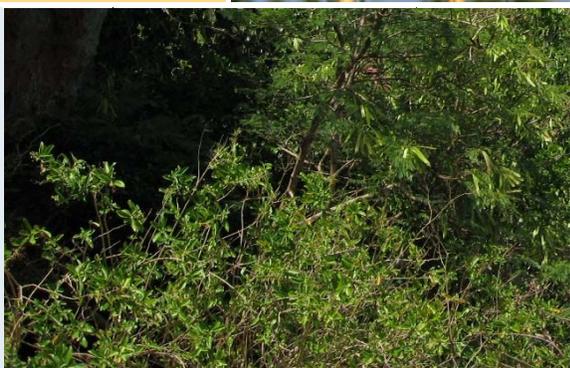


Executive Summary

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR DIVERT ACTIVITIES AND EXERCISES,
COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**



Headquarters, Pacific Air Forces
Joint Base Pearl Harbor-Hickam, Hawai'i



September 2016

Executive Summary Cover Sheet
Environmental Impact Statement for Divert Activities and Exercises,
Commonwealth of the Northern Mariana Islands

Responsible Agencies:

Lead Agency	U.S. Air Force (USAF)
Cooperating Agencies	U.S. Navy, U.S. Marine Corps, Federal Aviation Administration.

Affected Location: Mariana Islands region.

Proposed Action: The USAF proposes to improve an existing airport or airports and associated infrastructure in the Mariana Islands in support of expanding mission requirements and to achieve divert capabilities in the western Pacific.

Designation: Final Environmental Impact Statement (EIS) (Executive Summary).

Abstract: Under this action, the USAF proposes to construct facilities and infrastructure at an existing airport or airports to support a combination of cargo, tanker, and similar aircraft and associated support personnel for divert operations, periodic exercises, and humanitarian assistance and disaster relief. The purpose of the Proposed Action is to establish additional divert capabilities to support and conduct current, emerging, and future training activities, while ensuring the capability to meet mission requirements in the event that access to Andersen Air Force Base or other western Pacific locations is limited or denied. The Proposed Action is needed because there is not an existing divert or contingency airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

This EIS was prepared pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations Parts 1500–1508) for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) and USAF Procedures for Implementing National Environmental Policy Act (32 Code of Federal Regulations Part 989). The USAF determined the policies and objectives of NEPA would be best served by preparing and releasing a Revised Draft EIS to seek additional comments on changes made as a result of comments received on the 2012 Draft EIS. To suitably address public, and agency officials' comments, the USAF developed modified versions of the alternatives presented in the 2012 Draft EIS that were described and analyzed in the Revised Draft EIS. The USAF requested public comments on the Revised Draft EIS during a 60-day review period following publication of the Notice of Availability in the Federal Register. The USAF considered comments received on the Revised Draft EIS in preparation of the Final EIS. This Final EIS has been made available to the public and announced by a Notice of Availability in the Federal Register. The USAF must wait at least 30 days from that date to make a decision.

Inquiries regarding this document should be sent to HQ PACAF/PA, 25 E Street, Suite G-108, Joint Base Pearl Harbor-Hickam, HI 96853, ATTN: PACAF Divert Marianas EIS or via email to pacaf.paops@us.af.mil.

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EXECUTIVE SUMMARY

FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

DIVERT ACTIVITIES AND EXERCISES,

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS



HEADQUARTERS PACIFIC AIR FORCES (HQ PACAF)
JOINT BASE PEARL HARBOR-HICKAM, HAWAI'I 96853-5233

SEPTEMBER 2016

Reader Introduction

This document is a Final Environmental Impact Statement (EIS) for the U.S. Air Force's Divert Activities and Exercises proposal. The Final EIS was developed from the 2015 Revised Draft EIS and considers comments received on the 2015 Revised Draft EIS. The Revised Draft EIS was a modification of the original Divert Activities and Exercises Draft EIS that was released for public review in June 2012.

This Final EIS analyzes potential environmental impacts of the modified alternatives that were presented in the 2015 Revised Draft EIS. The modified alternatives are considered modified from those originally presented in the June 2012 Draft EIS. The following paragraphs provide a summary of events leading to this Final EIS and the changes incorporated into this document throughout the National Environmental Policy Act (NEPA) process.

RI 1. 2012 Draft EIS Publication

In June 2012, the U.S. Air Force (USAF) released a Draft EIS for Divert Activities and Exercises, available for download at www.pacafdivertmarianaseis.com. The 2012 Draft EIS described the Proposed Action as improving an existing airport or airports in the Mariana Islands region through the construction of facilities and infrastructure to support a combination of cargo, fighter, and tanker aircraft and support personnel for periodic divert operations, joint military exercises, and humanitarian assistance and disaster relief efforts. The 2012 Draft EIS analyzed two alternative locations in the Commonwealth of the Northern Mariana Islands (CNMI) for the Proposed Action: Francisco C. Ada/Saipan International Airport and the Port of Saipan on Saipan, and Tinian International Airport and the Port of Tinian on Tinian. The 2012 Draft EIS identified Saipan as the Preferred Alternative.

Each of the 2012 Draft EIS Alternatives (i.e., Alternative 1 – Saipan and Alternative 2 – Tinian) included a Construction Phase and the following construction elements: a runway extension; a parking apron(s); associated pavement markings, lighting, and navigational aids; munitions storage facilities; a hazardous cargo pad and arm/disarm pad; an aircraft hangar; a maintenance facility; jet fuel receiving, storage, and distribution infrastructure; and billeting (tent lodging). The 2012 Draft EIS Alternatives also included an Implementation Phase with the following elements: divert operations; humanitarian airlift staging; military exercises by fighter and tanker aircraft; jet fuel receiving, storage, and distribution; and lodging either in tents or local lodging.

RI 2. 2012 Draft EIS Public Review

The public comment period for the 2012 Draft EIS occurred for 45 days from June 9, 2012 Chamorro Standard Time (ChST) (June 8, 2012 EDT) until July 24 ChST (July 23, 2012 EDT). The USAF received over 200 individual comments from Federal, territory, and commonwealth agencies; political stakeholders; and the general public. Many comments received on the 2012

Draft EIS recommended the USAF consider Tinian as the Preferred Alternative and also that the USAF consider construction on the north side of the Tinian International Airport. Comments also expressed concern over potential impacts related to munitions storage and fighter jet aircraft operations.

RI 3. 2015 Revised Draft EIS

In October 2015, the USAF released the 2015 Revised Draft EIS for a 60-day public comment period from October, 17 2015 ChST (October 16, 2015 EDT) until December 15, 2015 ChST (December 14, 2016 EST). The USAF's purpose of and need for the divert activities and exercises Proposed Action had not changed since release of the Draft EIS in June 2012. However, the USAF determined the policies and objectives of NEPA would be best served by preparing and publicly releasing a Revised Draft EIS to seek additional comments on changes made as a result of comments received on the 2012 Draft EIS. The Revised Draft EIS presented modified alternatives that represent a reduced capability from that analyzed in the 2012 Draft EIS. The modified alternatives meet USAF operational selection standards presented in the 2012 Draft EIS, while incorporating input received during the 2012 Draft EIS public review period.

RI 3.1 Modified Alternatives

The Revised Draft EIS presented three modified alternatives, which include a modified Saipan alternative, a modified Tinian alternative, and a hybrid modified alternative. The hybrid modified alternative would combine development on both Saipan and Tinian; however, it would focus most development and operations on Tinian. Both the modified Tinian alternative and the hybrid modified alternative analyze the potential for development on either the south or north side of Tinian International Airport.

Based on public and agency input into the 2012 Draft EIS, the USAF removed the following elements from each of the three modified alternatives in the Revised Draft EIS:

- Runway extension
- Navigational aids
- Aircraft hanger
- Munitions storage facilities
- Arm/disarm pad
- Tent billeting (lodging)
- Fighter aircraft operations.

The USAF also reduced the total number of proposed aircraft operations from 1,920 take-offs or landings to 720 take-offs or landings.

Although the USAF removed many elements from the 2012 Draft EIS, some elements included in the modified alternatives were not previously included in the 2012 Draft EIS. These new elements are required due to revisions in the alternatives developed through continued coordination with the Federal and CNMI government agencies, and in consideration of public comments. For example, the Modified Tinian Alternative North Option was developed in response to feedback to consider construction on the north side of Tinian International Airport. There is not an existing parallel taxiway on the north side of the airport; therefore, the construction of a parallel taxiway is proposed in the Modified Tinian Alternative North Option and analyzed in this document, although not previously included in the 2012 Draft EIS.

An “operation” is considered to be either one take-off or one landing. For example, a round-trip flight that includes a take-off and landing would be considered two operations. The Proposed Action includes a total of up to 720 operations per year.

RI 3.2 Affected Environment and Environmental Consequences

Some information in the 2015 Revised Draft EIS description of the Affected Environment (**Chapter 3**) and the Environmental Consequences (**Chapter 4**) sections was changed after the release of the 2012 Draft EIS. Those changes were based on the modified alternatives presented in the Revised Draft EIS and also provided a more thorough and in-depth analysis of impacts. Changes included updates on information presented in the 2012 Draft EIS and additional analysis beyond that done in the 2012 Draft EIS.

RI 4. 2016 Final EIS

The USAF’s purpose of and need for the divert activities and exercises Proposed Action remains the same in this Final EIS as that presented in the 2015 Revised Draft EIS and 2012 Draft EIS. This Final EIS presents the same modified alternatives as those presented in the 2015 Revised Draft EIS. The modified alternatives meet USAF operational selection standards while incorporating input received during the 2012 Draft EIS and 2015 Revised Draft EIS public review period. **Section 2.5** and **Tables 2.4-1, 2.4-2, and 2.4-3** provide a detailed description and comparison of the alternatives presented in the 2012 Draft EIS and the modified alternatives presented in this Final EIS.

Some information in the description of the Affected Environment (**Chapter 3**) and the Environmental Consequences (**Chapter 4**) sections of this Final EIS has changed since the release of the 2015 Revised Draft EIS. These changes are based on updated information presented in the 2015 Revised Draft EIS and additional analysis beyond that done in the 2015 Draft EIS, including changes resulting from comments received during the 2015 Revised Draft EIS public review period. The changed information relates to the assessment of impacts, and a summary of any changed information is presented in **Chapter 3** of the document, as applicable.

