After circularization and review of all pertinent information, Service Center OSGs must submit SUA proposals recommended for approval to the Rules and Regulations Group, AJV–P2, for final determination and processing in accordance with paragraph 21–5–7.

TBL 28-2-1

Calendar Days	Action
D	Proposal received by ATO Service Center OSG.
D+30	Proposal reviewed by Service Center OSG; processing re- quirements initiated in accordance with paragraph 21–5–2; non–rule circular published; circular information copy sent to the Rules and Regulations Group, AJV–P2.

D+75	Public comment pe- riod ends. Service Center OSG initiates review of all perti- nent information re- ceived.
D+105	All pertinent infor- mation reviewed by the Service Center OSG; proposal deter- mination made in ac- cordance with para- graph 21–5–5. Sub- mit approval recom- mendation to the Rules and Regula- tions Group, AJV– P2, in accordance with paragraph 21–5–7.
D+145	Service Center OSG recommendation and all pertinent informa- tion reviewed by the Rules and Regula- tions Group, AJV– P2. FAA final deter- mination made. If approved, NFDD in- put drafted, coordi- nated and submitted to AJV–A for publi- cation (at least 58 days prior to effec- tive date).

# Section 4. Notices to Air Missions

### 29-4-1. ISSUANCE OF NOTICES TO AIR MISSIONS (NOTAM)

**a.** To enhance safety of flight, the appropriate Service Center OSG must prepare the NOTAM, for visible lasers or if requested by the facility having jurisdiction over that airspace, and notify the United States NOTAM Office facility via telephone (540) 422-4262/4263, or fax (540) 422-4298 within seven days of a proposed laser activity.

**b.** The NOTAM will emphasize the potential hazardous effects and other related phenomena that may be encountered by laser light emissions.

Include facility to notify, and any other information deemed appropriate.

**c.** The Service Center OSG may further delegate notification responsibility to the Air Traffic facility.

**d.** When deemed appropriate, the Service Center OSG may direct the proponent to activate or cancel the FDC NOTAM, specific to the laser activity. The Service Center OSG must explain the responsibility of the proponent concerning appropriate NOTAM actions.

**e.** The Service Center OSG is responsible for canceling the NOTAM except as noted above in paragraph 29–4–1.c. and d.

# Chapter 31. Amateur Rocket and Commercial Space Operations

## Section 1. General

#### 31-1-1. PURPOSE

This chapter provides guidance, policies, and procedures for processing requests for amateur rocket, commercial launch and reentry vehicle, and commercial launch and reentry site operations in the NAS.

#### 31-1-2. AUTHORITY

**a.** Title 51 of the United States Code (51 U.S.C.), National and Commercial Space Programs, is the compilation of the general laws regarding space programs. 51 U.S.C. was issued December 18, 2010, when signed ("H.R. 3237".) into law under PL 111–314.

**b.** Title 14 of the Code of Federal Regulations (14 CFR) Aeronautics and Space:

**1.** Chapter I, Subchapter F, Part 91, Air Traffic and General Operating Rules;

**2.** Chapter I, Part 101, Moored Balloons, Kites, Amateur Rockets, Unmanned Free Balloons, and Certain Model Aircraft;

**3.** Chapter III, Commercial Space Transportation, Federal Aviation Administration, Department of Transportation, Parts 400–460.

#### 31-1-3. POLICY

**a.** ATO service area forwards all requests for Class II amateur rockets that will enter Class A airspace and all Class III requests to the Office of Commercial Space Transportation (AST) for additional safety analysis.

**b.** All proposals for development of launch or reentry sites, and the conducting of commercial space launches and reentry operations, must be immediately forwarded to AST.

**c.** The Federal Aviation Administration's policy is to use an interdisciplinary approach to ensure

compliance with all laws and regulations. This policy requires all projects be reviewed in a timely manner by all necessary stakeholders to determine the impact to the NAS.

#### 31-1-4. CONTROLLING FACILITY

The FAA or DOD facility having control jurisdiction over the affected airspace where the amateur rocket, launch vehicle, or reentry vehicle is projected to operate must be designated as the controlling facility. When multiple facilities may be impacted by an operation, one facility will be designated as the lead and be designated as the controlling agency. The controlling facility will be responsible for the execution of the appropriate airspace management.

#### 31-1-5. DEFINITIONS

**a.** Aircraft hazard area – the predicted location and extent of the airspace potentially containing falling debris generated by an amateur rocket, launch vehicle, reentry vehicle failure, or from the planned jettison of stages or other hardware.

**b.** Amateur rocket – an unmanned rocket that is propelled by a motor or motors having a combined total impulse of 889,600 Newton-seconds (200,000 pound-seconds) or less; and cannot reach an altitude greater than 150 kilometers (93.2 statute miles) above the Earth's surface.

c. Amateur rocket classes:

**1.** Class 1 – a model rocket that uses no more than 125 grams (4.4 ounces) of propellant; uses a slow-burning propellant; is made of paper, wood, or breakable plastic; contains no substantial metal parts; and weighs no more than 1,500 grams (53 ounces) including the propellant.

2. Class 2 - a high power rocket, other than a model rocket, that is propelled by a motor or motors having a combined total impulse of 40,960 Newton-seconds (9,208 pound-seconds) or less.

3. Class 3 - an advanced high power rocket, other than a model rocket or high-power rocket.

**d.** Applicant – an entity that has submitted a request for waiver/authorization to Part 101 for the launch of an amateur rocket, or an entity that has submitted an application to AST for a license or permit to operate a launch vehicle, reentry vehicle, launch site, or reentry site.

**e.** Ground hazard a r e a – the required separation distance between the launch point and nearest people or property that are not associated with the operation.

**f.** Launch vehicle – a vehicle built to operate in, or place a payload in, outer space or a suborbital rocket. Chapter III requires that launch vehicle operations be licensed by AST.

**g.** Operator – an amateur rocket operator or an entity that has received a license or permit from AST to conduct a launch or reentry operation.

**h.** Reentry vehicle – a reusable launch vehicle designed to return from Earth's orbit or outer space to Earth substantially intact. The performance and maneuverability of reentry vehicles may vary depending upon the design of the vehicle, including those that descend via parachute, those that glide to a landing, and those that use rocket or jet power to land.

**a.** Current regulations can be viewed at ecfr.gov.

**1.** Commercial space regulations can be found at 14 CFR Chapter III, Parts 400–460.

**2.** Amateur rocket regulations can be found at 14 CFR, Part 101.

**b.** The FAA's Commercial Space Transportation organization website contains information about current and planned launches, issued licenses, industry news, and announcements.

**c.** Additional amateur rocketry information can be found at the National Association of Rocketry (NAR) website at www.NAR.org.

**d.** FAA Order JO 7210.3, Facility Operation and Administration, contains guidance and policy for processing waiver/authorizations applicable to amateur rocket operations as well as commercial space letter of agreement facilitation and coordination.

e. FAA Order 7930.2, Notices to Air Missions (NOTAM), contains procedures for issuance of "Airspace," "Temporary Flight Restriction," and "ALTRV" NOTAMS.

**f.** FAA Order JO 7610.4 .Special Operations established authority, responsibility, and general operating procedures under the ALTRV concept for Central Altitude Reservation Function (CARF) and other concerned ATC facilities.

# Section 3. Launch and Reentry Vehicle Operations

#### 31-3-1. RESPONSIBILITIES

**a.** Operator. Prior to conducting a launch or reentry, the operator must obtain a license or permit from the Office of Commercial Space Transportation (AST). With regard to airspace management, the 14 CFR Parts 400–460 regulations for both a license and a permit require an applicant to engage AST in the pre–application consultation and to complete a letter of agreement (LOA) with the ATC facility having jurisdiction of the airspace where the launch or reentry will take place.

#### NOTE-

Commercial space LOAs are required for each launch site and launch and/or reentry operator for license and permit purposes in accordance with 14 CFR Parts 400–460. The FAA has 180 days to evaluate a complete license application and 120 days to evaluate a complete permit application. AST requires a draft LOA to accompany the submission of a license or permit application to ensure ATO is included in the coordination. The draft LOA submitted with the license or permit application must be acceptable to all signatories and be completed prior to the end of the application process. Each commercial space applicant must have a signed LOA prior to operation in the NAS.

**b.** Air Traffic. ATO Space Operations (AJR-1800) and ATC facilities have the following responsibilities:

**1.** ATO Space Operations is the ATO Office of Primary Responsibility for launch and reentry operations and any other activity relevant to tactical space operations in the NAS. ATO Space Operations is responsible for:

(a) Ensuring that launch and reentry operations are safely and efficiently integrated into the NAS;

(b) Working with ATC facilities to develop a memorandum of assessment of potential impacts on the NAS from the proposed site/operation and the identification of any issues or constraints;

(c) Coordinating with AST, the operator, and the affected air traffic facilities as necessary;

(d) Analyzing and evaluating data to produce and distribute an airspace management plan;

(e) Serving as the focal point for the coordination and distribution of any hazard mitigation requirements, and information relevant to launch or reentry vehicle operations to affected air traffic facilities;

(f) Monitoring, evaluating, and disseminating information in real-time regarding the status of launch and reentry vehicle operations and providing operational support as required;

(g) Hosting a mission real-time hotline when required in accordance with an LOA;

(h) Performing post launch or reentry analysis of each operation to improve future operations;

(i) Archiving captured launch and reentry data and analysis;

(j) ATO Space Operations will supply the space launch/re-entry course (expressed in magnetic degrees) to the ATC facility.

**2.** ATC facilities are responsible for:

(a) Working with ATO Space Operations to develop a memorandum of assessment of potential impacts on the NAS from the proposed site/operation and the identification of any issues or constraints;

(b) Determining and notifying ATO Space Operations of potential effects the launch or reentry operation may have on traffic flows and sector loading;

(c) Determining the type and level of assistance needed to support the launch or reentry operation;

(d) Developing and executing an airspace management plan in collaboration with ATO Space Operations;

(e) Working with ATO Space Operations and other affected facilities during the execution of the launch or reentry. This includes the following duties:

(1) Participating on a real-time communications hotline during the launch or reentry operation when required in accordance with an LOA;

(2) Execution of any safety hazard mitigation efforts.

