

CHAPTER 7.

AIRSPACE

1 7.1 INTRODUCTION

2 This chapter contains a description of the potential environmental consequences on airspace associated
3 with implementation of the alternatives within the region of influence (ROI). For a description of the
4 affected environment for all resources, refer to respective chapters of Volume 2, (Marine Corps
5 Relocation – Guam). The locations described in that volume include the ROI for the Army Air and
6 Missile Defense Task Force (AMDTF) component of the proposed action, and the chapters are presented
7 in the same order as the resource areas contained in this volume.

8 7.2 ENVIRONMENTAL CONSEQUENCES

9 7.2.1 Approach to Analysis

10 7.2.1.1 Methodology

11 As the airspace impacts would be island-wide in nature with no difference in effects among the various
12 alternatives, the summary of impacts presented below covers all of the alternatives except the no-action
13 alternative, which is treated separately in Section 7.2.3. Impacts on airspace use were assessed by
14 evaluating the potential effects of the proposed training activities on the principal attributes of airspace
15 use. Listed below are the impact categories and how they were assessed for this project:

- 16 • Impacts on controlled and uncontrolled airspace were assessed by determining if the project
17 would reduce the amount of navigable airspace by creating new or expanding existing special
18 use airspace (SUA) or by introducing temporary flight restrictions or presenting an
19 obstruction to air navigation.
- 20 • Impacts on SUA were assessed by determining the project's requirement either for new SUA
21 or for modifying existing SUA.
- 22 • Impacts on enroute airways were assessed by determining if the project would lead to a
23 change in a regular flight course or altitude or instrument procedures.
- 24 • Impacts on airports and airfields were assessed by determining if the project would restrict
25 access to or affect the use of airports/airfields available for public use or if it would affect
26 airfield/airport arrival and departure traffic flows.

27 Factors used to assess impacts on air traffic include consideration of an alternative's potential to result in
28 an increase in the number of flights such that they could not be accommodated within established
29 operational procedures and flight patterns, a requirement for airspace modification, or an increase in air
30 traffic that might increase collision potential between military and nonparticipating civilian operations.

31 7.2.1.2 Determination of Significance

32 Based part on Federal Aviation Administration (FAA) Order 1050.1E, Change 1, Environmental Impacts:
33 Policies and Procedures and FAA Order 7400.2E, Procedures for Handling Airspace Matters, an action is
34 considered to have a potential significant airspace impact if it would result in any of the following:

- 35 • Reduction in the amount of navigable airspace that would have adverse aeronautical impacts
36 to non-participating users that could not be mitigated.

- 1 • Creation of an obstruction to air navigation.
- 2 • Assignment of new SUA (including Controlled Firing Areas, Restricted Areas, Warning
- 3 Areas, and/or Military Operations Areas) or require the modification of existing SUA that
- 4 would have adverse aeronautical impacts that could not be mitigated.
- 5 • Change to an existing or planned Instrument Flight Rule (IFR), minimum flight altitude, a
- 6 published or special instrument procedure, or an IFR departure procedure or require a visual
- 7 flight rule operation to change from a regular flight course or altitude.
- 8 • Reduction in public health and safety due to a change in aviation safety risk.
- 9 • Restricted access to or effects on the use of airports and airfields available for public use.
- 10 • Change to commercial or private airfield or airport arrival and departure traffic flows.

11 7.2.1.3 Issues Identified During Public Scoping Process

12 As part of the analysis, concerns related to Airspace that were mentioned by the public, including
13 regulatory stakeholders, during the public scoping meetings include potential impacts to commercial
14 aircraft using Guam International Airport (GIA).

15 **7.2.2 Proposed Action**

16 This description of environmental consequences addresses all components of the proposed actions for the
17 Army AMDTF. This includes the headquarters/housing component and the munitions storage component,
18 each of which has three alternatives. The weapons emplacement component has four alternatives.
19 Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L).