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Final EIS Executive Summary

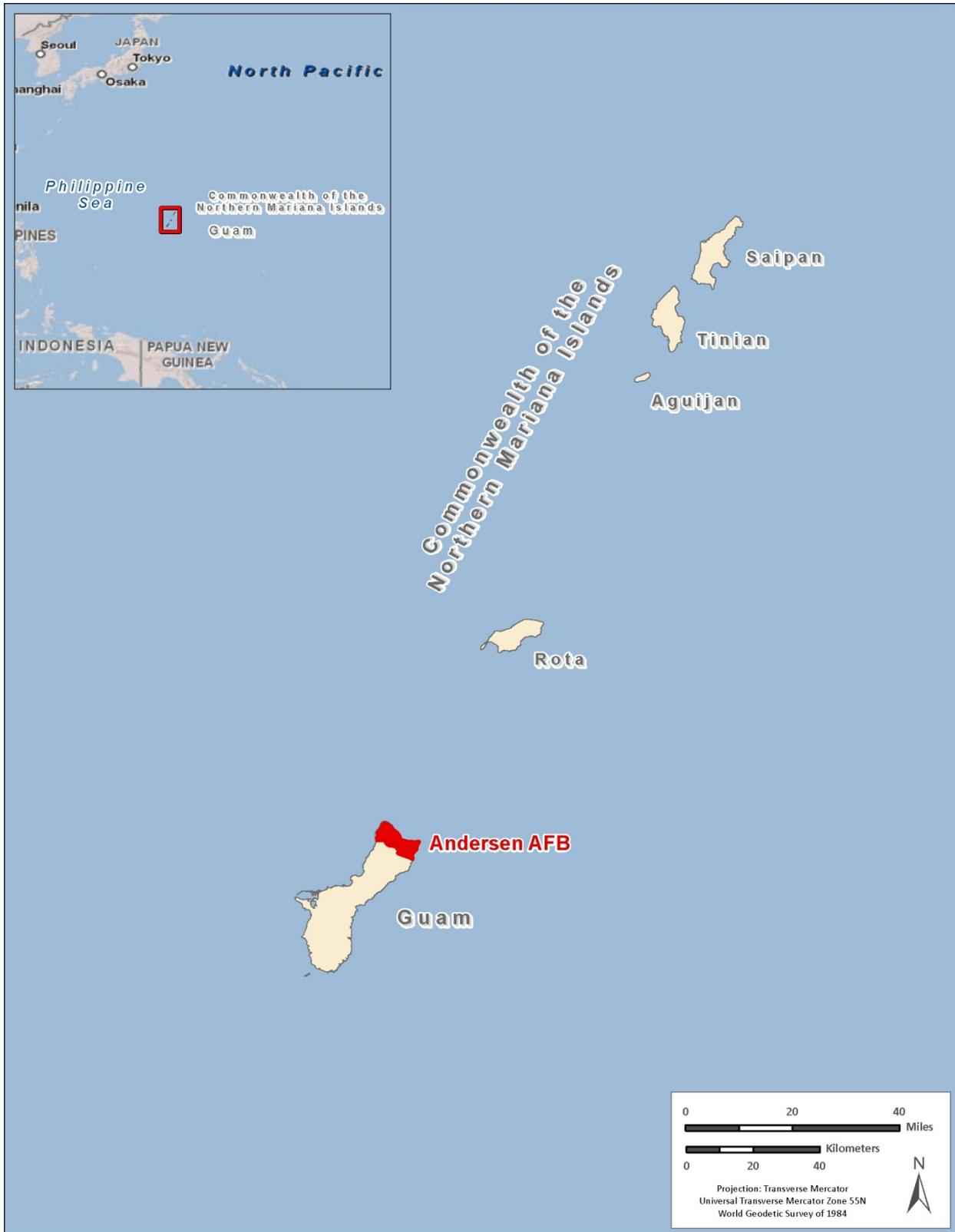
ES 1. Introduction

The U.S. Air Force (USAF) seeks to improve an existing airport or airports in the Mariana Islands region in support of expanding U.S. strategic interests and Department of Defense (DOD) mission requirements in the western Pacific. The U.S. territories of Guam and Commonwealth of the Northern Mariana Islands (CNMI) (including Saipan, Rota, and Tinian) are located to the east of the Philippine Sea (see **Figure ES-1**) and make up the southern portion of the Mariana Islands. The Philippine Sea is a section of the western North Pacific Ocean, located east and north of the Philippines.

The lead agency for this Environmental Impact Statement (EIS) is the Department of the Air Force. Headquarters Pacific Air Forces (HQ PACAF) is a USAF major command headquartered at Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i. PACAF developed this EIS on behalf of the USAF. The EIS was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500–1508), and the USAF implementing regulation for NEPA, the Environmental Impact Analysis Process (EIAP), Air Force Instruction 32-7061, which adopts Title 32 CFR Part 989, as amended, as the controlling document for the EIAP. Cooperating agencies include the U.S. Navy, U.S. Marine Corps, and the Federal Aviation Administration (FAA). As cooperating agencies, PACAF coordinates with the U.S. Navy, U.S. Marine Corps, and FAA throughout the EIS development process. Additionally, the FAA must approve the airport layout plan, following CNMI Commonwealth Ports Authority (CPA) approval, before the USAF-selected alternative can be implemented.

The 2012 DOD Strategic Guidance places increased emphasis on the Asia-Pacific region (DOD 2012). Relationships with Asian allies and key partners are critical to the future stability and growth of this region to maintain regional access and the ability to operate freely. PACAF's primary mission is to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during peacetime, through crisis, and in war (PACAF undated b). PACAF maintains a forward presence to help ensure stability in the region (PACAF undated b). In order to fulfill its mission in the region successfully, PACAF must continually anticipate future needs and adapt to an ever-evolving geopolitical setting.

The area of focus for potential implementation of the Proposed Action is the Mariana Islands Archipelago (see **Figure ES-1**). For the purposes of this EIS, the Study Area includes existing airports in the Mariana Islands region, existing seaports, and surrounding areas, including easements or routes needed to transport construction materials and petroleum products. The Mariana Islands Archipelago straddles the Pacific Ocean and the Philippine Sea and hosts the U.S. military's westernmost training complex on U.S. soil, the Mariana Islands Range Complex (MIRC). The MIRC consists of special use airspace, the Farallon de Medinilla live-fire bombing range, and other land training areas. These training areas include what are commonly called the CNMI military-leased areas, which are lands leased from the CNMI government for military



Source: ESRI StreetMap USA 2007

Figure ES-1. Location of the Philippine Sea, Guam, and CNMI Region

purposes pursuant to Article VIII of The Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America (Covenant) for 50 years (with an automatic 50-year renewal). The leases and the technical agreements that implement the Covenant provide for use of the Farallon de Medinilla and its nearshore waters for military live-fire exercises and provide for portions of Saipan and Tinian to be used by the DOD for military purposes including training. To the north and east of the Study Area are portions of the Marianas Trench Marine National Monument, which was established in January 2009 by Presidential Proclamation under the authority of the Antiquities Act (16 USC 431).

ES 2. Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to establish additional divert capabilities to support and conduct current, emerging, and future exercises, while ensuring the capability to meet mission requirements in the event that access to Andersen Air Force Base (AFB) or other western Pacific locations is limited or denied. The Proposed Action would develop critical enhancements to an existing airport or airports and associated infrastructure in the Mariana Islands region to increase operational and divert capabilities needed by the USAF, especially in humanitarian assistance and disaster relief and joint military exercises. These enhancements are required for the USAF to maintain a state of military readiness commensurate with national defense and humanitarian relief missions.

The need for humanitarian assistance can arise suddenly. Disaster response to Japan during the 2011 earthquake and tsunami serves as an example. If this occurred during scheduled training exercises at Andersen AFB, then either training or response efforts might have been delayed or impeded. Furthermore, natural or man-made disasters could impact Andersen AFB's missions, requiring reliance on designed and designated divert airfield capabilities. Because of the proximity to forward-deployed forces in the western Pacific, the Mariana Islands provides the best alternative for forward-deployed U.S. forces to train on U.S. lands and develop the proposed additional divert capabilities.

The Proposed Action is driven by the USAF's need to achieve its mission mandated by Title 10 USC 8062 in the event of a disruption of operational capabilities at Andersen AFB or other western Pacific locations. The need for the Proposed Action is derived from the following operational requirements necessary to support the PACAF mission successfully:

- Ensure airfield accessibility if access to Andersen AFB or other western Pacific airfields is limited or denied
- Provide for contingency operations to include humanitarian relief efforts
- Accommodate future increases in operational tempo and associated training
- Achieve and sustain readiness.

In summary, the Proposed Action is needed because there is not an existing divert or contingency airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian airlift and disaster relief in times of natural or man-made disasters.

Implementation of the Proposed Action would support the PACAF mission to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during peacetime, through crisis, and in war.

ES 3. Scope and Content of the NEPA Process and EIS

ES 3.1 NEPA

This EIS provides an analysis of environmental effects associated with the Proposed Action and alternatives. The following text summarizes the formal NEPA process followed by the USAF for this proposal and the opportunities for public involvement and input into the EIS process.