**c.** AST. AST is responsible for:

**1.** Validating AHAs, THAs, and other safety and mission information to ATO Space Operations when necessary;

2. Operating as part of the Joint Space Operations Group (JSpOG), to include onsite computation of AHAs and THAs during operations and other support;

**3.** Evaluating all commercial space LOAs against 14 CFR Parts 400–460 requirements.

**d.** Federal range. The process for launches or reentries conducted at Federal ranges is similar to the process at non–Federal launch and reentry sites. Additional opportunities exist in the collaboration between the Federal range and the operator for ATO and AST to obtain necessary information to support the launch and reentry process. Further, the range generally conducts some activities necessary for the operation on behalf of the operator, including safety analyses. Federal ranges also typically have existing letters of agreements with ATC facilities.

# 31–3–2. NOTICE TO AIR MISSIONS (NOT-AM)

**a.** NOTAMs issued for space launch and reentry operations will be processed in accordance with current FAA directives.

**b.** The NOTAM must include the key words "airspace," "space launch," or "space reentry;" the launch or reentry site description, effective dates and times, and a chart depicting the area boundaries. It should also include a brief narrative describing the launch or reentry scenario, activities, types of launch or reentry vehicle involved, and the availability of inflight activity status information for nonparticipating pilots.

**c.** Information regarding the methods of airspace management may also be addressed.

# **31–3–3.** LAUNCH AND REENTRY **PROCESS**

**a.** The operator/range or designee submits a request to conduct a launch or reentry operation to ATO Space Operations, facilities and other organizations in accordance with the LOA.

**b.** The operator/range or designee must distribute AHAs to affected parties, per LOA.

**c.** Unless otherwise specified in a LOA, the operator coordinates use of airspace outside the U.S. FIR.

**d.** Unless otherwise specified in a LOA, the operator coordinates use of any special use airspace with the Using Agency.

**e.** ATO Space Operations must work with affected ATC facilities to conduct a NAS impact analysis of the proposed operation. As the ATO's POC for commercial space operations, ATO Space Operations must provide a memorandum of assessment of potential impacts on the NAS to AST.

**f.** ATO Space Operations and ATC facility(ies) develop a proposed plan of operation based on the NAS impact analysis and/or any local or national constraints.

**g.** When necessary, AST verifies the accuracy of the mission AHAs and THAs and coordinates the results with ATO Space Operations.

**h.** Prior to each launch or reentry, ATO Space Operations shares AHAs and THAs with affected ATC facilities.

**i.** ATO Space Operations notifies the affected facilities of any additional safety hazard mitigation requirements depending on the unique characteristics of the launch or reentry operation if needed.

**j.** Prior to each launch or reentry operation, ATO Space Operations coordinates with the ATC facility(ies) to develop and implement an airspace management plan.

**k.** All affected ATC facilities, ATO Space Operations, and the operator/range or their designee participate on a real-time communications hotline during the launch or reentry operation in accordance with an LOA.

**I.** Coordination for airspace delegation and control procedures will be conducted in accordance with the LOA.

**m.** The responsible authority cancels all applicable NOTAMs.

**n.** ATO Space Operations complete a post–operator analysis of actual space operation impact.

# Chapter 32. Environmental Matters

# Section 1. General Information

### 32-1-1. PURPOSE

This section provides guidance and establishes policy and procedures to assist air traffic personnel in applying the requirements of FAA Order 1050.1, Environmental Impacts: Policies and Procedures, to proposed air traffic actions. The guidance in this chapter will assist air traffic personnel in determining the level of environmental study appropriate for a proposed action and in preparing the required environmental documentation.

The policies and procedures set forth in this chapter are intended to supplement the requirements of FAA Order 1050.1 and other Department of Transportation and FAA directives.

Further, this chapter outlines the approach for considering environmental issues and helps reduce the complexity of the review process, while ensuring that the environmental process associated with proposed air traffic actions is thoroughly and properly documented.

### 32-1-2. POLICY

It is air traffic policy to use an interdisciplinary approach to ensure compliance with all environmental laws and regulations. This policy requires that all projects be reviewed as early as possible to determine if there is potential to impact the quality of the human environment as defined by the National Environmental Policy Act of 1969, as amended (NEPA). All units of Air Traffic Services and Mission Support Services must adhere to the requirements in FAA Order 1050.1.

Additionally, all units must comply with the guidelines and directions detailed in this chapter whenever reviewing regulatory and non-regulatory airspace actions.

### 32-1-3. BACKGROUND

**a.** FAA Order 1050.1 establishes policies and procedures and assigns responsibility for ensuring FAA compliance with NEPA and its implementing regulations issued by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500–1508), the Department of Transportation (DOT) Order 5610.1, FAA Order 1050.1, and other related statutes and directives.

**b.** The complexity of environmental issues associated with some air traffic actions necessitates a systematic and uniform approach to the environmental review process. This process must assess all impacts, as well as provide sufficient data for preparing all required environmental impact analyses and supporting documentation.

c. FAA Order 1050.1 provides the procedures and guidance for the FAA's environmental compliance and documentation responsibilities for all applicable FAA actions. It is the intent of this chapter to complement, and not repeat in its entirety, what is already contained in FAA Order 1050.1. However, there are issues addressed in FAA Order 1050.1 that require further detailed analyses for air traffic actions or additional impact review requirements to ensure they are properly analyzed and documented.

**d.** The environmental review process for Instrument Flight Procedures (IFPs) and other air traffic actions requires completion of a pre–screening filter and, in certain cases, eliminates the need to complete the Air Traffic Initial Environmental Review (IER) form (see Appendix 5), the checklist in support of a Categorical Exclusion (CATEX) Determination, and the CATEX Memo. The re-engineered environmental review process is depicted in FIG 32–1–1.

e. This chapter is designed to address these unique airspace actions (for example, special use airspace proposals) and provide additional detail necessary for air traffic to conduct a thorough and legally sufficient environmental review.

FIG 32-1-1 IFP Re-Engineered Environmental Review Process



#### 32-1-4. DELEGATION OF AUTHORITY

The Approving Official for Environmental Assessments (EAs), Findings of No Significant Impact (FONSIs) and Environmental Impact Statements (EISs) is the FAA official with signature authority for these documents. The FAA official with signature authority to approve a Record of Decision (ROD) is the decision-maker (see Order 1100.154A, Delegation of Authority).

**a.** The air traffic facility manager has signature authority for memoranda related to administrative actions listed in FAA Order 1050.1, paragraph 2–1.2.d. and advisory actions discussed in FAA Order 1050.1, paragraph 2–1.2.b.

**b.** The Service Center Directors have signature authority for CATEXs and, as delegated by the Vice President for Mission Support Services, for EA/FONSI and EIS/ROD documents which are exclusively within the scope of a single Service Center; and may delegate this authority to the Operations Support Group Manager within that Service Center. For Special Use Airspace (SUA) actions that require approval at the Headquarters level, the associated environmental document also requires approval and signature at the Headquarters level. See FAA Order 1050.1, paragraph 8–2 (Adoption of Other Agencies' National Environmental Policy Act Documents).

**c.** The Vice President for Mission Support Services has signature authority for EAs, FONSIs, EISs, and RODs that are beyond the scope of authority of a single Service Center. This authority cannot be delegated.

**d.** The Service Center Directors are responsible for air traffic environmental compliance for proposed actions within the jurisdiction of air traffic facilities within their respective service areas.

**e.** The Mission Support, Rules and Regulations Group is responsible for coordinating environmental processes that cross service area boundaries.

**f.** The Service Center Operations Support Group (OSG) Flight Procedures Team (FPT) must assist the Service Center Environmental Specialist in preparing CATEXs based on the results of the re-engineered environmental review process for IFPs unless it is routed to an OSG Environmental Specialist, at which time it is subject to the authority and responsibilities described above in this Order.

#### 32-1-5. RESPONSIBILITIES

The order of delegated authority for air traffic environmental processes is as follows:

**a.** Mission Support, Policy, Rules and Regulations Group. The Rules and Regulations Group has been delegated authority to direct and implement environmental policy and procedures for air traffic actions. It must design and initiate training programs to educate air traffic personnel in Headquarters, in the Service Centers, Air Traffic Services Service Areas, and in air traffic field facilities on environmental

laws, regulations, policies, and processes related to the implementation or revision of air traffic airspace and procedures.

The Rules and Regulations Group must direct and implement training for air traffic Environmental Specialists in the use of environmental screening and modeling tools (see Subparagraph 32–1–5.b, Service Center Directors). Additionally, the Rules and Regulations Group must serve as the air traffic focal point for the Headquarters Environmental Network chaired by the Office of Environment and Energy (AEE).

**b.** Service Center Directors.

**1.** The Service Center Directors have the final responsibility for ensuring that all appropriate environmental documentation within their area of jurisdiction is prepared accurately and completely.

2. The Service Center Directors are responsible for designating at least one person to serve as the Environmental Specialist within his/her service center to address air traffic environmental issues. Funding for training associated with the duties of the Environmental Specialist must also be the responsibility of the Service Center Director (or his/her designee).

**3.** The Service Center Director (or his/her designee) must appoint a representative to serve as the focal point for his/her service center on Regional Environmental Networks within his/her service center. The representative must coordinate any environmental compliance and documentation activities in his/her service center with the Rules and Regulations Group, as appropriate.

**4.** The Service Center Directors must ensure that the Environmental Specialist attends the following training or equivalent, as soon as practical after his/her appointment to the position:

(a) FAA Academy Course #50019, Airspace and Procedures.

(b) Electronic Learning Management System (eLMS) Course #60000076, Mission Support Services' National Environmental Policy Act (NEPA) & Air Traffic Applications.

(c) Electronic Learning Management System (eLMS) course NEPA for Airspace Actions.

(d) Environmental Review Process for IFPs and the Environmental Pre–Screening Filter.

(e) Environmental screening tools (prescreening filter, noise screening guidance document, and/or TARGETS Environmental Plug-in, or other FAA-approved modeling tool).

(f) Environmental Modeling Tools (Aviation Environmental Design Tool (AEDT) or other FAA-approved modeling tool).

#### NOTE-

Recurrent training to supplement these minimums should be provided, as appropriate. Additionally, when members of the FPT or other specialists have duties that include the use of the Pre-Screening Filter, they must complete training on the Filter, NEPA for Airspace Actions.

c. OSG Manager.

The OSG manager must act as the FAA environmental point of contact when another Federal agency (for example, Department of Defense (DOD)) requests FAA participation as a Cooperating Agency on air traffic or airspace actions.

#### NOTE-

When a request for Cooperating Agency status is received from the DOD related to Special Use Airspace (SUA), a copy of Appendix 2 and Appendix 3, (flow charts for SUA environmental and aeronautical non-rulemaking and rulemaking actions, respectively) along with a copy of Appendix 4 (a summary of FAA procedures for processing DOD SUA actions), will be attached to the response. A copy of the response, which will also identify the Service Center Environmental Specialist, will be provided to the appropriate Service Center.

d. Service Center Environmental Specialist.