20 The proposed SUA (Restricted Area R-7205) would be located along and off the northwest coast of
21 Guam. The SUA includes all components of the proposed action, and would be the same for all the
22 alternatives. The THAAD radar radio frequency hazard areas for military aircraft with electro-explosive
23 devices exists from the radar out to 3.4 miles (mi) (5.5 kilometers [km]) from the radar, 65 degrees to the
24 left and right of the main radar bore site and 90 degrees straight up. A THAAD radar radio frequency
25 hazard area for civilian aircraft exists from the radar out to 1.5 mi (2.4 km) from the radar, 65 degrees to
26 the left and right of the main radar bore site and 90 degrees straight up. A personnel hazard exists for 328
27 feet (ft) (100 meters [m]) on level ground in front of the radar and for elevations 5 degrees above the radar
28 elevation out to 2.2 mi (3.6 km). For distances from the radar between 328 ft (100 m) and 2.2 mi (3.6
29 km), if the difference in elevation between the radar and the terrain (or a tower or building in an urban
30 environment) divided by the distance from the radar is greater than 0.0875, then an uncontrolled
31 personnel hazard exists. Planned preventive maintenance will require a minimum continuous period of 45
32 minutes daily Monday through Friday. Training and certification periods will be processed to the FAA for
33 approval to utilize pre-approved R-7205 airspace.

34 The proposed restricted area would not impact GIA. The proposed Restricted Area-THAAD would be
35 from the Surface up to Flight Level 22,000 ft mean sea level (MSL) (FL220) (4.2 mi [6.7 km]) and would
36 be activated from 0800-2200L (i.e., from 8:00 a.m. until 10:00 p.m. local time), Monday – Friday; 7:00-
37 6:00, Saturday and Sunday; other times by Notice to Airmen (NOTAM.).

38 Under this alternative there would be no change to enroute airways or IFR procedures. There would also
39 be no restrictions on access to and no effect on the use of civilian airports or airfields available for public
40 use. Class D airspace surrounding Andersen Air Force Base (AFB) would fall partially within the existing
41 Class D airspace surrounding Andersen AFB. Under this option, current Class D airspace would be
42 modified to exclude the proposed SUA. This would not cause any direct adverse impacts on general

1 aviation air traffic flying out of GIA. Operations would continue to be subject to air traffic control
 2 clearances and instructions. Hazardous air training activities are communicated to commercial airlines
 3 and general aviation by NOTAMs, published by the FAA.

4 There would be no additional impacts on the FAA’s capabilities, no expected decrease in aviation safety,
 5 and no adverse effect on commercial or general aviation activities. No significant impacts are anticipated.
 6 Arrival and departures for Andersen AFB would be impacted, but changes and coordination of proposed
 7 SUA use with Andersen AFB Arrival and Departure Control would limit impacts. Therefore, impacts to
 8 airspace would be less than significant.

9 **7.2.3 No-Action Alternative**

10 Under the no-action alternative, no SUA or restricted airspace associated with the Army AMDTF would
 11 occur. Therefore, no airspace impacts would result from the no-action alternative.

12 **7.2.4 Summary of Impacts**

13 Tables 7.2-1 summarize the potential impacts of the proposed action to airspace island-wide. A text
 14 summary is provided below.

Table 7.2-1. Summary of Army AMDTF Impacts

<i>All Alternatives</i>
Construction
NI
<ul style="list-style-type: none"> No impacts to airspace from construction
Operation
LSI
<ul style="list-style-type: none"> No change to enroute airways or IFR procedures No restrictions on access to and no effect on the use of civilian airports or airfields available for public use. No direct adverse impacts on general aviation air traffic flying out of GIA. No additional impacts on the FAA’s capabilities, no expected decrease in aviation safety, and no adverse effect on commercial or general aviation activities. Impact on air traffic to and from Andersen AFB would be limited with coordination.

Legend: NI = No impact; LSI = Less than significant impact.

15 None of the alternatives would have significant impacts on airspace. Alternatives 1, 2, 3, and 4, would
 16 establish SUA for THAAD training. A new SUA would be necessary to accommodate THAAD training,
 17 but would not require any changes to existing arrival and departures from GIA. There would be no
 18 enroute low-altitude airways, and no IFR procedures would need to change. Well-established and
 19 understood aviation procedures and rules governing flight operations in both controlled and uncontrolled
 20 navigable airspace and SUA make future adverse impacts on public health and safety extremely unlikely.
 21 Aircrews for military participants and non-participating aircraft would be responsible for using see and
 22 avoid techniques to avoid hazards. The impact on this airspace action on air traffic control and airspace
 23 users is anticipated to be less than significant once new procedures have been in effect for a few months.

24 **7.2.5 Summary of Potential Mitigation Measures**

25 Table 7.2-2 summarizes the potential mitigation measures proposed for each action alternative.

Table 7.2-2. Summary of Potential Mitigation Measures

<i>Impact Area</i>	<i>Adverse Impacts</i>	<i>Mitigation Measures</i>
Airspace	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> No mitigation required

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