- **Pre-Notice of Intent Briefings.** Prior to issuing the Notice of Intent (NOI) that formally started the EIS process, PACAF and U.S. Pacific Fleet, representing the cooperating agency the U.S. Navy, provided pre-NOI briefings to senior-level stakeholders in Guam and CNMI. Briefings included question-and-answer sessions to provide early information about the Proposed Action and alternatives to regional political leadership. Briefings were given to Guam legislature and Governor's office and to the office of the Guam Congressional Delegate. Briefings in Saipan, CNMI, were presented to the Military Integration Management Committee, which consists of the Governor; Lieutenant Governor; members of Legislature; and Mayors of Tinian, Rota, and Saipan, and to the office of the CNMI Congressional Delegate. One briefing was presented in Honolulu, Hawai'i, to the U.S. Fish and Wildlife Service.
- **Scoping.** Formal public scoping began with the issuance of an NOI in the *Federal Register* on September 27, 2011 EDT. PACAF also issued notices in local media on September 28, October 3, October 10, October 11, October 12, October 14, October 17, and October 18, 2011 Chamorro Standard Time (ChST), that announced schedules and locations for public scoping meetings. Comments were accepted at two public scoping meetings in Guam, one public scoping meeting in Saipan, one public scoping meeting in Tinian, and one public scoping meeting in Rota. Comments were also accepted via the project website (<http://www.PACAFDivertMarianasEIS.com>), postal service, and telephone recording system. Once the scoping period was completed, the scoping comments received were summarized in a scoping summary report, and comments were considered during the development of the 2012 Draft EIS.
- **Post-NOI Briefings.** During the public scoping period, PACAF provided post-NOI briefings to senior-level stakeholders in Guam and CNMI. The briefings were an updated and expanded version of the pre-NOI briefings, and were offered to a wider audience of stakeholders. The purpose of the briefings was to provide ongoing communication with local stakeholders, and to inform the stakeholders of up-to-date information regarding the Proposed Action and alternatives. The post-NOI briefings were conducted to coincide with public scoping meetings.
- **2012 Draft EIS Public Review.** The 2012 Draft EIS was the first public version of the EIS. It was distributed to selected Federal, state, territory, commonwealth, regional, and local agencies; private citizens; and organizations that requested copies. The 2012 Draft EIS was also made available at nine information repositories and is available on

the project website (<http://www.PACAFDivertMarianasEIS.com>). The USAF provided a 45-day public review period for the 2012 Draft EIS (40 CFR Part 1506.10). The public review period was initiated through the publication of a Notice of Availability (NOA) in the *Federal Register* on June 8, 2012 EDT. PACAF also issued notices in local media on June 9, June 11, June 22, June 23, June 24, June 25, and June 26, 2012 ChST, that announced schedules and locations for public hearings. Comments on the 2012 Draft EIS were accepted at the public hearings, on the project website (<http://www.PACAFDivertMarianasEIS.com>), via postal service, or via telephone recording system. Comments received on the 2012 Draft EIS during the 45-day public review period were considered in preparation of the Revised Draft EIS.

- **Post-NOA Briefings.** During the public review period for the 2012 Draft EIS, PACAF provided post-NOA briefings to senior-level stakeholders in Guam and CNMI. The briefings were an updated version of the post-NOI briefings. The purpose of the briefings was to provide ongoing coordination and communication with local stakeholders, and to inform the stakeholders of up-to-date information regarding the Proposed Action and alternatives. The post-NOA briefings were conducted to coincide with public hearings.
- **Revised Draft EIS Public Review.** The Revised Draft EIS was the second public version of the EIS. It incorporated comments received on the 2012 Draft EIS and presented modified alternatives. The Revised Draft EIS public review period was initiated via the publication of an NOA in the *Federal Register* on October 16, 2015 EDT/October 17, 2015 ChST. The USAF provided a 60-day public review period for the Revised Draft EIS. The Revised Draft EIS was made available at four different information repositories and is available on the project website (<http://www.PACAFDivertMarianasEIS.com>). PACAF also issued notices in local media that announced availability of the Revised Draft EIS. Comments on the Revised Draft EIS were accepted on the project website (<http://www.PACAFDivertMarianasEIS.com>) and via postal service. Substantive comments received during the public review of the Draft and Revised Draft EIS will be fully considered in USAF decisionmaking.
- **Final EIS and Record of Decision Public Review.** Prior to implementing any action described in the EIS, the NOA for this Final EIS was issued in the *Federal Register* by the U.S. Environmental Protection Agency at the request of the USAF. The USAF will issue a Record of Decision (ROD) no sooner than 30 days after the NOA for this Final EIS is released. Public outreach efforts include the NOA *Federal Register* notice, advertising the notice in local newspapers, mailing a notice to individuals and groups that commented on the 2012 or Revised Draft EIS, and posting notification on the project website. The signed ROD will be posted on the project website. An NOA for the ROD will also be published in the *Federal Register* and local newspapers.

ES 3.2 Other Environmental Requirements Considered

The USAF reviews a variety of other Federal environmental requirements for applicability when completing the NEPA process. These include (among other applicable laws and regulations) the following:

- Marine Mammal Protection Act
- Endangered Species Act
- Migratory Bird Treaty Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Coastal Zone Management Act
- Clean Air Act
- Federal Water Pollution Control Act (Clean Water Act)
- National Historic Preservation Act
- Resource Conservation and Recovery Act
- Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Department of Transportation Act Section 4(f)
- EO 13045, Environmental Health and Safety Risks to Children
- EO 13112, Invasive Species.

In addition, CNMI requirements that are applicable to military actions are identified and addressed in this EIS.

ES 4. Description of the Proposed Action and Alternatives

ES 4.1 Proposed Action

The Proposed Action is to improve an existing airport or airports and associated infrastructure in support of expanding mission requirements and to achieve divert capabilities in the western Pacific. Under this action, the USAF proposes to construct facilities and infrastructure at an existing airport or airports to support a combination of cargo, tanker, and similar aircraft and associated support personnel for divert operations, periodic exercises, and humanitarian assistance and disaster relief. Divert operations and humanitarian assistance and disaster relief would occur at the airport or airports proposed for improvements as required. Because the proposal does not include the construction of an entirely new airfield, or the full-time use of the facilities by USAF, the Proposed Action would use an existing airfield or airfields. By locating the facilities at an existing operating airfield or airfields, the location itself provides a level of physical security and maintenance not available at closed or abandoned facilities. Physical security describes measures that are designed to control access to unauthorized areas, including control of access to a building, facility, resource, or equipment. Locating the military facilities on an existing commercial airfield provides the necessary physical security because of the Department of Homeland Security and Transportation Security Administration measures already in place at commercial airfields. In addition, the development of some of these facilities on an existing commercial airport provides for future joint use and ensures compliance with required

maintenance standards through continuous use. The following is a summary of the Proposed Action.

1. **Construction Phase.** The KC-135 Stratotanker (KC-135) aircraft is indicative of tanker or cargo aircraft used by the USAF in the western Pacific. The KC-135 aircraft is being used as the design aircraft for the Construction Phase in the EIS. The USAF would design and then construct or improve infrastructure as required at the selected airport or airports depending on existing airport capabilities to support divert activities and exercises. Potential infrastructure to be constructed could include the following:
 - Parking apron
 - Cargo pad
 - Maintenance facility
 - Jet fuel receiving, storage, and distribution
 - Fencing and utilities (including fire suppression system)
 - Road improvements or new access roads
 - Taxiway(s).

Construction would include the transport of construction materials.

2. **Implementation Phase.** It is assumed that any mix of joint cargo, tanker, or similar aircraft, not to exceed the design capabilities of the airport, could be diverted to or exercised from the airport or airports selected for improvements. KC-135s would remain the design aircraft for the Implementation Phase because they are indicative of tanker refueling aircraft used by the USAF in the western Pacific. The following activities could potentially occur at the selected airport or airports:
 - a. *Divert operations* – Divert operations would occur if other locations in the western Pacific, for example Andersen AFB, are unavailable for standard operations, such as during emergencies or natural disasters. Although it is not possible to predict when such events might occur, under the Proposed Action the USAF would be better prepared to manage divert operations when or if they occur.
 - b. *Humanitarian airlift staging* – The airport or airports proposed for improvements would support refueling aircraft participating in humanitarian airlift staging, including non-combatant evacuation operations, in the event of an emergency or disaster.
 - c. *Military exercises* – A limited number of military training activities and exercises would occur, as described and analyzed in authorizations associated with the MIRC in the MIRC ROD and the Mariana Islands Training and Testing (MITT) ROD, which were issued on July 20, 2010, and July 29, 2015, respectively (DON 2010a, DON 2015b). This Divert EIS addresses only the ground movements and immediate approaches and departures at the airport or airports selected for improvement (e.g., take-offs and landings) during exercises. Actual air readiness and air logistics training (i.e., above 10,000 feet) are addressed by the MIRC EIS and the MITT EIS. Copies of the MIRC EIS can be reviewed on the “Documents”

tab of the website <http://www.PACAFDivertMarianasEIS.com>. Copies of the MITT EIS can be reviewed at <http://mitt-eis.com>

- d. *Jet fuel receiving, storage, and distribution* – Fuel transfer from the receiving port to the selected airport would occur. Once fuel was available at the airport, it would be transferred via a fuel delivery system to the aircraft.
- e. *Lodging and associated support* – Temporary lodging, including medical, transportation, and dining services, would be required for the personnel supporting aircraft operations.

ES 4.2 Evaluation and Selection of Alternatives

Considering alternatives helps avoid unnecessary impacts and allows for an analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be suitable for decisionmaking, capable of implementation, and satisfactory to meeting the purpose of and need for the action.

There are many potential divert airfield locations across the Pacific Rim, but they all fall too far outside USAF-established selection standards for consideration in this EIS. For this reason, the following Pacific locations with airfield assets were considered and dismissed from analysis during the development of the Proposed Action and will not be addressed in this EIS: Kwajalein Atoll, Midway, Hawai'i, Wake Island Airfield, and the Aleutian Islands.

In the 2012 Draft EIS, PACAF considered several locations, or combinations of locations, with existing FAA-regulated airports in the Mariana Islands region to meet the purpose of and need for the Proposed Action. The 2012 Draft EIS is available for download at www.pacafdivertmarianaseis.com. Existing islands and airports considered include Francisco C. Ada/Saipan International Airport (Saipan International Airport), Saipan; Tinian International Airport, Tinian; Rota International Airport, Rota, in CNMI; and A.B. Won Pat International Airport, Guam. As a result of comments received during the public comment period for the 2012 Draft EIS, PACAF considered several additional planning options to meet the purpose of and need for the Proposed Action. Additional options included evaluation of former World War II airfields and closed military airfields on Guam and in CNMI.

Only A.B. Won Pat International Airport, Saipan International Airport, and Rota International Airport are listed in the USAF 36th Wing Instruction (WI) 13-204, Airfield Operations Instructions, as locations for divert landings in the western Pacific. Although Tinian International Airport is not listed as an existing divert location, it has a concrete runway and some commercial airfield infrastructure. All other CNMI locations, including the former World War II airfields contained within the military-retained leased areas of the CNMI, were abandoned in 1947.