1. Center, TRACON, and ATCT facility managers are responsible for participating in the development of all appropriate environmental documentation for proposed air traffic actions within their jurisdiction, and assisting the Service Center Environmental Specialist in ensuring that such documentation is prepared accurately and completely.

The facility managers must designate at least one facility staff specialist within their scope of operations to coordinate with the Service Center Environmental Specialist when addressing environmental issues and concerns. The facility specialist may be required to perform his/her environmental duties on a full-time or collateral basis. The decision about the need for a full-time Environmental Specialist at a field facility must be made by the facility manager.

2. The Service Center Environmental Specialist is responsible for the preparation of CATEXs, Environmental Assessments (EA), Environmental Impact Statements (EIS), Adoption NEPA documents, Written Reevaluations, Findings of no Significant Impact (FONSI), Records of Decision (ROD), and supporting documentation for air traffic actions unless it is a CATEX prepared based on the results of the IFP Environmental Pre-Screening Filter that does not require additional environmental review. In that case, the OSG FPT is responsible. (See paragraph 32-1-5e.) When the results of the Pre-Screening Filter indicate that additional environmental review is needed, the Service Center Environmental Specialist is responsible for additional review and preparation of the appropriate NEPA documentation. The Service Center Environmental Specialist is also responsible for posting these documents to the appropriate KSN site.

**3.** The Service Center Environmental Specialist must provide guidance in the use of the IFP Environmental Pre-Screening Filter.

4. The Service Center Environmental Specialist must provide guidance in and oversee the preparation of the Air Traffic Initial Environmental Reviews (IERs) (see Appendix 5).

**5.** The Service Center Environmental Specialist is responsible for reviewing environmental studies and forwarding written concurrence to the air traffic facilities that originate the environmental documentation.

**6.** The Service Center Environmental Specialist must review environmental compliance documentation initiated by Technical Operations in the Service Centers.

7. The Service Center Environmental Specialist must coordinate with Airport District Offices or the Airports Division, within his/her jurisdiction, on the preparation of environmental compliance documents and 14 CFR, Part 150, Airport Noise Planning, Land Use Compatibility Guidelines (Part 150) studies undertaken by these offices. Review and comments by the Service Center Environmental Specialist must be directed to those matters affecting the operation of the air traffic program. Comments must be forwarded to the appropriate organization in the Office of Airports. The Service Center Environmental Specialist may also be requested to attend public meetings or hearings to provide support to the facility, regional office, service center, or other lines of business convening the meetings or hearings.

8. The Service Center Environmental Specialist must review other agencies' environmental documentation when applicable (for example, when the FAA is considering adopting another agency's environmental documentation).

**9.** In the case of SUA actions, the Service Center Environmental Specialist must review environmental studies in accordance with paragraph 32–2–3.

**10.** The Service Center Environmental Specialists must coordinate with each other and with their counterparts in other agencies, as appropriate. Service Center Environmental Specialists are encouraged to engage in early coordination with AGC when working on a project that is complex, involves novel issues, or is expected to elicit public opposition.

**e.** OSG Flight Procedures and Airspace Specialist (FPT/AT)

**1.** The responsibility to coordinate and consult with the Service Centers' EPSs for environmental analysis and documentation rests with the following flight procedures and airspace specialists as applicable and defined in FAA Order 8260.19 and JO 7100.41.

(a) The OSG Flight Procedures Team is responsible for IFP establishment, change and cancellation requests to IFPs.

(b) The OSG Airspace Teams are responsible for the establishment, change or cancellation requests to airway routes (as applicable) and assisting with IERs.

(c) AJV-A is responsible for IFP establishment or change requests to AFS assigned special procedures and AJV-A initiated maintenance actions.

(d) AFS-400 is responsible for IFP Non-FAA Service Provider procedures (also referred to as "third-party developed flight procedures").

2. The respective flight procedure or airspace specialist must provide the Environmental Specialist information and data concerning the flight procedure being analyzed by the EPS for potential environmental impacts, and that will support the EPSZ preparation of a CATEX and other related environmental documentation as necessary. When the results of the Pre–Screening Filter indicate that additional environmental review is needed, the Service Center Environmental Specialist is responsible for completing that additional review and preparing the appropriate environmental compliance documentation. If additional information about the flight procedure is necessary to complete a sufficient environmental analysis, the EPS and flight procedure designer(s) are responsible to determine what additional information is necessary to complete the environmental document.

**f.** Air Route Traffic Control Center (ARTCC), Terminal Radar Approach Control (TRACON), and Airport Traffic Control Tower (ATCT) facility managers.

1. ARTCC, TRACON, and ATCT facility managers are responsible for coordinating and consulting with the Service Center Environment Specialist to ensure that all appropriate environmental documentation for proposed air traffic actions within their jurisdiction is prepared accurately and completely. For procedures reviewed through the IFP Environmental Pre–Screening Filter, these managers must ensure that the results of the Filter are reviewed by appropriate FAA personnel, and with the Service Center Environmental Specialist, as appropriate and necessary.

(a) For actions that require additional environmental review, these managers are responsible for consulting with the Service Center Environmental Specialist who recommends the appropriate level of environmental review.

(b) For actions other than Advisory or Emergency Actions (as defined in FAA Order 1050.1), and actions that require additional environmental review beyond the IFP Environmental Pre-Screening Filter, the facility manager must ensure that, at a minimum, an Air Traffic Initial Environmental Review (IER) (see Appendix 5) is prepared and submitted, with supporting information, to the Service Center Environmental Specialist along with a description of the proposed action (see Paragraph 32–2–1a, Determination of Appropriate Environmental Documentation). Under some limited circumstances, the Service Center Environmental Specialist may waive the need for completion of the IER by substituting an appropriate level of documentation, such as a memorandum to the file.

(c) For IFP actions reviewed through the IFP Environmental Pre–Screening Filter, the OSG FPT must assist the Service Center Environmental Specialist in determining the appropriate level of environmental documentation after reviewing the results from the Filter. The Service Center Environmental Specialist must then prepare the Categorical Exclusion Declaration (if appropriate) for signature by the Service Center Director (or his/her designee). If preparation of an EA or EIS requires the use of contractor funds and staff, the field facility must forward that recommendation to the Service Center Director for approval and action.

2. The ATCT facility manager should be involved early in the design phase of a proposed IFP action, and any other applicable air traffic action, to ensure that a full understanding of tower/airport operations is included in the alternatives development for the description of the proposed action. The facility manager is responsible for ensuring that information provided to the ARTCC and/or TRACON is complete and accurate.

**3.** Facility managers are also responsible for designating at least one facility staff specialist within their scope of operations to address environmental issues, and for coordinating with the Service Center Environmental Specialist.

(a) The facility specialist may be required to perform his/her environmental duties on a full-time or collateral basis. The decision about the need for a full-time Environmental Specialist at a field facility must be made by the facility manager.

(b) Facility managers must ensure that the specialist who performs environmental duties on a full-time basis attends the training specified in paragraph 32–1–5b. above, as soon as practical.

(c) The environmental screening and modeling tools training is also recommended, but is not mandatory. Additionally, where other facilities have, or are authorized to have, an operations specialist (for example, Plans and Programs Specialist or Procedure Specialist) to conduct environmental activities as a collateral duty, it is recommended that these specialists attend the above-referenced training.

4. Facility managers must ensure that their facility is represented at meetings of the Office of

Airports and other lines of business, such as environmental compliance and Part 150 process meetings, where decisions rendered could affect air traffic operations in their area of responsibility.

(a) Facility managers are responsible for working with operating divisions, airport sponsors, and contract support personnel in the environmental review processes. Air traffic attendance at these meetings does not necessarily constitute air traffic endorsement or sanction of the proposed action.

(b) Environmental compliance and Part 150 studies must receive thorough review at the facility level. Review and comments on Office of Airports documents must be directed to those matters that affect the operation of the air traffic program. Facility comments must be forwarded to the Service Center Environmental Specialist, not more than 15 days after receipt of the document or study. (Requests for longer periods of review must be coordinated with the Service Center Environmental Specialist on an as needed basis.) Prior to a facility submitting comments directly to other operating divisions, or airport sponsors, the facility point of contact must discuss relevant and applicable airspace and/or air traffic issues with the Service Center Environmental Specialist.

5. Facility managers (or their designees) must not make or recommend a proposed flight track, route, or air traffic flow as a preferred action for the sole purpose of noise abatement. They may, however, indicate if the proposed action is operationally feasible or safe (within the context of aircraft separation standards). The airport sponsor (operator) is solely responsible for the recommendation of noise abatement procedures.

# Section 2. Environmental Processing

#### 32-2-1. THE PROCESS

The ARTCC, TRACON, and ATCT facilities, in coordination with the Service Center and Service Center Environmental Specialist, must conduct environmental compliance actions for any proposed air traffic action under their jurisdiction with the potential to impact the human environment. Examples of air traffic actions include, but are not limited to, flight procedure changes that create new flight tracks over noise sensitive areas, flight procedure changes that alter existing flight tracks over noise sensitive areas, lowering altitudes of routes or procedures utilized by aircraft, establishment or modification of certain SUA, and actions affecting operational changes (for example, changes in runway use percentages or headings). Environmental documentation for such actions must be completed prior to approval and implementation. (See Appendix 1, Environmental Study Process Flow Chart, for the steps from action concept to implementation.)

**a.** Questions to ask when considering the potential environmental impact of flight procedures or other air traffic actions may be, but are not limited to:

**1.** Are there aircraft currently flying over the area of change?

2. Are route altitudes increasing or decreasing?

**3.** Are the routes moving laterally, and if so, how far from the baseline route?

- 4. Will the number of operations increase?
- 5. Are there projected changes in runway use?
- 6. Will the types of aircraft change?
- 7. Will nighttime operations increase?

If the FAA is not the proponent of the proposed air traffic action (for example, the Department of Defense or an Airport Sponsor [the proponent] requests the FAA to take the action) then the proponent is responsible for funding and preparation of environmental documentation associated with the proposed action. FAA Order 1050.1, paragraph 2–2.2 discusses the responsibility for preparation of EISs (respectively) where FAA must approve the project. Signature authority for the environmental documents discussed in this section must be in

accordance with paragraph 32–1–4, Delegation of Authority, of this chapter.

The FAA or non-FAA proponent must prepare and submit the associated environmental documentation in conjunction with the proposed air traffic action, as follows:

**b.** Determination of Appropriate Level of Environmental Documentation. The appropriate level of environmental documentation required must be determined by the Service Center Environmental Specialist after all portions of a proposed action have undergone the Air Traffic Initial Environmental Review (IER) (see Appendix 5). The IER form must be completed for all projects that:

**1.** Require the use of computer-based noise screening or modeling tools, or

**2.** Require Headquarters-level funding for completion of environmental impact analysis and documentation.

For those projects not requiring the use of computer-based noise screening or modeling tools or that are not being funded at the Headquarters level, completion of the IER is optional. Facility personnel and the Service Center Environmental Specialist must coordinate completion of the IER form.

If someone other than the Service Center Environmental Specialist completes the IER form, the completed IER form, along with a recommendation as to whether the proposed action warrants no further environmental review, a CATEX, or preparation of an EA or an EIS, must be forwarded to the Service Center Environmental Specialist for review and incorporation of the proposed project information into the NEPA document. Field personnel must consult FAA Order 1050.1 before recommending the appropriate level of environmental review for a proposed action to the Service Center Environmental Specialist.

For IFP or other actions reviewed through the IFP Environmental Pre–Screening Filter, the OSG FPT should assist the Environmental Specialist in determining the appropriate level of environmental documentation after reviewing of the results from the Filter. If the Filter results indicate that a CATEX is warranted, the OSG FPT must assist the Environmental Specialist in the preparation of a CATEX by providing information about the action to help ensure that the action is appropriately and thoroughly described in the CATEX. After the CATEX is approved, the action may be implemented.

**c.** The following are specific sections of FAA Order 1050.1 that must be reviewed:

**1.** Advisory Actions, paragraph 2–1.2b. A memorandum to the file may be the only documentation necessary.

**2.** Emergencies, paragraph 5–6.1a.

**3.** Extraordinary Circumstances, paragraph 5–2.

4. Categorical Exclusions (CATEXs), paragraph 5-6.5, and Extraordinary Circumstances, Paragraph 5-2. Only those categorical exclusions listed in FAA Order 1050.1 may be cited. However, the categorical exclusion referenced in AEE's Guidance Memo #5 dated December 6, 2012, Guidance for Implementation of the Categorical Exclusion in Section 213(c)(1) of the FAA Modernization and Reform Act of 2012 (known as CATEX 1), (see FAA Order 1050.1, paragraph 5-6.5.q) may also be used.

A review of Categorical Exclusion Documentation, paragraph 5-3, will assist in determining the appropriate level of environmental documentation required for a CATEX (see Appendix 6 of this order for a "Sample Categorical Exclusion Declaration").

**5.** Chapter 6 of FAA Order 1050.1 addresses EAs and FONSIs. A review of this chapter will assist in determining when to prepare these documents. The FAA may adopt, in whole or in part, an EA prepared by another Federal agency. Consult FAA Order 1050.1 paragraphs 6–3.c and 8–2 to determine if the other agency's EA meets the criteria for FAA adoption.

**6.** Chapter 7 of FAA Order 1050.1 addresses EISs and RODs. A review of this chapter will assist in determining when and how to prepare these documents.

7. A review of FAA Order 1050.1, Appendix B, will assist in determining whether a noise analysis is warranted and if so, what type of analysis should be conducted. A noise analysis requires several different types of input data including radar data. This data is available to FAA and other Federal Government personnel. Request for the data should be made

through the Service Center Environmental Specialist assigned to the proposal.

**d.** Requests for the FAA to release radar data, to other than FAA personnel, for use in noise studies or environmental compliance documents should be via FAA Order 1200.22, External Requests for National Airspace System (NAS) Data, or the Freedom of Information Act (FOIA) process. It may be simpler and more expedient to utilize the FOIA process, as FOIA does not require use of the Data Release Review Committee or a Memorandum of Agreement between the FAA Field Facility and an Environment-al Contractor. Consult with the Service Center Environmental Specialist should occur if radar data is needed.

**e.** Preparation of Environmental Documents. The following are various levels of environmental review and documentation that may be prepared:

**1.** Actions Not Subject to NEPA Review. See FAA Order 1050.1, paragraph 2–1.2, for a list of actions that do not require an environmental study.

2. No Further Environmental Review Required. Some air traffic actions are subject to NEPA review, but require no further environmental action after the initial environmental review (IER) is completed. These actions involve modifications to airspace and/or procedures and may fit some or all of the following criteria. Special purpose environmental requirements may still apply to airspace and/or procedures that fit some or all of these criteria. No further environmental review is required if the proposed change:

(a) Is over 18,000 ft above ground level (AGL). Currently, there is no need to analyze aircraft noise above 18,000 ft AGL. However, greenhouse gas requirements may require analysis of fuel burn and carbon dioxide (CO2) impacts.

(b) Is over 7,000 AGL for arrivals, and/or over 10,000 ft AGL for departures and/or overflights.

(1) Any decision to analyze aircraft noise over 10,000 ft AGL is an exception and should be coordinated with the ATO Airspace Policy Group at FAA headquarters at the earliest possible time.

(2) Proposed flight procedure changes between 10,000 ft and 18,000 ft AGL should be analyzed for potential impacts when there is a national park or wildlife refuge in the study area that has a quiet setting that is a generally recognized
purpose and attribute, and also in situations when the flight procedure change is likely to be highly controversial.

- (c) Is over a non-noise sensitive area(s).
- (d) Does not alter the current noise footprint.

(e) Does not cause the following noise level change over noise sensitive areas, as defined in FAA Order 1050.1, paragraph 11-5 (10): +1.5 dB for 65 DNL and higher.

For IFP actions reviewed through the IFP Environmental Pre-Screening Filter, most of these determinations will be made automatically based on the information input into the Filter.

#### NOTE-

An FAA-approved environmental screening tool or model must be used to confirm the noise data when the project is not processed through the IFP Environmental Pre-Screening Filter. **3.** Actions Not Requiring a Noise Analysis. (See FAA Order 1050.1, Appendix B, Paragraph B-1.)

4. Following review and consultation, the field facility manager and Service Center Environmental Specialist may agree that no further environmental review is required. When this occurs, the originating facility must prepare a memorandum to the file and attach any supporting documentation, which indicates the basis for the determination (such as a copy of the proposed action that includes references to the above criteria, results of the noise review, etc.).

The memorandum must include, if applicable, references to the provisions of FAA Order 1050.1 that support the determination (for example, whether the proposed action is administrative or advisory in nature).

**5.** Actions Requiring Environmental Modeling for NEPA Compliance. FIG 32–2–1 shows the levels of environmental screening and modeling that are required for NEPA compliance.





6. Non-FAA proponents and third party developers. To meet the requirements of NEPA and other applicable environmental requirements, potential environmental impacts of flight procedures submitted by third party procedure developers must be considered. A proposed procedure development package submitted by a third party developer to an environmental specialist must include (at a minimum) the following information:

(a) Draft Initial Environmental Review (IER) in accordance with process outlined in Appendix 5 of this this Order.

(b) Documentation (email or letter) from the responsible FAA facility to the proponent indicating concurrence with the proposed development of the procedure(s).

7. The Service Center Environmental Specialist will review the documentation to determine if a categorical exclusion is applicable. If the procedure qualifies for a categorical exclusion, the Environmental Specialist will prepare a Categorical Exclusion Declaration and process it in accordance with the requirements of Appendix 6 of this Order.

(a) If necessary, the Service Center Environmental Specialist must use the MITRE Screening Guidance Document referenced in paragraph 32-3-3, below, to assist in determining if the CATEX is applicable.

(b) The Service Center Environmental Specialist must contact the proponent if any additional information is needed to support the CATEX.

**8.** If the Guidance for Noise Screening of Air Traffic Actions indicates that additional review is required, the Service Center Environmental Specialist will use one of the following tools, as appropriate, to perform the next level of screening to determine if the CATEX is applicable:

(a) Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS) tool with the Environmental "Plug-in," or other FAA approved noise screening tool.

(b) If that level of screening indicates that a CATEX is applicable, the Environmental Specialist will prepare a CATEX declaration (Appendix 6 of this order) with results from the above screening tool(s) attached.

(c) If screening of a flight procedure(s) indicates that a CATEX is not applicable, then an Environmental Assessment (EA) should be completed. Flight procedures requiring an EA will be returned to the proponent for additional information that will enable the Service Center Environmental Specialist to conduct an EA level of environmental impact analysis and documentation.

(1) A "focused" EA with required noise analysis may be appropriate in this situation. In coordination and consultation with the Service Center Environmental Specialist, preparation of the EA and any related environmental analysis will be the responsibility of the proponent, and must be completed in accordance with all applicable environmental regulations and requirements. (2) The Service Center Environmental Specialist is responsible for providing advice and assistance to the proponent during the EA preparation; independent review and EA completion; and preparation and completion of a FONSI or decision that an EIS is required.

**9.** Categorical Exclusions. If someone other than an EPS completes an IER (when applicable), the completed IER form, and any other documentation describing the proposed action, must be forwarded to the Service Center Environmental Specialist for review and incorporation into the NEPA document.

(a) The Service Center Environmental Specialist must then prepare the CATEX declaration. If the IFP Environmental Pre-Screening Filter is used, then the environmental data is gathered electronically instead of through the IER, and it is forwarded to the appropriate next step in the IFP process.

(b) A CATEX does not apply to a proposal if extraordinary circumstances, as described in FAA Order 1050.1, paragraph 5-2, Extraordinary Circumstances, exist.

**10.** Environmental Assessments. Although the facility manager must make a recommendation on the level of environmental review, the Service Center Environmental Specialist must make the final determination as to whether the proposed action warrants preparation of an EA or an EIS. For proposed actions that warrant an EA level of review, the Service Center Environmental Specialist may need to request additional resources, funding, and information to support the proposal.

(a) Consultation with the Airspace Policy Group regarding projects at this stage is recommended.

(b) If an independent contractor is to prepare the EA, the Service Center Environmental Specialist must oversee the preparation to ensure compliance with FAA Order 1050.1, Chapter 6, Environmental Assessments and Findings of No Significant Impact.

(c) Chapter 6 of FAA Order 1050.1 summarizes and supplements requirements of the Council on Environmental Quality (CEQ) regulations for EAs. The CEQ regulations do not specify a required format for an EA; however, FAA Order 1050.1, paragraph 6-2.1, contains a sample format that will facilitate preparation of an EA, and integrate compliance with other environmental laws, regulations, and Executive Orders with NEPA review.