Certain facility, operational, and mission requirements must be present or reasonably attainable to meet the purpose of and need for the Proposed Action. Selection standards were developed based on USAF operational requirements for proposed airfield improvements, fuel storage, and flight operations. They were then applied to the possible site locations, or combinations of sites, identified during scoping and the 2012 Draft EIS comment period to select those considered

reasonable for implementing the Proposed Action. Reasonable alternatives are carried forward for detailed analysis in this EIS. The site location selected for improvements must meet the following selection standards:

- Be located in a U.S. territory
- Be located outside the average diameter of a typhoon from Andersen AFB (i.e., storm radius)
- Provide an airfield that has land available for development
- Provide an airfield that has existing functional infrastructure available for improvement and expansion
- Be located within the MIRC training area (i.e., 30-minute reserve fuel flight time)
- Provide a seaport that has existing fuel-receiving capabilities at the port of debarkation.

The evaluation of possible locations identified two alternative locations that individually or combined meet, or have the ability to meet, each selection standard. Accordingly, Tinian (Tinian International Airport and the Port of Tinian) and Saipan (Saipan International Airport and the Port of Saipan) are able to individually or jointly meet the purpose of and need for the Proposed Action and will be considered in the analysis as reasonable alternatives. Both Tinian International Airport and Saipan International Airport are located on CPA property, not on current military leased lands, and would require real property agreements with the CPA should they be selected for implementation of the Proposed Action.

Potential site alternatives that do not meet the selection standards, shown with red in **Table ES-1**, cannot meet the stated purpose and need, and will not be considered in detail in the EIS. **Table ES-1** provides a summary of each site alternative evaluated against the selection standards.

ES 4.3 Modified Alternatives

This Final EIS presents three modified alternatives that are the same as those presented in the 2015 Revised Draft EIS and represent a reduced capability from that presented in the 2012 Draft EIS. The modified alternatives meet USAF operational selection standards presented in the 2012 Draft EIS, while incorporating input received during the 2012 Draft EIS public review period. The three modified alternatives include a modified Saipan alternative, a modified Tinian alternative, and a hybrid modified alternative. The hybrid modified alternative combines development on both Saipan and Tinian previously analyzed in the 2012 Draft EIS. For each modified alternative, the KC-135 remains the design aircraft for both the Construction and Implementation Phases because this aircraft is indicative of tanker or cargo aircraft used by the USAF in the western Pacific. The amount of real property interest acquired and the actual construction footprint of infrastructure for the three modified alternatives could change based on negotiations with the current property owner to accommodate potential uneconomic remnants associated with the proposed layout; engineering or design limiting factors; or potential changes requested by the FAA during the airport layout plan approval process.

Table ES-1. Evaluation of Alternative Site Locations Against Selection Standards

Selection Standard	Guam (A.B. Won Pat International Airport and Port of Guam)	Rota (Rota International Airport and Rota West Harbor)	Tinian (Tinian International Airport and Port of Tinian)	Tinian (Military Lease Area and Port of Tinian)	Saipan (Saipan International Airport and Port of Saipan)
U.S. Territory	Green	Green	Green	Green	Green
Storm radius	Red	Red	Green	Green	Green
Adequate land at airfield for development	Yellow	Yellow	Green	Green	Yellow
Existing infrastructure at airfield with improvement and expansion capabilities	Yellow	Green	Green	Red	Green
Within MIRC (average approximate 30-minute reserve fuel flight time)	Green	Green	Green	Green	Green
Seaport with access for fuel vessels	Green	Yellow	Yellow	Yellow	Green

Key:

- Green = meets selection standard
- Yellow = limited capability to meet selected standard, or can be brought to standard
- Red = does not meet selection standard and cannot be brought or made to meet standard

ES 4.3.1 Alternative 1–Modified Saipan Alternative

Under Alternative 1, Saipan International Airport would be improved to an airfield design that ultimately could accommodate up to 12 KC-135 or similar aircraft to meet the purpose of and need for the Proposed Action, as shown in **Figure ES-2**. During the Construction Phase under Alternative 1, the USAF would build one parking apron, one cargo pad, one maintenance facility, fuel tanks and supporting infrastructure, and a fuel hydrant system including a hydrant

fuel pipeline from the hydrant system to the parking apron. The parking apron would be able to accommodate six KC-135 and the cargo pad could accommodate up to three KC-135. During an emergency, three additional KC-135 could be accommodated at the existing commercial terminal in accordance with FAA Airport Sponsor Assurance C. 27. However, the USAF would not utilize this capability during a standard divert exercise. The USAF would also construct fuel tanks at the Port of Saipan. The Construction Phase would include the transport of construction materials from the seaport to a concrete batch plant and to the airport. A negligible amount of materials would also be transported from the concrete batch plant back to the seaport for construction of the fuel tanks.

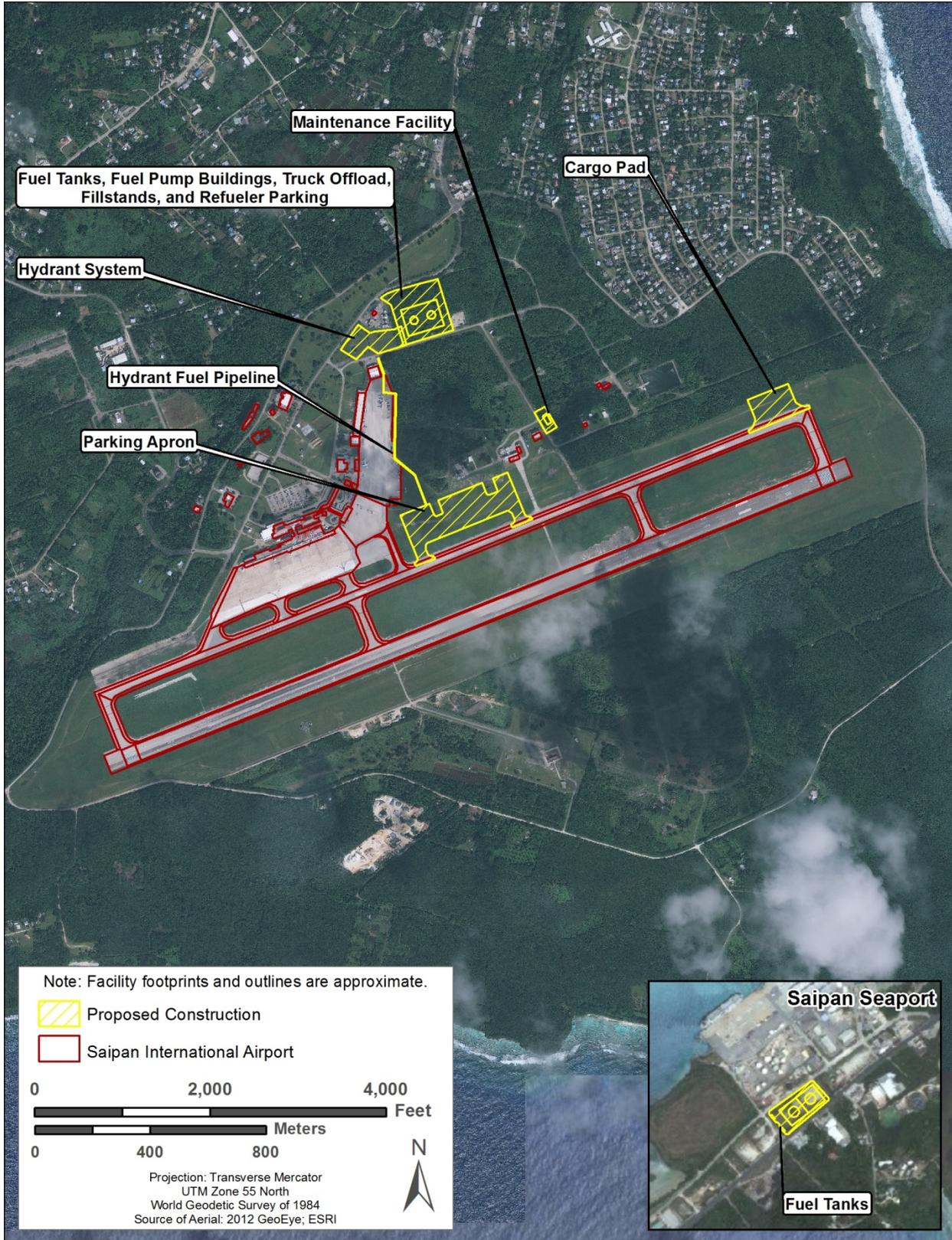


Figure ES-2. Overview of Proposed Construction on Saipan under Alternative 1

During the Implementation Phase at Saipan International Airport, the improved facilities and infrastructure would support a combination of cargo, tanker, and similar aircraft and associated support personnel for periodic exercises, divert operations, and humanitarian assistance and disaster relief in the western Pacific, as described under the Proposed Action. Approximately 720 operations (i.e., 360 take-offs and 360 landings) by KC-135 or similar aircraft during exercises would be completed over a maximum 8 weeks annually under Alternative 1. The Implementation Phase would include fuel transfer from the seaport to the airport and temporary lodging and associated support for up to 265 personnel.

The airfield design would also accommodate other military logistics aircraft for exercises. The airfield design assumes that the KC-135 aircraft represents large logistics (or heavy lift cargo) aircraft that could be exercised from Saipan International Airport within the proposed airfield capacity.

ES 4.3.2 Alternative 2–Modified Tinian Alternative

Under Alternative 2, construction could occur on either the south side or the north side of Tinian International Airport. Under either the North or South Options, Tinian International Airport would be improved to an airfield design that could accommodate 12 KC-135 or similar aircraft to meet the purpose of and need for the Proposed Action, as shown in **Figure ES-3**. During the Construction Phase under Alternative 2, the USAF would build one parking apron, one cargo pad, one maintenance facility, fuel tanks and supporting infrastructure, a fuel hydrant system, a fire suppression system, and an access road. For the North Option, the USAF would also build taxiways to connect the cargo pad and parking aprons to the runway and to connect the existing runway to the existing taxiway, and would reroute 8th Avenue on the western side of the runway so that it avoids the proposed parallel taxiway area. The USAF would also construct fuel tanks at the Port of Tinian. The Construction Phase would include the transport of construction materials from the seaport to a concrete batch plant and to the airport. A negligible amount of materials would also be transported from the concrete batch plant back to the seaport for construction of the fuel tanks.