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(d) All EAs must be focused and concise in accordance with CEQ and AEE guidance. As defined in the CEQ regulations implementing NEPA, an EA is a "concise public document" that "briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact."

(1) 40 CFR §1508.9(a). An EA must include "brief discussions" of the need for the proposed action, alternatives to the proposed action, and the potential environmental impacts of the proposed action and alternatives.

(2) 40 CFR §1508.9(b). In addition to these specific directions for EAs, the CEQ regulations also contain guidelines regarding the importance of reducing paperwork (for example, by "discussing only briefly issues other than significant ones") and reducing delay (for example, by setting time limits for deciding whether to prepare an EIS.) (See 40 C.F.R. §§ 1500.4(c), 1500.5, 1501.8(b)(2)(i)).

**11.** These concepts are also emphasized in other CEQ guidance, as well as in DOT and FAA orders, and guidance for implementing NEPA actions. To achieve a focused and concise EA, the following must be considered:

(a) Where there are anticipated effects to a resource, but those effects are clearly below thresholds of significance as defined in FAA Order 1050.1, briefly document that fact with an explanation that thresholds would not be reached or exceeded.

(b) Do not address impact categories that the action has no potential to impact, such as construction, farmland, and water quality.

(c) Scale the NEPA review process to the nature and level of the expected environmental impact. Include only what is absolutely necessary in the document and include any additional required supporting data in an appendix.

(d) Do not include information in the document (not even in an appendix) that can be incorporated by reference to a related proposed action analyzed in a previous NEPA document, and made available on a publicly accessible website.

**12.** Findings of No Significant Impact. If an EA reveals that a proposed air traffic action would not

cause significant adverse impacts, the Service Center Environmental Specialist must prepare a FONSI.

(a) FAA Order 1050.1, paragraph 6-3, Finding of No Significant Impact, summarizes and supplements CEQ requirements for FONSIs. The CEQ regulations do not specify a format for FONSIs, but FONSIs must contain the information discussed in 40 CFR 1508.13. The FONSI may be attached to an EA, may be combined with the EA in a single document, or may be a stand-alone document.

(b) Paragraph 6-3 should be reviewed in detail prior to completion of a FONSI to assist in determining the type of document to prepare.

(1) If the FONSI is not combined with, or attached to an EA, it must include a summary of the EA and note any other environmental documentation related to it.

(2) If the FONSI is attached or included with the EA, the FONSI does not need to repeat any of the discussions in the EA but may incorporate them by reference.

(3) All documentation relied upon must be made available to the public upon completion of the environmental process.

(c) If mitigation of potential impacts is included as a requirement in the FONSI, the appropriate follow-up actions must be taken to ensure that the required mitigation is implemented. The Service Center preparing the FONSI is responsible for ensuring that the required mitigation actions are implemented.

**13.** Environmental Impact Statement. If a proposed action requires preparation of an EIS, the Service Center Environmental Specialist must advise the Area Director when there is a need to seek funding and/or resources for the EIS. Consultation with the Rules and Regulations Group regarding projects at this stage is highly recommended.

(a) The FAA, or a contractor it selects, will prepare an EIS for projects that potentially may cause significant environmental impacts (40 CFR Part 1506.5(c)).

(b) If an independent contractor is to prepare the EIS, the Service Center Environmental Specialist must oversee the preparation to ensure compliance with FAA Order 1050.1, paragraph 7-1.2, Environmental Impact Statement Process.

#### NOTE-

The Service Center Environmental Specialist will ensure that all EAs and any subsequent EISs for proposed air traffic action within his/her area of jurisdiction meet the requirements of FAA Order 1050.1. The originating facility is responsible for the accuracy of operational data and assumptions contained therein.

14. Record of Decision. For all proposed air traffic actions that have been the subject of an EIS, the Service Center Environmental Specialist must prepare a ROD in accordance with FAA Order 1050.1, paragraph 7–2.

(a) For proposed air traffic actions for which a FONSI is prepared, the Service Center Environmental Specialist should consider preparing a ROD in accordance with FAA Order 1050.1, paragraph 7-2.

(b) If an independent contractor prepares the EIS, that contractor may also support preparation of the ROD; the ROD documents the agency's decision on the Federal action and remains the responsibility of the FAA.

#### 32–2–2. ENVIRONMENTAL REVIEW OF FLIGHT PROCEDURES AND OTHER AIR TRAFFIC ACTIONS

**a.** "Procedures." The term "procedures" in FAA Order 1050.1 refers to published flight procedures (conventional, PBN IFPs, visual, and others appearing in the FAA's Instrument Flight Procedures (IFP) Information Gateway web page) and radar tracks, which are the actual flight paths.

**b.** Performance–Based Navigation (PBN) Procedures: Refers to satellite–based navigation procedures known as Area Navigation/Required Navigation Performance (RNAV/RNP) procedures. Establishing and implementing a new or revised PBN Instrument Flight Procedure (IFP) constitutes a federal action under NEPA. Accordingly, the FAA must consider environmental impacts before it can take steps to implement a PBN IFP. There are several CATEXs in FAA Order 1050.1, paragraph 5–6.5, that may apply to these flight procedures and other air traffic action, which preclude the need to prepare an EA or EIS for new or revised PBN IFPs.

c. Categorical Exclusions for Flight Procedures and Other Air Traffic Actions: FAA Order 1050.1 includes several CATEXs that normally apply to flight procedures (provided no extraordinary circumstances apply). See FAA Order 1050.1, subparagraphs 5-6.5g, 5-6.5i, and 5-6.5 p. These CATEXs apply to procedures that:

**1.** Use overlays of existing flight procedures (paragraph 5-6.5g).

**2.** Are conducted at 3,000 feet AGL or more (paragraph 5-6.5 i).

**3.** Are conducted below 3,000 feet AGL, but do not cause traffic to be routinely routed over noise-sensitive areas (paragraph 5-6.5 i).

**4.** Are modifications to currently approved IFPs conducted below 3,000 feet AGL that do not significantly increase noise over noise-sensitive areas, or involve increases in minimum altitudes or landing minima (paragraph 5-6.5 i).

**5.** Are new flight procedures that routinely route aircraft over non-noise-sensitive areas (paragraph 5-6.5 p).

**6.** Are published flight procedures, but do not change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks (paragraph 5-6.5 k).

#### NOTE-

FAA Order 1050.1 also recognizes that increasing the concentration of aircraft over existing noise-sensitive areas below 3,000 feet AGL and introducing new traffic on a routine basis over noise-sensitive areas below 3,000 feet AGL may cause a significant noise increase that would preclude the use of a CATEX (see FAA Order 1050.1, subparagraphs 5–6.5i and 5–6.5k).

**d.** Conducting Environmental Review of Proposed Flight Procedures. Additional environmental analysis is needed in some cases to determine the appropriate level of NEPA review for proposed flight procedures. A determination of whether a proposed flight procedure that would normally be categorically excluded, but requires an EA or EIS, depends on whether the proposed action involves "extraordinary circumstances." (See FAA Order 1050.1, paragraph 5-2).

**1.** If additional analysis shows that extraordinary circumstances do not exist, then the procedure can be categorically excluded from further environmental review under NEPA.

2. If analysis shows that extraordinary circumstances exist, then the procedure does not qualify for a CATEX, and an EA or EIS is required. Extraordinary circumstances exist when the proposed action involves any of the conditions described in FAA Order 1050.1, paragraph 5-2, and also may have a significant effect on the environment.

**3.** Circumstances listed in FAA Order 1050.1 that are most likely to require additional analysis with respect to a proposed procedure include:

(a) An impact on noise levels of noise-sensitive areas (paragraph 5-2 b (7)).

(b) Effects on the quality of the human environment that are likely to be highly controversial on environmental grounds (paragraph 5-2 b (10)).

(c) An adverse effect on cultural resources protected under the National Historic Preservation Act of 1966, as amended (subparagraph 5-2 b (1)).

(d) An impact on properties protected under section 4(f) of the Department of Transportation Act (subparagraph 5-2 b (2)).

**4.** If any of the circumstances described in FAA Order 1050.1, paragraph 5-2, exist for a proposed new or modified flight procedure, additional analysis is required to determine the potential for significant environmental effects.

e. Noise Focusing. The term used to characterize the concentration of noise is "noise focusing." The actual flight tracks of aircraft flown on conventional IFPs using ground-based Navigational Aids (NAVAIDs) show broad dispersion around the trajectory of the defined flight procedures. The aircraft noise dispersion is typically based on the performance characteristics of individual aircraft types and pilot technique. In contrast, FAA's experience with satellite-based navigation procedures shows that actual flight tracks and RNAV/RNP PBN procedures converge to a much greater degree. Therefore, aircraft flying RNAV/RNP procedures and the associated noise are concentrated over a smaller area than would be the case for the same operations using conventional, non-RNAV/RNP IFPs.

**f.** Screening Requirements. Due to concerns with noise focusing as described above, it is particularly important to conduct appropriate noise screening to determine whether or not extraordinary circum-

stances exist that warrant preparation of an EA or EIS for PBN IFPs that would normally be categorically excluded.

**1.** Noise screening must be done for PBN IFPs over noise-sensitive areas below 10,000 feet AGL to determine the potential for extraordinary circumstances that may preclude use of a CATEX.

**2.** PBN IFPs that are not over noise–sensitive areas do not require noise screening; however, a CATEX declaration should be prepared in accordance with subparagraph 32-2-1e9(a).

**3.** Noise screening is also required between 10,000 feet and 18,000 feet AGL if a procedure would result in operational changes at an altitude that could increase aircraft noise in an area within a national park, national wildlife refuge, historic site (including a traditional cultural property), or similar area where quiet is an attribute and the noise increase is likely to be highly controversial. (See FAA Order 1050.1, Appendix B, paragraph B-1.5 and paragraph 32-2-1b2(e) of this chapter.) Such screening is used to determine if aircraft flying these procedures would cause increased noise over noise-sensitive areas, and if so, the magnitude of the increase.

4. There are several tools that the FAA has developed to screen for the level of change in noise exposure between the existing condition and a proposed procedure (see paragraph 32-3-3).

**g.** Obstacle Departure Procedures (ODPs). According to FAA Order 8260.46, Departure Procedure (DP) Program, paragraph 2-1-1b(4), there are two types of ODPs: Textual and Graphic. They are defined as:

**1.** Textual ODP. A relatively simple ODP may be published textually unless a graphical depiction is required for clarity. Textual ODP instructions that exceed a maximum of one turn, one altitude change, and one climb gradient must be published graphically.

(a) A Textual ODP does not define a specific route nor have a name or computer code assignment, but only advises the operator how to avoid potential obstacles.