During the Implementation Phase at Tinian International Airport, the improved facilities and infrastructure would support a combination of cargo, tanker, and similar aircraft and associated support personnel for periodic exercises, divert operations, and humanitarian assistance and disaster relief in the western Pacific, as described under the Proposed Action. Approximately 720 operations (i.e., 360 take-offs and 360 landings) by KC-135 or similar aircraft would be completed over a maximum 8 weeks annually under Alternative 2. The Implementation Phase would include fuel transfer from the seaport to the airport and temporary lodging and associated support for up to 265 personnel.

The airfield design would also accommodate other military logistics aircraft for exercises. The airfield design assumes that the KC-135 aircraft represents large logistics aircraft that could be exercised from Tinian International Airport within the proposed airfield capacity.

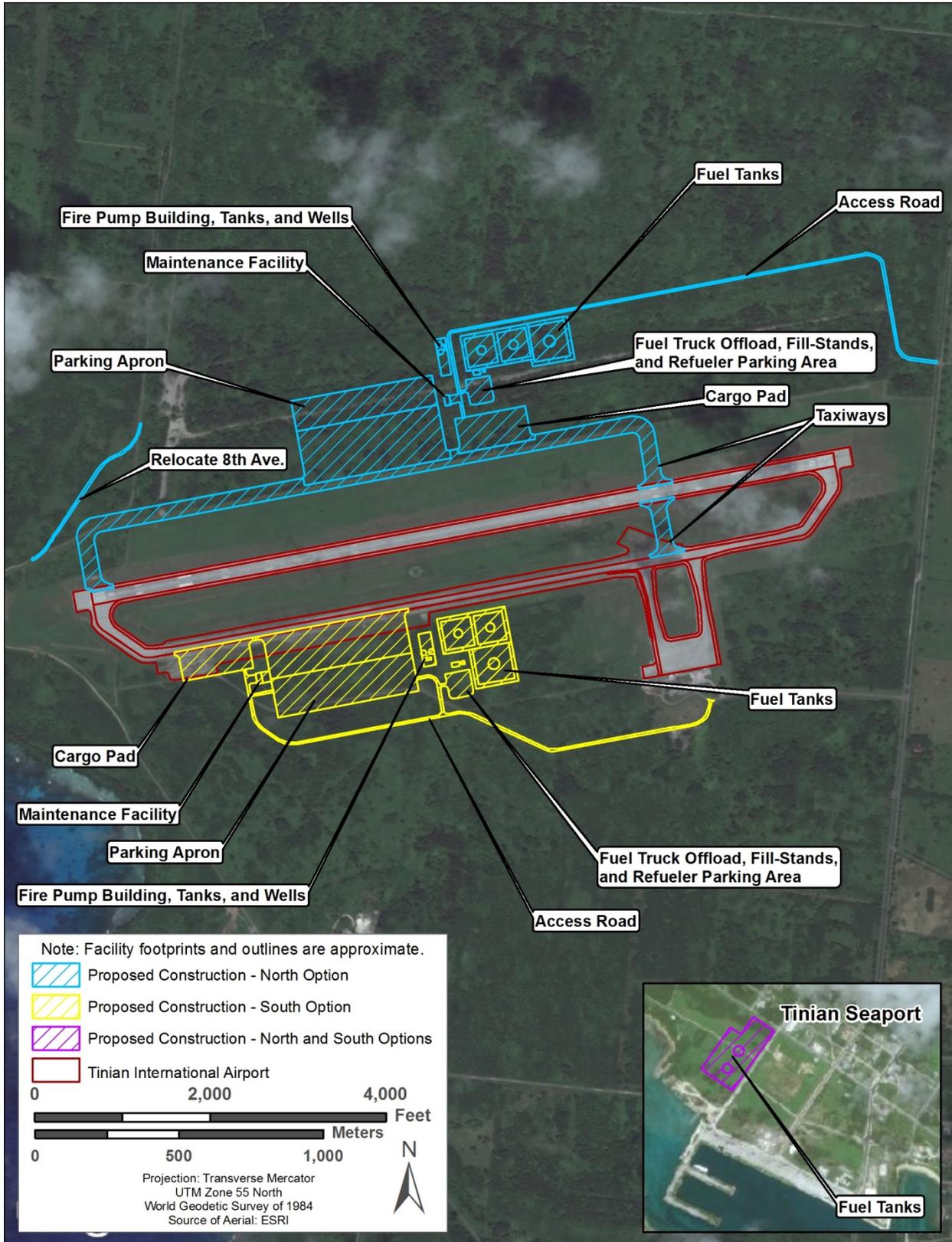


Figure ES-3. Overview of Proposed Construction on Tinian under Alternative 2

ES 4.3.3 Alternative 3—Hybrid Modified Alternative

Under Alternative 3, the proposed Construction Phase and Implementation Phase would be conducted on both Saipan and Tinian, as shown in **Figure ES-4**. However, Alternative 3 would focus most development and operations on Tinian. The Hybrid Modified Alternative combines some, but not all, of the components presented in Alternative 1 and Alternative 2.

Under Alternative 3 on Tinian, construction could occur on either the south side or the north side of Tinian International Airport. Under both the North and South Options of Alternative 3, Tinian International Airport would be improved to an airfield design that could accommodate 10 KC-135 or similar aircraft to meet the purpose of and need for the Proposed Action.

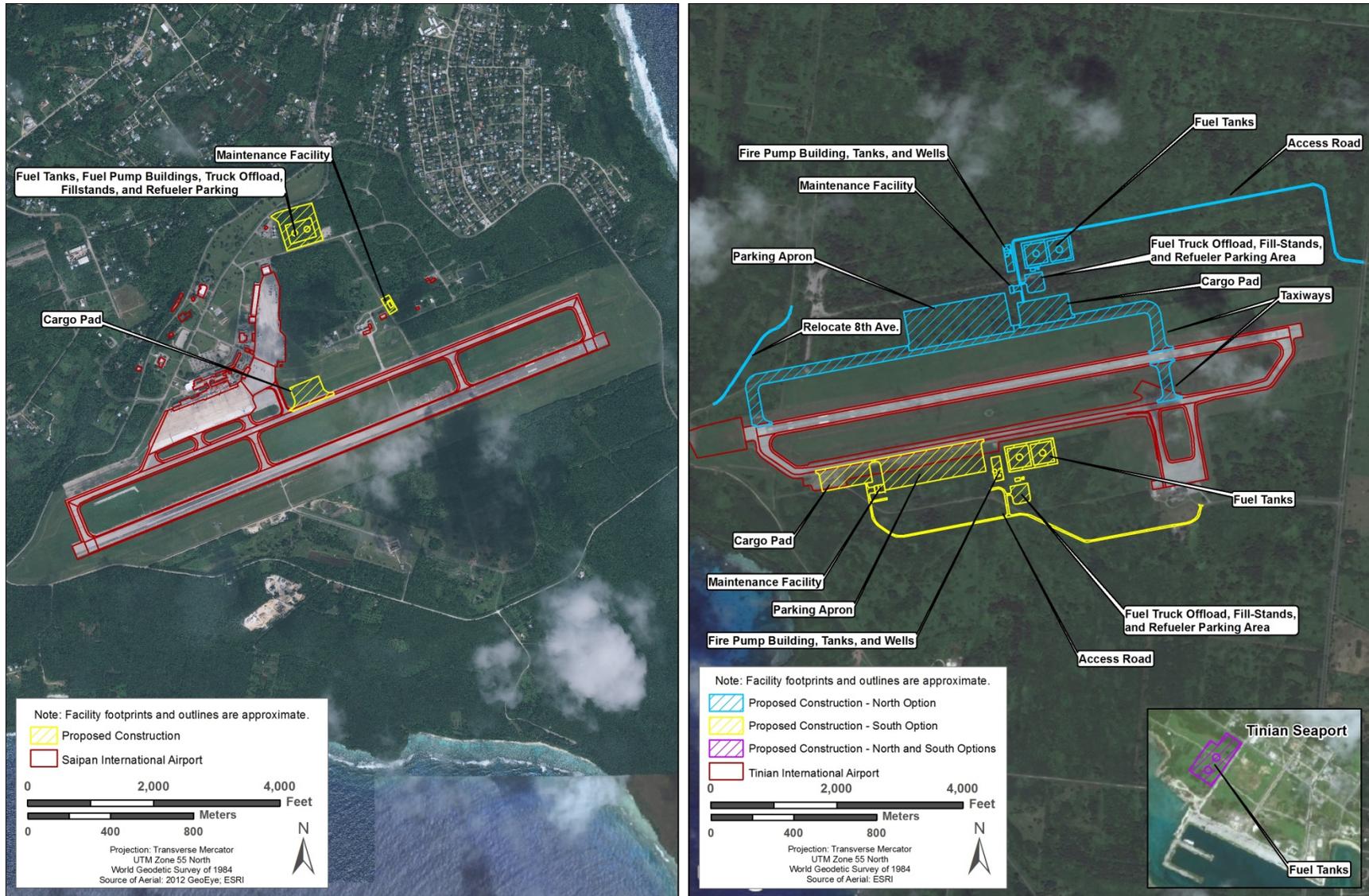
During the Construction Phase under Alternative 3, the USAF would build one parking apron, one cargo pad, one maintenance facility, fuel tanks and supporting infrastructure, a fuel hydrant system, a fire suppression system, and an access road. The proposed access road route could be adjusted based on guidance from CPA. For the Tinian North Option, the USAF would also build taxiways to connect the cargo pad and parking aprons to the runway and to connect the existing runway to the existing taxiway, and would reroute 8th Avenue on the western side of the runway so that it avoids the proposed parallel taxiway area. At the Port of Tinian, the USAF would construct fuel tanks. Construction would include the transport of construction materials as described in under Alternative 2.

Under Alternative 3 on Saipan, Saipan International Airport would be improved to an airfield design that could accommodate 3 KC-135 or similar aircraft to meet the purpose of and need for the Proposed Action. During the Construction Phase under Alternative 3, the USAF would build one cargo pad, a maintenance facility, and fuel tanks and supporting fuel infrastructure. There would be no construction at the Port of Saipan. Construction would include the transport of construction materials to Saipan International Airport.

During the Implementation Phase at Saipan International Airport and Tinian International Airport, the improved facilities and infrastructure would support a combination of cargo and tanker aircraft and associated support personnel for periodic exercises, divert operations, and humanitarian assistance and disaster relief in the western Pacific, as described under the Proposed Action. Approximately 720 operations (i.e., 360 take-offs and 360 landings) by KC-135 or similar aircraft would be completed over a maximum of 8 weeks annually under Alternative 3. The total of 720 operations would likely be split between Saipan International Airport and Tinian International Airport; however, this document assumes that 720 annual operations could occur at either location because exercises could occur at either airport. The Implementation Phase would include fuel transfer under a commercial contract from the seaport to the airport and temporary lodging and associated support for up to 265 personnel at either airport. Actual personnel numbers would be split proportionately with planned exercise operations among the two locations. However, this analysis takes a conservative approach by considering all 265 personnel at either location.

The airfield design would also accommodate other military logistics aircraft. The airfield design assumes that the KC-135 aircraft represents large logistics aircraft that could be diverted to or exercised from Saipan International Airport or Tinian International Airport for any element of the Proposed Action within the proposed airfield capacity.

1



2

3 **Figure ES-4. Overview of Proposed Construction at Saipan and Tinian under Alternative 3**

ES 4.4 No Action Alternative

CEQ regulations require consideration of the No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential action alternatives can be evaluated. Under the No Action Alternative, the USAF would not develop or construct facilities and infrastructure at an existing airport or airports to support existing divert operations, a combination of cargo, tanker, and similar aircraft and associated support personnel for periodic exercises, or humanitarian assistance and disaster relief in the western Pacific.

Divert Landings and Operations. Currently, divert landings in the Mariana Islands region occur at A.B. Won Pat International Airport, Guam; Saipan International Airport, Saipan; and Rota International Airport, Rota, in accordance with 36th WI 13-204, Airfield Operations Instructions. Under the No Action Alternative, divert landings would continue to occur at these locations. However, under the No Action Alternative, an additional designed and designated divert airfield for divert operations would not be developed.

Joint Military Exercises. Currently, planned joint military exercises occur within the MIRC and Mariana Islands. Under the No Action Alternative, these planned exercises would continue to take place using Andersen AFB and the surrounding airspace and range area. However, under the No Action Alternative, an additional designed and designated divert airfield would not be developed.

Humanitarian Airlift Staging. Currently, humanitarian airlift staging can occur at Andersen AFB or A.B. Won Pat International Airport, Guam, to support humanitarian assistance and disaster relief response in the western Pacific. Under the No Action Alternative, USAF humanitarian response in the western Pacific would likely continue to use existing fully functional airfields, such as Andersen AFB or A.B. Won Pat International Airport, Guam, as available.

As an airport sponsor, in accordance with FAA Airport Sponsor Assurance C. 27, Saipan International Airport and Tinian International Airport would continue to be available for use by Federal government agencies (e.g., DOD) without charge as long as the use of the airport is not considered substantial or all of the following apply:

- Fewer than five government aircraft are regularly based at the airport or on land adjacent thereto during each calendar month
- The total number of movements (counting each landing as a movement) of government aircraft is less than 300 per calendar month
- The gross accumulative weight of government aircraft using the airport (the total movement of government aircraft multiplied by gross weights of such aircraft) is less than 5 million pounds per calendar month (FAA 2012b).

Additionally, the USAF has a retained right for use of the Tinian International Airport per the 1999 *Partial Release of Leasehold Interest by and between the Commonwealth of the Northern Mariana Islands and the United States of America*. The agreement states that the United States has retained the right, “in common with others, for its military to land its aircraft, to load and

unload cargo, to stage equipment and material, and to conduct other military aviation-related activities at West Tinian Airport,” among other retained rights at the airport included in the document.

ES 5. Preferred Alternative

According to CEQ guidelines, an agency’s preferred alternative is the alternative that the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors (CEQ 1981). CEQ regulations require the section of the EIS on alternatives to “identify the agency’s preferred alternative or alternatives if one or more exists, in the draft statement, and identify such alternative in the final statement...” (CEQ 1981).

The USAF’s Preferred Alternative is to implement Alternative 2- Modified Tinian Alternative, as described in **ES 4.3.2**. There are two options under the Preferred Alternative; construction and implementation could occur on either the south side or the north side of Tinian International Airport. Should the Tinian Alternative be selected in the ROD, a final determination regarding which features of the north or south option will be implemented will also be reflected in the ROD or an amendment to the ROD. .

The analysis of impacts in the Final EIS also includes Alternative 1- Modified Saipan Alternative as described in **ES 4.3.1**, Alternative 3- Hybrid Modified Alternative as described in **ES 4.3.3**, and the No Action Alternative as described in **ES 4.4**. The USAF is identifying the Preferred Alternative pursuant to 40 CFR Part 1502.14(e); however, no final decision selecting a particular alternative for implementation has been made. The USAF decisionmaker will use this EIS to support the decision about how best to satisfy the stated purpose and need within mission constraints. The final decision will be documented in the ROD.

ES 6. Summary of Environmental Impacts

Chapter 3 of this EIS describes existing environmental conditions and **Chapter 4** describes environmental consequences for resources potentially affected by the Proposed Action and alternatives described in **Chapter 2**. The affected environment and environmental consequences are described and analyzed according to categories of resources.

Environmental impacts that might result from the implementation of the USAF’s Proposed Action alternatives and the No Action Alternative have been summarized in **Table ES-2**. This table presents potential impacts that could occur and include consideration of the use of best management practices and compliance with federal and local regulations and requirements. A detailed analysis of effects is provided in **Chapter 4**.

Table ES-2. Summary of Environmental Impacts

Resource	Alternative	Summary of Environmental Impacts
Noise (Sections 3.1 and 4.1)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, direct, minor to moderate, adverse impacts from construction equipment and vehicles would be expected during peak activity.
		Implementation Phase. Periodic, direct, minor, adverse impacts from military exercises would be expected. Fuel truck trips would have short-term, minor to moderate, direct adverse impacts on receptors adjacent to the roadways.
	Alternative 2 - Modified Tinian	Construction Phase. Short-term, direct, minor to moderate, adverse impacts from North Option construction equipment and vehicles would be expected during peak activity. Short-term, direct, minor adverse impacts from South Option construction equipment and vehicles would be expected during peak activity.
		Implementation Phase. Periodic, direct, minor, adverse impacts from military exercises would be expected. Periodic, direct, minor to moderate, adverse impacts from fuel truck traffic noise would be expected.
	Alternative 3 - Hybrid Modified	Construction Phase. Direct, negligible, adverse impacts from construction equipment and vehicles on Saipan would be expected. Short-term, direct, minor to moderate, adverse impacts on Tinian from North Option construction equipment and vehicles would be expected. Short-term, direct, minor, adverse impacts on Tinian from South Option construction equipment and vehicles would be expected.
		Implementation Phase. Periodic, direct, minor, adverse impacts from aircraft operations on Saipan and Tinian would be expected. Direct, minor to moderate, adverse impacts from fuel truck traffic noise on Saipan and Tinian would be expected.
	No Action Alternative	No impacts on the ambient noise environment would be expected.
Air Quality (Sections 3.2 and 4.2)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, direct, minor, adverse impacts would be expected from construction emissions and land disturbance.
		Implementation Phase. Periodic, direct, minor, adverse impacts would be expected from aircraft, vehicle, and fuel transfer operations.
	Alternative 2 - Modified Tinian	Construction Phase. Short-term, minor, direct, adverse impacts would be expected from North and South Option construction emissions and land disturbance.
		Implementation Phase. Periodic, minor, direct, adverse impacts would be expected from aircraft, vehicle, and fuel transfer operations.
	Alternative 3 - Hybrid Modified	Construction Phase. Short-term, minor, direct, adverse impacts would be expected on Saipan and Tinian from construction emissions and land disturbance under the North and South Options.
		Implementation Phase. Periodic, minor, direct, adverse impacts would be expected on Saipan and Tinian from aircraft, vehicle, and fuel transfer operations.
	No Action Alternative	No impacts on air quality would be expected.
Airspace and Airfield Environment (Sections 3.3 and 4.3)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, minor, direct, adverse impacts would be expected from construction of the cargo pad, parking apron, and jet fuel systems.
		Implementation Phase. Short-term, periodic, negligible, direct, adverse impacts would be expected due to joint military exercises.

Resource	Alternative	Summary of Environmental Impacts
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North Option, short-term, minor to moderate, direct, adverse impacts would be expected due to construction of the proposed jet fuel receiving, storage, and distribution system, taxiways, and reroute of 8th Avenue. Under the South Option, short-term, minor, direct, adverse impacts would be expected due to construction of the parking apron and jet fuel receiving, storage, and distribution system.</p> <p>Implementation Phase. Short-term, periodic, moderate, direct, adverse impacts would be expected during joint military exercises. If required and implemented during exercises, major, direct, beneficial impacts could be expected during operation of the mobile air traffic control tower due to the positive control and safety factors.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. Short-term, negligible, adverse impacts on Saipan would be expected from construction of the cargo pad. Short-term, minor to moderate impacts on Tinian under the North Option would be expected from construction of the jet fuel receiving, storage, and distribution system, taxiways, and reroute of 8th Avenue. Short-term, minor impacts under the South Option would be expected from construction of the parking apron and jet fuel receiving, storage, and distribution system.</p> <p>Implementation Phase. Short-term, periodic, negligible to moderate, direct, adverse impacts would be expected on Saipan and Tinian during joint military exercises and fueling operations. If required and implemented during exercises, major, direct, beneficial impacts could be expected during operation of the mobile air traffic control tower due to the positive control and safety factors.</p>
	No Action Alternative	Short-term, direct, moderate, adverse, impacts could be expected on Saipan because, without airport improvements, divert operations could interrupt and impact commercial operations and cause damage to airport infrastructure.
Geological Resources and Soils (Sections 3.4 and 4.4)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, direct, minor, adverse impacts would be expected from site preparation and construction. Long-term, direct, minor, adverse impacts would be expected from compaction of soils under the weight of vehicles and other construction equipment, buildings, and other structures.</p> <p>Implementation Phase. Long-term, direct, minor, and adverse impacts would be expected from the compaction of soil, degradation in soil productivity, alteration of storm water drainage and the percolation of rainwater.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North Option, short- and long-term, direct, minor to moderate, adverse impacts would be anticipated due to soil disturbance, compaction, erosion and sedimentation during construction. Under the South Option, short- and long-term, direct, minor, adverse impacts would be expected due to soil disturbance, compaction, erosion and sedimentation during construction</p> <p>Implementation Phase. Long-term, direct, minor, adverse impacts would be anticipated from the compaction of soil, degradation in soil productivity, alteration of storm water drainage and the percolation of rainwater.</p>
	Alternative 3 - Hybrid Modified	Construction Phase. Short-term, direct, negligible to minor, adverse impacts would be expected on Saipan due to site preparation and construction. Under the North and South Options, short-term, direct, minor, adverse impacts would be expected due to construction on Tinian.