(b) This type of action is not considered a major Federal action under NEPA; therefore, FAA Order 1050.1, Paragraph 2-1.2 b, Advisory Actions, applies.

2. Graphic ODP. Complex ODPs require a visual presentation to clearly communicate the departure instructions and desired flight paths. If the ODP is depicted graphically, it must be clearly stated on FAA Form 8260–15A, Takeoff Minimums and Textual Departure Procedures (DP), in the Departure Procedure section; for example, "USE JONES DEPARTURE." The decision to graphically publish ODPs rests within AeroNav Products.

(a) A Graphic ODP has a repeatable ground track, has the same naming conventions and computer code assignments, looks almost the same on a chart, and is processed the same as a standard instrument departure (SID). (See FAA Order 8260.46, Departure Procedure (DP) Program, Appendix A).

(b) A Graphic ODP is considered a major Federal Action under NEPA just like an SID. FAA Order 1050.1, Paragraph 5-6.5, Categorical Exclusions for Procedural Actions, should be reviewed to determine if a CATEX applies. FAA Order 1050.1, Appendix B, Paragraph B-1.1, Aircraft Noise Screening, should also be reviewed to determine if noise screening or analysis would be required.

### 32-2-3. SPECIAL USE AIRSPACE (SUA)

The purpose of this section is to ensure that air traffic personnel and SUA proponents are aware of the need to comply with NEPA and CEQ requirements for evaluating the environmental impacts of proposed SUA actions. (For example, see FAA Order 1050.1, paragraph 3–1.2.b (14). This section supplements the airspace processing requirements contained in Part 5. of this Order.

Normally, SUA is designated to support DOD requirements. The FAA/DOD Memorandum of Understanding (MOU) in Appendix 7 sets forth procedures and responsibilities for the evaluation of the environmental impacts of DOD SUA proposals. It designates when DOD is the lead agency and when FAA is the cooperating agency for NEPA compliance on SUA proposals.

Appendix 8, FAA Special Use Airspace Environmental Processing Procedures, establishes air traffic environmental document development and processing procedures for proposed SUA actions. In the case of SUA proposals submitted by non–DOD Federal agencies, the responsibility for preparation of an EA or EIS, if required, rests with the proponent (i.e., the requesting Federal agency). However, the FAA retains responsibility under NEPA to ensure that its SUA actions are supported by adequate environmental documentation.

In accordance with FAA Order 1050.1, Paragraph 8–2, Adoption of Other Agencies' National Environmental Policy Act Documents, the FAA may adopt, in whole or in part, draft or final EAs, EISs, or the EA portion of another agency's EA/FONSI, or EIS in accordance with 40 CFR Sec. 1506.3, independently evaluate the information contained in the EA or EIS, take full responsibility for the scope and content that address FAA actions, issue its own FONSI and/or ROD, and, if applicable, provide notification to EPA that the FAA has adopted an EIS.

### 32-2-4. CFR PART 150 STUDIES

**a.** Airport sponsors (Operators) may choose to conduct a 14 CFR Part 150, Airport Noise Planning, Land Use Compatibility Guidelines study to analyze the operation of an airport, identify compatible and and non-compatible land uses, and assess the costs and benefits of noise mitigation techniques.

**b.** Noise Compatibility Programs that result from Part 150 studies often recommend modifications to air traffic routes and/or procedures to accomplish noise abatement. The FAA does not normally make changes in air traffic routes and/or procedures solely for the purpose of noise abatement.

**1.** Under Part 150, the FAA can approve flight procedures to reduce noise that are recommended in a Noise Compatibility Plan.

**2.** If modifications to air traffic routes and/or procedures are recommended, air traffic will evaluate those recommendations as to feasibility and provide input to the appropriate organization in the Office of Airports.

**c.** Preparation of a Part 150 study does not necessarily invoke NEPA; however, the potential implementation of recommended noise abatement measures, such as alternative air traffic procedures, is subject to the environmental review process by the air traffic program.

1. During the Part 150 process, facility managers must keep the Airports Division or Airports District Office representative and the Service Center Environmental Specialist advised of any alternative air traffic control procedures that have the potential to require a NEPA review.

2. Facility managers are responsible for ensuring that current operational data and assumptions (furnished to the entity completing the Part 150 process) are accurate and that future operational data and assumptions reflect reasonable conditions. (Operational data in this context relates to flight track and profile data and/or documentation.)

**d.** The facility environmental representative and the Service Center Environmental Specialist must coordinate with the Airports Division or Airports District Office representative throughout the Part 150 process. This coordination should ensure that assumptions and data used are reviewed at each phase and results can be verified early in the process. Early coordination will allow for adjustments to any operational assumptions prior to completion of the study.

e. The Service Center Environmental Specialist must coordinate with the Airports Division or Airports District Office personnel to furnish any data necessary for use in the Part 150 study. Additionally, air traffic participation in the process does not constitute air traffic approval for a Part 150 action.

**f.** During other noise studies conducted by the airport sponsor, facility managers and Service Center Environmental Specialists must work with the airport sponsor and the Office of Airports personnel on the exchange of information as described above.

# Section 3. Environmental Impact Categories and Other Topics

Chapter 4 of FAA Order 1050.1, "Impact Categories, Significance, and Mitigation," summarizes the requirements and procedures for environmental impact analyses according to the resource impact category. Executive Orders, DOT and FAA orders, handbooks, memoranda, and guidance documents described in FAA Order 1050.1, paragraph 1–10.13, Environmental Impact Categories, may also contain requirements.

Although all resource impact categories may receive the same level of review and analysis, the level of detail of review and analysis for a particular resource is dependent upon the potential for impact. The following paragraphs address those impact categories that may be required as part of the environmental review for proposed air traffic actions.

# 32-3-1. ENVIRONMENTAL IMPACT CAT-EGORIES TO BE INCLUDED IN ANALYSIS

**a.** The following environmental resource categories or sub-categories could be impacted by a proposed flight procedure, flight procedure change, or other air traffic related action. Accordingly, they must be included in an EA or EIS for further detailed analysis. For proposed actions that qualify for a categorical exclusion, certain impact categories or sub-categories may still need to be analyzed to achieve compliance with special purpose environmental laws, regulations, and other state and federal requirements. (See FAA Order 1050.1, paragraphs 4-2 f, 4-3.2, and 5-2 b.)

- 1. Air Quality
- **2.** Compatible Land Use
- **3.** DOT Act; Section 4(f)

**4.** Biological Resources; particularly avian species like birds and bats. As necessary, conduct impact analyses related to bird and bat strikes, as well as noise and light emissions-related impacts to avian and nocturnal avian species.

**5.** Biological Resources: Other Species. If the proposed action increases the number of aircraft flights, changes the origins or destinations of flights, the proposed action may also need to be analyzed for

the potential for an invasive species to be introduced into the study area (GSA).

A significant impact could occur if the U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines that the action could jeopardize the continued existence of a federally listed threatened or endangered species, or would result in the destruction or adverse modification of federally designated critical habitat. Compliance with Section 7 of the Endangered Species Act may be required.

**6.** Historical, Architectural, Archeological, and Cultural Resources (*Historical and Cultural Resources only*). Review the potential for adverse effects related to the introduction of visual, atmospheric, or audible elements that diminish the integrity of the significant historic or cultural features that qualify the property for inclusion in the National Register or other federal protections.

7. Light Emissions and Visual Impacts. In certain cases, a proposed action may require an analysis of light emissions for potential impacts to avian and nocturnal avian species.

8. Natural Resources and Energy Supply (aircraft fuel burn analysis only). Review Council on Environmental Quality (CEQ) June 21, 2019 Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions. (Refer to the official version on the Government Printing Office's govinfo website https://www.govinfo.gov/app/collection/fr and on Regulations.gov website at: https://regulations.gov in Docket No. CEQ-2019-0002.) Until further FAA guidance is provided, continue to calculate aircraft fuel burn in accordance with the methodology referenced in AEE-400 Guidance Memo #3, dated January 12, 2012, Considering Greenhouse Gases and Climate Under the National Environmental Policy Act (NEPA): Interim Guidance, and other currently used tools such as AEDT, to analyze fuel burn.

**9.** Noise. Calculate day-night sound level (DNL) exposure levels for population centroids and unique grid points. For California analyses, CNEL may be provided as a supplemental metric. Use of

other supplemental metrics requires coordination with the Rules and Regulations Group, AJV-P2. Change analysis must be conducted as directed in FAA Order 1050.1, Appendix B.

**b.** A proposed flight procedure(s) or other air traffic action would create a significant noise impact if it would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.

**1.** For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB. (See FAA Order 1050.1, Appendix B, Paragraph B-1.5, Significance Determination).

**2.** If the noise screening shows that the proposed procedure(s) would cause such an impact, a CATEX cannot be used, and an EA or EIS must be prepared.

**3.** If the flight procedure(s) or other air traffic action can be modified to reduce the noise below the significance threshold, an EA and mitigated Finding of No Significant Impact (FONSI) may be prepared. (See FAA Order 1050.1, paragraphs 2-3.6, 4-4, and 6-2.3).

4. If the noise screening shows that aircraft noise over a noise-sensitive area would increase by 5 dB or more, within the DNL 45-60 dB noise range; or would increase by 3 dB or more within the DNL 60-65 dB noise range, further analysis may be required to determine the potential for the flight procedure(s) to be highly controversial because of the potential noise impacts.

**5.** The determination of the appropriate level of additional analysis should be made in consultation with Mission Support, Policy, Rules and Regulations Group.

**c.** If the noise screening shows that none of the above increases would occur, the results of the noise screening with these conclusions should be attached to the CATEX Declaration and uploaded into the current document management database. (See FAA Order JO 7400.2, Appendix 6.)

# 32–3–2. ENVIRONMENTAL IMPACT CAT-EGORIES EXCLUDED FROM ANALYSIS

**a.** The following environmental resource categories or sub-categories would not normally be affected by a proposed flight procedure or air traffic related action because the resource either does not exist within the study area, or the types of activities associated with a proposed air traffic or air traffic related action would not affect them. Accordingly, the following impact areas and resource categories would not be included in an EA or EIS for further analysis.

**1.** Coastal Resources (Coastal Barriers and Coastal Zones).

(a) Coastal Barriers. The Proposed Action is not expected to involve any actions (physical changes or development of facilities) that would be inconsistent with management of designated Coastal Barrier Resource System (CBRS) areas. However, if there are coastal zones within the study area, management plans must be reviewed to ensure there are no activities related to aircraft overflight noise in the management plan.