Resource	Alternative	Summary of Environmental Impacts
		Implementation Phase. Long-term, direct, minor, adverse impacts would be expected on Saipan and Tinian from the compaction of soil, degradation in soil productivity, alteration of storm water drainage and the percolation of rainwater.
	No Action Alternative	No impacts on geological resources and soils would be expected.
Water Resources (Sections 3.5 and 4.5)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, direct, minor, adverse impacts could occur on surface water and storm water from a reduction in water quality, increased storm water runoff, and altered hydrologic conditions during construction. Short- and long-term, minor to moderate adverse impacts on groundwater resources could occur from a reduction in groundwater recharge and possible contamination to the groundwater lens.
		Implementation Phase. Long-term, direct, minor, adverse impacts could occur on surface water and storm water from a reduction in water quality, increased storm water runoff, and altered hydrologic conditions after construction is complete. Long-term, direct and indirect, minor, adverse impacts on groundwater would be expected as a result of sheet runoff or petroleum spills from fuel storage and aircraft-refueling activities.
	Alternative 2 - Modified Tinian	Construction Phase. Under the North and South Options, short-term, direct, minor, adverse impacts on surface water and storm water from a reduction in water quality, increased storm water runoff, and altered hydrologic conditions during construction. Under the North and South Options, short- and long-term, minor to moderate, adverse impacts on groundwater resources could occur from a reduction in groundwater recharge and possible contamination to the groundwater lens.
		Implementation Phase. Long-term, direct, minor, adverse impacts could occur on surface water and storm water from a reduction in water quality, increased storm water runoff, and altered hydrologic conditions after construction is complete. Long-term, indirect and direct, minor, adverse impacts on groundwater quality would be expected as a result of sheet runoff or petroleum spills from fuel storage and aircraft-refueling activities.
	Alternative 3 - Hybrid Modified	Construction Phase. Short-term, direct, negligible, adverse impacts on surface water, storm water, and groundwater resources would be expected on Saipan during construction due to reduction in water quality, increased storm water runoff, and altered hydrologic conditions during construction. Under the North and South Options, short-term, direct, minor, adverse impacts on surface water, storm water, and groundwater resources would be expected on Tinian due to construction.
		Implementation Phase. Long-term, indirect and direct, negligible to minor, adverse impacts on surface water, storm water, and groundwater supply and quality would be expected under Alternative 3 on Saipan and Tinian.
	No Action Alternative	No impacts on water resources would be expected.
Terrestrial Biological Resources (Sections 3.6 and 4.6)	Alternative 1 - Modified Saipan	Construction Phase. Long-term, minor, direct, adverse impacts on vegetation would be expected due to vegetation clearing and disturbance. Short-term, minor, direct and indirect, adverse impacts on wildlife would be expected from habitat loss and increase in noise during construction activities. Long-term, moderate, direct, adverse impacts on the nightingale reed-warbler would be expected due to habitat loss and displacement.

Resource	Alternative	Summary of Environmental Impacts
		Implementation Phase. Short-term, periodic, direct, minor, adverse impacts on vegetation would be expected due to potential distribution of nonnative invasive plants. Short-term, periodic, direct, minor, adverse impacts on wildlife would be expected from potential bird strikes during exercises. Long-term and periodic, negligible, adverse impacts on terrestrial threatened and endangered species would be expected from increased aircraft activity and noise.
	Alternative 2 - Modified Tinian	Construction Phase. Under the North and South Options, long-term, minor, direct, adverse impacts on vegetation would be expected from clearance and disturbance. Short-term, minor, direct, adverse impacts on wildlife under the North and South Options would be expected due to construction; however, permanent impacts on populations of wildlife would not likely result. Terrestrial threatened and endangered species would not be affected by construction.
		Implementation Phase. Short-term, periodic, minor, direct, adverse impacts on vegetation would be expected due to potential distribution of nonnative invasive plants. Long-term, direct, negligible to minor, adverse impacts would be expected from noise and potential bird strikes during exercises. There would be no adverse impacts on terrestrial threatened and endangered species.
	Alternative 3 - Hybrid Modified	Construction Phase. Long-term, minor, direct, adverse impacts on vegetation would be expected on Saipan and Tinian from vegetation disturbance and clearing. Short-term, minor, direct, adverse impacts on wildlife would be expected from a small loss of habitat for terrestrial birds and other wildlife on Saipan and Tinian. On Saipan only, minimal direct effects on nightingale reed-warbler territories would be expected and disturbances associated with the construction could temporarily adversely affect nightingale reed-warblers by disrupting or modifying their behavior. Implementation Phase. Short-term, periodic, direct, minor, adverse impacts on vegetation would be expected due to potential distribution of nonnative invasive plants. Long-term, direct, minor, adverse impacts would be expected on wildlife from the noise generated by operations and potential bird strikes. There would be no adverse impacts on terrestrial threatened and endangered species for aircraft activity.
	No Action Alternative	No impacts on terrestrial biological resources would be expected
Marine Biological Resources (Sections 3.7 and 4.7)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, negligible, indirect, adverse, impacts would be expected on nearshore marine resources, essential fish habitat (EFH), and threatened and endangered marine species. The USAF consulted with the National Marine Fisheries Service (NMFS) for potential effects on Endangered Species Act (ESA)-listed marine species, including listed sea turtles and marine mammals. NMFS concurred with the determination that the Proposed Action on Saipan may affect but is not likely to adversely affect ESA-listed marine species. Implementation Phase. Long-term, negligible, indirect, adverse, impacts would be expected on nearshore marine resources, EFH, and ESA- listed corals. Periodic, minor, direct, adverse impacts on sea turtles and marine mammals could occur. The USAF consulted with NMFS for potential effects on ESA-listed marine species, including listed sea turtles and marine mammals. NMFS concurred with the determination that the Proposed Action on Saipan may affect but is not likely to adversely affect ESA-listed marine species.

Resource	Alternative	Summary of Environmental Impacts
	Alternative 2 - Modified Tinian	<p>Construction Phase. Short-term, negligible to minor, indirect, adverse, impacts would be expected on nearshore marine resources, EFH, and threatened and endangered marine species. USAF consulted with NMFS regarding potential impacts on EFH for proposed actions on Tinian and NMFS concluded that adverse impacts on EFH from the Proposed Action on Tinian would be none to minimal. The USAF also consulted with NMFS for potential effects on ESA-listed marine species, including listed corals, the Indo-West Pacific distinct population segment of the scalloped hammerhead shark (<i>Sphyrna lewini</i>), sea turtles, and marine mammals. NMFS concurred with the determination that the Proposed Action on Tinian may affect but is not likely to adversely affect these ESA-listed marine species. The USAF consulted with the United States Fish and Wildlife Service (USFWS) for potential effects on nesting sea turtles; the USFWS concurred with the determination that proposed activities on Tinian may affect, but are not likely to adversely affect, nesting green sea turtles and hawksbill sea turtles.</p> <p>Implementation Phase. Long-term, negligible, indirect, adverse, impacts would be expected on nearshore marine resources, EFH, and ESA-listed corals. Periodic, minor, direct, adverse impacts on sea turtles and marine mammals could occur. USAF consulted with NMFS regarding potential impacts on EFH for proposed actions on Tinian and NMFS concluded that adverse impacts on EFH from the Proposed Action on Tinian would be none to minimal. The USAF also consulted with NMFS for potential effects on ESA-listed marine species, including listed corals, the Indo-West Pacific distinct population segment of the scalloped hammerhead shark (<i>Sphyrna lewini</i>), sea turtles, and marine mammals. NMFS concurred with the determination that the Proposed Action on Tinian may affect but is not likely to adversely affect these marine species. The USAF consulted with the USFWS for potential effects on nesting sea turtles; the USFWS concurred with the determination that proposed activities on Tinian may affect, but are not likely to adversely affect, nesting green sea turtles and hawksbill sea turtles.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. Short-term, negligible to minor, indirect, adverse, impacts would be expected on nearshore marine resources, EFH, and threatened and endangered marine species. The USAF consulted with the NMFS for potential effects on ESA-listed marine species, including listed sea turtles and marine mammals. NMFS concurred with the determination that the Proposed Action may affect but is not likely to adversely affect ESA-listed marine species.</p> <p>Implementation Phase. Long-term, negligible, indirect, adverse, impacts would be expected on nearshore marine resources, EFH, and threatened and endangered marine species. Periodic, minor, direct, adverse impacts on sea turtles and marine mammals could occur. The USAF consulted with the NMFS for potential effects on ESA-listed marine species, including listed sea turtles and marine mammals. NMFS concurred with the determination that the Proposed Action may affect but is not likely to adversely affect ESA-listed marine species.</p>
	No Action Alternative	No new impacts on marine biological resources would be expected.