(b) Coastal Zones. The Proposed Action is not expected to directly affect shorelines or change the use of shoreline zones, or be inconsistent with a NOAA-approved state Coastal Zone Management Plan (CZMP). However, if there are coastal zones within the study area, the CMZP should be reviewed to confirm.

**2.** Construction Impacts. The implementation of new air traffic procedures or other air traffic actions does not normally involve construction activity or ground–based impacts.

**3.** Farmland. The Farmland Protection Policy Act (FPPA) (7 CFR Part 658) regulates federal actions with potential to convert farmland to non-agricultural uses. Implementation of proposed flight procedures or air traffic actions does not normally involve the development of land regardless of use, nor do they have the potential to convert farmland to non-agricultural uses.

4. Biological Resources (habitat).

(a) Air traffic, airspace, and flight procedure changes do not involve ground disturbing activities. They do not normally impact critical habitats.

(b) The proposed flight procedure or air traffic action would not normally affect habitat for non-avian animals, fish, or plants.

**5.** Floodplains. The proposed flight procedure or air traffic action would not involve the construction of facilities. Therefore, it would not impact nor be affected by locations designated as a 100-year flood event area as described by the Federal Emergency Management Agency (FEMA), and no further analysis is required.

**6.** Hazardous Materials, Pollution Prevention, and Solid Waste. The proposed flight procedure or air traffic action would not involve construction or development, or any physical disturbances of the ground. Therefore, the potential for impact from hazardous materials, pollution, or solid waste is not anticipated, and no further analysis or pollution prevention actions would be required.

7. Historical, Architectural, Archeological, and Cultural Resources (*except Historical and Cultural*).

(a) Archeological. The proposed flight procedure or air traffic action would not involve any construction, development, or any physical disturbance of the ground, or excavation that could impact archaeological resources on Federal, State, or Indian lands, and therefore, would not impact cultural resources, or affect the physical integrity or access to American Indian sacred or culturally significant sites.

(b) Architectural. The proposed flight procedure or air traffic action would not involve any construction, development, or any physical disturbance of the ground. Therefore, the potential for impact in relation to architectural compatibility with the character of a surrounding historic district or property is not anticipated. However, in certain circumstances, some analysis of the potential for impacts related to aircraft noise may be required.

8. Light Emissions and Visual Impacts (*except Visual Impacts*). There are no special purpose laws for light impacts and visual impacts. Aviation lighting is required for security, obstruction clearance, and navigation and is the chief contributor to light emissions from airports.

(a) An impact analysis is necessary when projects introduce new airport lighting that may affect residential or other sensitive land uses.

(b) In certain circumstances, for example, when high intensity lights shine directly into a residence or have the potential to impact avian or other species, is the effect of light emissions considered potentially significant enough to warrant impact analysis and planning to reduce or mitigate such effects.

(c) The proposed flight procedure or air traffic action will not normally involve aviation lighting. Therefore, no further analysis is required.

**9.** Natural Resources and Energy Supply (*except fuel burn*). The proposed flight procedure or air traffic action would not normally involve the use of natural resources or materials. Therefore, no further analysis is required.

**10.** Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks (*except Environmental Justice*). Potential impacts in this category as a result of disproportionally high adverse noise and/or air quality impacts are dealt with in the noise and air quality impacts sections, respectively.

(a) Socioeconomic Impacts. The proposed flight procedure or air traffic action would not involve acquisition of real estate, relocation of residents or community businesses, disruption of local traffic patterns, loss in community tax base, or changes to the fabric of the community.

(b) Children's Environmental Health and Safety Risks. The proposed flight procedure or air traffic action would not affect products or substances that a child would be likely to come into contact with, ingest, use, or be exposed to, and would not result in environmental health and safety risks that could disproportionately affect children.

**11.** Water Quality. The proposed flight procedure or air traffic action would not involve any discharges or changes to existing discharges to water bodies, create a new discharge that would result in impacts to water quality, or modify a water body. Therefore, the proposed flight procedure or air traffic action would not result in any direct or indirect impacts to water quality, and no further analysis is required.

**12.** Wetlands. The proposed action would not involve the construction of facilities or infrastructure and would therefore not impact wetlands or navigable waters. Therefore, no further analysis is required.

**13.** Wild and Scenic Rivers. If there are no Wild and Scenic River segments (http://www.rivers.gov/rivers/) located in the study area, the proposed flight procedure or air traffic action would not adversely impact any wild, scenic, or recreational status of a river or river segment included in the Wild and Scenic River System and therefore, no further analysis is required.

#### 32–3–3. ENVIRONMENTAL SCREENING AND MODELING TOOLS

**a.** Screening. FAA Order 1050.1 contains a list of air traffic actions which normally do not result in significant impacts to the environment, are identified as categorically excludable actions (CATEX), and therefore, do not require the preparation of an EA or an EIS. One of the requirements for a CATEX determination is to ensure that there are no extraordinary circumstances as defined in FAA Order 1050.1.

1. The environmental screening process provides a uniform and consistent approach to identify air traffic actions that qualify for categorical exclusion from full environmental impact review in an EA or EIS, and also identifies extraordinary circumstances and/or the potential for significant impacts associated with proposed air traffic actions. The screening process is based on currently approved FAA impact analysis tools and policies.

2. A proponent of an air traffic action can perform a series of relatively simple tests prior to contacting a Service Center Environmental Specialist based on the location of the action (e.g., airport location) that will indicate if a CATEX is applicable.

**3.** Actions that pass the screening tests (see paragraph 32-3-3c1) would normally be eligible for a CATEX, but could still require compliance with special purpose environmental laws, regulations, and requirements such as National Historic Preservation Act (NHPA) Section 106 requirements.

**b.** Passing the environmental screening process indicates that the potential for significant impacts and/or extraordinary circumstances due to aircraft noise is minimal or negligible, and a CATEX is appropriate. The environmental screening documentation should be used by the Service Center Environmental Specialist to support the CATEX determination.

c. The recommended practice is to start with simple NEPA document determination tools, switching to more complex ones only if the proposed flight procedure or other air traffic action fails the test for CATEX eligibility. In general, the simple tools evaluate isolated changes to the proposed action with the goal of achieving quick but conservative results and require input of a minimal amount of data. The more complex tools evaluate multiple interdependent changes and require input of a more comprehensive set of data.

**1.** The following are the available tools that can screen proposed flight procedures or other air traffic actions for noise and/or fuel burn and carbon dioxide (CO<sub>2</sub>) impacts as indicated:

(a) Pre–Screening Filter. The Environmental Pre–screening Filter was developed to guide users through initial analysis of a flight procedure or other air traffic action to achieve applicability of a CATEX. Using a series of simple questions, the pre–screening filter collects and analyzes flight procedure information to determine the next steps in completing the NEPA process. The filter provides the Service Center Environmental Specialist with information to identify an appropriate CATEX or if additional environmental review is required.

(b) Noise Screening Guidance Document. Using a series of look-up tables, the document guides users through the process to determine if a CATEX is appropriate or if additional environmental review is required.

(c) Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS) Environmental Plug-in. The TARGETS Plug-in allows specialists to design procedures for the terminal environment and assess alternative concepts leading to final designs that consider both operational noise and air emissions constraints. Once the user has performed the analysis, the TARGETS Plug-in provides results detailing any potential increase or decrease in noise due to the proposed air traffic action. The TARGETS Plug-in also leverages the technology of AEDT and provides the capability to conduct tradeoff analysis between noise, fuel burn, and  $CO_2$ .

2. Modeling. If the result of screening indicates that additional analysis is required, then a more complex modeling tool will need to be used. FAA environmental modeling has evolved to a single tool

that allows analysis of noise, emissions, and climate impacts and their interdependencies:

(a) Aviation Environmental Design Tool. AEDT is a software system that dynamically models aircraft performance in space and time to produce fuel burn, emissions and noise. Full flight gate-to-gate analyses are possible for study sizes ranging from a single flight at an airport to scenarios at the regional, national, and global levels.

(b) AEDT is currently used by the U.S. government to consider the interdependencies between aircraft-related fuel burn, noise, and emissions.

(c) The AEDT initially replaced the Noise Integrated Routing System (NIRS) that was used for the noise analysis of large regional study areas that included multiple airports. AEDT has subsequently also replaced the Integrated Noise Model (INM) and the Emissions and Dispersion Modeling System (EDMS).

# 32-3-4. RECORDS RETENTION

Records retention must be in accordance with the appropriate paragraph(s) in FAA Order 1350.15, Records Organization, Transfer, and Destruction Standards.

#### NOTE-

Although chapter 10 of FAA Order 1350.15 contains Air Traffic-specific information, guidance for retention of environmental documentation is contained in that portion of the order specific to the Airports Division. **a.** Environmental record-keeping should receive special attention at the field facility level. If an action requires preparation of an EA or an EIS, the Service Center Environmental Specialist must maintain an Administrative File for every proposed action. The Administrative File is important in the environmental process because it is a compilation of all the information relied upon by FAA in the decision-making process.

**b.** Since some environmental projects may extend over several years, the Administrative File becomes a history of events. In the event of a legal challenge, the Administrative File will be used to develop the Administrative Record. The Administrative Record will be reviewed by the U.S. Court of Appeals to determine if the FAA complied with environmental requirements. The data and documentation contained in the File can also be used as the starting point for any follow–on environmental studies.

c. Field facility personnel must consult with their Service Center Environmental Specialist to obtain guidance on what should or should not become part of the Administrative File. Regional counsel or AGC-620, as appropriate, should also be consulted on this. Federal court rules provide that when an FAA action is challenged in court, the agency has 40 days to compile the Administrative Record, make necessary copies, and file an index to the Record with the court. Therefore, it is preferable to begin development of the Administrative Record by maintaining an accurate Administrative File from the earliest stages of a project, instead of waiting until a lawsuit is filed.

# Section 4. Air Traffic–Specific Environmental Guidance and Requirements

# 32–4–1. DEPARTMENT OF TRANSPORTATION (DOT) ACT SECTION 4(f) (RECODIFIED AS 49 USC SECTION 303(c))

Air Traffic personnel need to consult with all appropriate Federal, state and local officials having jurisdiction over affected Section 4(f) resource when determining whether project–related noise impacts would constitute a use of those resources.

FAA Order 1050.1, Appendix B, provides guidance on matters relevant to Section 4(f). (See also Appendix 9, Noise Policy for Management of Airspace Over Federally Managed Lands.)

# 32–4–2. ENVIRONMENTAL JUSTICE (TITLE VI/NEPA)

**a.** Environmental Specialists need to know the process and requirements for environmental justice compliance.

**b.** DOT Order 5610.2, Environmental Justice, requires analysis of impacts of proposed FAA actions to ensure that minority and low-income population groups are not disproportionately affected. Additionally, FAA Order 1050.1, Appendix B, paragraph B-1.5; Chapter 2, paragraphs 2-2.1.b(2)(a), 2-5.2.b, and Chapter 4, paragraph 4-1, summarize the requirements and procedures to be used in environmental impact analysis related to environmental justice, as well as other socioeconomic impacts and children's environmental health and safety risks.

**c.** Environmental Specialists should identify who potentially benefits and who is potentially adversely impacted by the proposed actions, while noting impacts on specific subgroups.

#### 32-4-3. COMMUNITY INVOLVEMENT

**a.** Community involvement is the process of engaging in dialogue and collaboration with communities affected by FAA actions. Collaboration means all parties taking responsibility to engage in meaningful dialogue with their counterparts. This includes making a genuine effort to ensure that the

interests of all have been identified and as many as possible have been addressed before an outcome is determined.

**b.** The FAA is committed to open dialogue with communities and regards community input as an important consideration in decisions that affect the airspace. Because the FAA must prioritize the safe and efficient operation of the National Airspace System, community involvement does not guarantee outcomes that satisfy everyone. However, decisions that take community input into consideration are more likely to reflect the collective public interest, receive broader community acceptance, and experience fewer implementation and post–implementation problems.

#### REFERENCE-

FAA Community Involvement Manual, February 2016, Section 1.1 "Background."

**c.** Therefore, ATO personnel should reference the following materials to determine the type and extent of community involvement, if any, for a project or action:

1. FAA Order 1050.1

2. FAA Community Involvement Manual (CIM)

**3.** FAA Air Traffic Organization Community Involvement Plan (ATO CIP)

**4.** FAA Community Involvement Performance Based Navigation Desk Guide (CIPDG)

**5.** FAA Order JO 7400.2, Appendix 10, FAA's "Community Involvement Policy" statement.

**6.** FAA Scenario–Based Guidance for Community Engagement.

**d.** Community involvement should be considered early in the project development process. Note that the type of community involvement (workshops, airport meetings, roundtables, presentations, etc.) must be determined on a case-by-case basis.

#### 32–4–4. SEGMENTATION, INDEPENDENT UTILITY, AND CUMULATIVE IMPACTS

**a.** Environmental Specialists must ensure that projects that do not have independent utility are not separated into smaller components (segmented) in

order to avoid analyzing the overall impact of the project. A project has independent utility when it can reasonably satisfy the agency's purpose and need for the project even if no other project (or related portion of the project) is implemented. In contrast, projects are connected actions if they would not exist without the other project. Environmental Specialists should ensure that a project does not involve actions by multiple FAA LOB/SOs. Connected actions, as defined in FAA Order 1050.1F, Paragraph 2–3.2 (b)(1), must be considered together to prevent dividing a project into several smaller actions, each of which might have an insignificant impact when considered in isolation, but that taken as a whole, could have a substantial impact.

**b.** Environmental Specialists must ensure that cumulative impacts are appropriately addressed in all EAs or EISs for air traffic actions.

1. Cumulative impacts are those that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal and non-Federal) or person undertakes such other actions.

**2.** Cumulative impacts may result from individually minor, but collectively significant actions taking place over a period of time. (See FAA Order 1050.1, paragraph 4-2.d (3) and also "Considering Cumulative Effects Under the National Environmental Policy Act (1997).")

### 32-4-5. DIVERSE VECTOR AREAS (DVA)

**a.** According to FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), a DVA is an area established to avoid obstacles.

**1.** A DVA is used by air traffic control (ATC) radar facilities to allow the radar vectoring of aircraft below the minimum vectoring altitude (MVA), or for en route facilities, the minimum instrument flight rules altitude (MIA).

2. A DVA consists of designated airspace associated with a departure runway where the use of the applicable departure criteria, specified in FAA Order 8260.3, and this order have been applied to identify and avoid obstacles that penetrate the departure obstacle clearance surface (OCS).

**3.** Avoidance of obstacles is achieved through the application of a sloping OCS within the boundaries of the DVA. Since a sloping OCS is applicable to climb segments, a DVA is valid only when aircraft are permitted to climb uninterrupted from the departure runway to the MVA/MIA (or higher). A DVA is not applicable once an aircraft's climb is arrested.

**b.** Since DVAs generally do not define a specific route to avoid potential obstacles, this type of action is not considered a major Federal action under NEPA and therefore, FAA Order 1050.1, paragraph 2-1.2.b, Advisory Actions, applies.

**c.** In accordance with FAA Order 1050.1, paragraph 2–1.2.b, the establishment of a DVA could result in subsequent action that may be subject to NEPA. Facility and Service Center specialists working on these subsequent actions must consult with their environmental specialist to determine if that action is subject to NEPA. (See questions in paragraph 32–2–1.)

# 32–4–6. NATIONAL SECURITY AREAS (NSAs)

**a.** According to paragraph 28-1-1, Definition, a National Security Area (NSA) consists of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities. Pilots are requested to voluntarily avoid flying through an NSA. When it is necessary to provide a greater level of security, flight in an NSA may be temporarily prohibited pursuant to the provisions of 14 CFR 99.7, Special Security Instructions.

**b.** In accordance with paragraph 28-2-1,NSA Proposals, NSAs do not require environmental analysis; therefore, this type of action is not considered a major Federal action under NEPA, and FAA Order 1050.1, paragraph 2-1.2.b, Advisory Actions, applies.

# 32–4–7. PROHIBITED AREA AND ALERT AREA DESIGNATIONS

In accordance with paragraph 21–1–9, Environmental Analysis, prohibited area and alert area designations are actions that are neither permissive nor enabling, and therefore, environmental assessments or statements are not required when designating these areas.

# 32–4–8. RECORDS RETENTION

Records retention must be in accordance with the appropriate paragraph(s) in FAA Order 1350.15, Records Organization, Transfer, and Destruction Standards.

#### NOTE-

Although chapter 10 of FAA Order 1350.15 contains Air Traffic-specific information, guidance for retention of environmental documentation is contained in that portion of the order specific to the Airports Division.

**a.** Environmental record-keeping should receive special attention at the field facility level. If an action requires preparation of an EA or an EIS, the Service Center Environmental Specialist must maintain the Administrative File. The Administrative File is important in the environmental process because it is a compilation of all the information relied upon by FAA in the decision-making process.

**b.** Since some environmental projects may extend over several years, the Administrative File becomes a history of events. In the event of a legal challenge, the Administrative File will be used to develop the Administrative Record. The Administrative Record will be reviewed by the U.S. Court of Appeals to determine if the FAA complied with the requirements of NEPA. The data and documentation contained in the File can also be used to initiate any subsequent environmental studies.

c. Field facility personnel must consult with their Service Center Environmental Specialist to obtain guidance on what should or should not become part of the Administrative File. Regional counsel or AGC–620, as appropriate, should also be consulted on this. Federal court rules provide that when an FAA action is challenged in court, the agency has 40 days to compile the Administrative Record, make necessary copies, and file an index to the Record with the court. Therefore, it is preferable to begin development of the Administrative File from the earliest stages of a project, instead of waiting until a lawsuit is filed.

### 32-4-9. APPENDICES

**a.** Appendix 1. Environmental Study Process Flow Chart.

**b.** Appendix 2. Special Use Airspace Aeronautical Processing Flow Chart

c. Appendix 3. Special Use Airspace Environmental Processing Flow Chart

**d.** Appendix 4. FAA Procedures for Processing SUA Actions Summary Table

e. Appendix 5. Air Traffic Initial Environmental Review (IER)

**f.** Appendix 6. Sample Categorical Exclusion Declaration.

**g.** Appendix 7. FAA/DOD Memorandum of Understanding.

**h.** Appendix 8. FAA Special Use Airspace Environmental Processing Procedures.

**i.** Appendix 9. Noise Policy for Management of Airspace Over Federally Managed Lands.

**j.** Appendix 10. Community Involvement Policy.

# 32-4-10. MEMORANDUMS AND EMAILS SUPERSEDED BY THIS ORDER

The following guidance memorandums (memos) and emails have been incorporated and therefore cancelled.

**a.** ATA-1 Memo dated January 17, 2001, Change in Air Traffic Noise Screen Policy (Federal Register/Vol. 65, No. 235/Wednesday, December 6, 2000/Notices, p. 76339).

**b.** ATA-300 Memo dated September 15, 2003, Altitude Cut-Off for National Airspace redesign (NAR) Environmental Analyses.

c. AJR-34 Memo dated August 21, 2009, Environmental Guidance for Actions Involving Propeller-Driven Aircraft.

**d.** AJR-34 Memo dated August 21, 2009, Guidance Regarding the Number of Procedures for Noise Screening.

e. AJV-1 Memo dated December 15, 2010, Guidance for Conducting Environmental Review of Proposed Performance Based Navigation (PBN) Flight Procedures.

**f.** AEE-400 Guidance Memo #1 dated December 20, 2010, Clarification of CATEXs 311g and 311i for Procedural Actions; FAA Order 1050.1E.

**g.** AEE-400 Memo #2 dated January 10, 2011, Guidance on Preparing Focused, Concise and Timely Environmental Assessments.

**h.** AEE-400 Guidance Memo #4 dated March 21, 2012, Guidance on Using AEDT2a to Conduct Environmental Modeling for FAA Air Traffic Airspace and Procedure Actions.

**i.** D. Warren email dated March 23, 2012; In accordance with FAA Order 1050.1, National Security Areas (NSAs) are considered Advisory Actions and do not require environmental analysis.

**j.** D. Warren email, dated May 8, 2012, CATEXs for Departure.

**k.** AJV-114 memo dated July 17, 2012, Interim Guidance: Using the Lateral Movement Tests (LAT Tests) for Noise Screening of Air Traffic Actions.

**I.** AJV-11 memo dated January 4, 2013, Authorized Use of the MITRE Noise Screening Guidance Document, dated December 2012.

**m.** D. Warren email dated March 11, 2013, Diverse Vector Areas (DVAs).

**n.** AJV-0 Memo dated March 21, 2013, Signature Authority and Process for Environmental Findings and Decision Documents Related to Performance Based Navigation and Airspace Redesign.

**o.** AJV-0 Guidance Memo dated September 19, 2013, Implementation of the Re-engineered Environmental Review Process for Instrument Flight Procedures: FAA Order JO 7400.2J.