Resource	Alternative	Summary of Environmental Impacts
Cultural Resources (Sections 3.8 and 4.8)	Alternative 1 - Modified Saipan	<p>Construction Phase. Minor adverse impacts on contributing elements of the Aslito/Isley Field National Historic Landmark District (NHLD) and the associated portion of the Saipan National Historic Landmark (NHL) due to visual impacts on integrity of setting and feeling. Inadvertent impacts to unrecorded cultural resources, particularly buried archaeological sites, are possible during construction but unlikely given the extent of previous cultural resources survey coverage.</p> <p>Implementation Phase. No impacts on cultural resources would be expected.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options, adverse minor to major impacts could occur on West Field from ground-disturbing activities and visual impacts on integrity of setting and feeling. Construction at the Tinian International Airport would also have minor impacts on West Field by introducing new elements to the landscape that could diminish the site's integrity of setting, design, and feeling, and thus National Register of Historic Places (NRHP) eligibility.</p> <p>Implementation Phase. No impacts on cultural resources would be expected.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. Construction would have minor impacts on the Aslito/Isley Field NHLD from the introduction of new facilities that would alter the viewshed of nearby historic structures, potentially affecting integrity of setting and feeling of those structures and the NHLD as a whole. Under the North and South Options, minor to major adverse impacts could occur on Tinian due to ground-disturbing activities within the boundaries of the archaeological site associated with the intact remains of West Field. Construction at the Tinian International Airport would also have minor impacts on West Field by introducing new elements to the landscape that could diminish the site's integrity of setting, design, and feeling, and thus NRHP eligibility.</p> <p>Implementation Phase. No impacts on Saipan or Tinian would be expected.</p>
	No Action Alternative	No impacts on cultural resources would be expected.
Recreation (Sections 3.9 and 4.9)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, indirect, negligible, and adverse impacts would be expected due to an increase in number of vehicles on roads, increasing travel times to available resources.</p> <p>Implementation Phase. Long-term, periodic, direct, minor, and adverse impacts would be expected on the southern tip of the island due to an increase in noise levels from proposed exercises and traffic congestion from fuel vehicles.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options, short-term, direct, negligible to minor, adverse impacts would be expected due to an increase in number of vehicles on roads, increasing travel times to available resources.</p> <p>Implementation Phase. Long-term, periodic, direct, negligible to minor, adverse impacts would be expected due to noise generated during exercises, vehicle use, and a temporary shortfall of hotel rooms available to tourists.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. Short-term, indirect, negligible, and adverse impacts on Saipan would be expected from construction traffic. Under the Tinian North and South Options, short-term, direct, negligible to minor, adverse impacts would be expected due to an increase in number of vehicles on roads, increasing travel times to available resources.</p>

Resource	Alternative	Summary of Environmental Impacts
		Implementation Phase. On Saipan, long-term, periodic, direct, minor, and adverse impacts would be expected on the southern tip of the island due to an increase in noise levels from proposed exercises. On Tinian, long-term, periodic, direct, negligible to minor, adverse impacts would be expected due to noise generated during exercises, vehicle use, and a temporary shortfall of hotel rooms available to tourists.
	No Action Alternative	No impacts on recreation would be expected.
Land Use (Sections 3.10 and 4.10)	Alternative 1 - Modified Saipan	Construction Phase. Long-term, minor, direct, adverse impacts on land use or land ownership would be expected from construction. Implementation Phase. Long-term, direct, negligible, adverse impacts would be expected due to increased noise levels during aircraft operations.
	Alternative 2 - Modified Tinian	Construction Phase. Minor, direct, adverse impacts would be expected from the North or South Option. Pending completion of the CRM permit and implementation of any potential BMPs, minor, adverse impacts on APCs on Tinian would be anticipated. Implementation Phase. Long-term, direct, negligible, adverse impacts would be expected due to increased noise levels during aircraft operations.
	Alternative 3 - Hybrid Modified	Construction Phase. Long-term, negligible to minor, direct, adverse impacts on land use or land ownership would be expected from construction on Saipan and Tinian. Pending completion of the CRM permit, minor, adverse impacts on APCs on Tinian would be expected. Implementation Phase. Long-term, direct, negligible, adverse impacts on Saipan and Tinian would be expected due to increased noise levels during aircraft operations.
	No Action Alternative	No impacts on land use would be expected.
Transportation (Sections 3.11 and 4.11)	Alternative 1 - Modified Saipan	Construction Phase. Short-term, direct, minor, adverse impacts would be expected due to construction-related traffic. Implementation Phase. Minor, direct, adverse impacts would be expected due to fuel truck traffic and daily transport of personnel.
	Alternative 2 - Modified Tinian	Construction Phase. Short-term, minor, direct, adverse impacts would be expected due to construction-related traffic under the North or South Options. Implementation Phase. Minor, direct, adverse impacts would be expected due to fuel truck traffic and daily transport of personnel.
	Alternative 3 - Hybrid Modified	Construction Phase. Short-term, direct, negligible, adverse impacts would be expected on Saipan from construction traffic. Under the North and South Options, short-term, minor, direct, adverse impacts would be expected on Tinian due to construction-related traffic. Implementation Phase. Minor, direct, adverse impacts would be expected on Saipan and Tinian due to fuel truck traffic and daily transport of personnel.
	No Action Alternative	No impacts on traffic or transportation would be expected.

Resource	Alternative	Summary of Environmental Impacts
Hazardous Materials and Wastes (Sections 3.12 and 4.12)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, direct, negligible to minor, adverse impacts would be expected from the use and storage of hazardous materials and petroleum products; from existing contamination areas; and asbestos-containing materials (ACMs), lead based paint (LBP), and polychlorinated biphenyls (PCBs) that could be encountered during construction. Long-term, minor, beneficial impacts would be expected from the removal of any ACMs, LBP, and PCBs.</p> <p>Implementation Phase. Long-term, direct, minor to moderate, adverse impacts would be expected from the use of petroleum products. Long-term, direct, negligible to minor, adverse impacts could occur from post construction radon intrusion.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options, short-term, direct, negligible to minor, adverse impacts would be expected from the use and storage of hazardous materials and petroleum products, and from existing contamination areas, ACMs, LBP, and PCBs that could be encountered during construction. Long-term, minor, beneficial impacts would be expected from the removal of any ACMs, LBP, and PCBs.</p> <p>Implementation Phase. Long-term, direct, minor to moderate, adverse impacts would be expected from the use of petroleum products. Long-term, direct, negligible to minor, adverse impacts could occur from post construction radon intrusion.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. On Saipan and Tinian, short-term, direct, negligible to minor, adverse impacts would be expected from the use and storage of hazardous materials and petroleum products, and from existing contamination areas, ACMs, LBP, and PCBs that could be encountered during construction. Long-term, minor, beneficial impacts would be expected from the removal of any ACMs, LBP, and PCBs.</p> <p>Implementation Phase. On Saipan and Tinian, long-term, direct, minor to moderate, adverse impacts would be expected from the use of petroleum products. Long-term, direct, negligible to minor, adverse impacts could occur from post construction radon intrusion.</p>
	No Action Alternative	No impacts associated with hazardous materials and wastes would be expected.
Infrastructure and Utilities (Sections 3.13 and 4.13)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, direct, negligible, adverse impacts on the liquid fuel supply would be expected from the petroleum required for construction equipment and vehicles. Short-term, direct, negligible, adverse impacts on the liquid fuel supply lines at the seaport and the port, the electrical system, and the communications systems would be expected during connection of the new infrastructure. Short-term, direct, negligible to minor, adverse impacts on the sewer system would be expected from the temporary shutoff of sewer lines during the connection of a 6-inch sewer line from the maintenance facility to the sewer main line. Short-term, direct, minor, adverse impacts on the storm water management system on solid waste management would be expected from an increase in both during construction. Short-term, direct, negligible, adverse and long-term, direct, moderate, beneficial impacts on the water supply would be expected from the temporary relocation and upgrade of water lines. Long-term, direct, minor, beneficial impacts on the port would be expected because of additional fuel storage capacity. Long-term, direct, major, beneficial impacts on fuel storage at Saipan International Airport would be expected.</p>

Resource	Alternative	Summary of Environmental Impacts
		<p>Implementation Phase. Long-term, direct, negligible, adverse impacts on solid waste would be expected from the increased use. Long-term, direct, minor, adverse impacts on jet fuel supply, water supply, storm water, and communications would be expected from the increase in use. Long-term, indirect, minor, adverse impacts on sanitary sewer and wastewater treatment and electrical supply would be expected due to increased use. Long-term, direct, minor to moderate, beneficial impacts would be expected from the increased liquid fuel supply at the airport and seaport.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options: Short-term, direct, moderate, adverse impacts on solid waste management would be expected from construction. Short-term, direct, negligible, adverse impacts on the existing electrical system, liquid fuel supply, communications system, and port would be expected from the extension, upgrade, or connection of associated infrastructure at the airport and seaport. Short-term, direct, minor, adverse impacts on the water supply and the storm water management system would be expected from water use during construction and to support the additional construction workforce that would be from off-island. Short-term, direct, negligible, adverse and long-term, direct, moderate, beneficial impacts on the water supply would be expected from the temporary relocation and upgrade of the water lines. Long-term, direct, minor, beneficial impacts on the port would be expected because of additional fuel storage capacity. Long-term, direct, major, beneficial impacts on fuel storage would be expected at the airport.</p> <p>Implementation Phase. Long-term, indirect, minor, adverse impacts on electrical supply would be expected from increased use. Long-term, direct, minor, adverse impacts on the water supply, communications, and solid waste would be expected from increased use. Long-term, direct, adverse, negligible to minor impacts would be expected on storm water. Long-term, minor, adverse impacts on jet and diesel fuel would be expected due to the increase in fuel that would need to be delivered to the island. Long-term, direct, minor to major, beneficial impacts would be expected from the increased liquid fuel storage and installation of a hydrant fuel system.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. On Saipan: Short-term, direct, minor, adverse impacts on the airfield would be expected from disruption to aircraft operations. Short-term, direct, negligible, adverse impacts on the liquid fuel supply would be expected from the petroleum required for construction equipment and vehicles. Short-term, direct, negligible, adverse impacts on the electrical system, and the communications systems would be expected during connection of the new infrastructure. Short-term, direct, negligible to minor, adverse impacts on the sewer system would be expected from the temporary shutoff of sewer lines during the connection of a 6-inch sewer line from the maintenance facility to the sewer main line. Short-term, direct, minor, adverse impacts on the storm water management system and solid waste management would be expected from an increase in both during construction. Short-term, direct, negligible, adverse and long-term, direct, moderate, beneficial impacts on the water supply would be expected from the temporary relocation and upgrade of water lines. Long-term, direct, major, beneficial impacts on fuel storage at Saipan International Airport would be expected.</p>

Resource	Alternative	Summary of Environmental Impacts
		<p>On Tinian under the North and South Options: Short-term, direct, moderate, adverse impacts on solid waste management would be expected from construction. Short-term, direct, negligible, adverse impacts on the existing electrical system, liquid fuel supply, communications system, and port would be expected from the extension, upgrade, or connection of associated infrastructure at the airport and seaport. Long-term, minor, adverse impacts on jet and diesel fuel would be expected due to the increase in fuel delivery requirements. Short-term, direct, minor to moderate, adverse impacts on the water supply and the storm water management system would be expected from water use during construction and to support the additional construction workforce that would be from off-island. Short-term, direct, negligible, adverse and long-term, direct, moderate, beneficial impacts on the water supply would be expected from the temporary relocation and upgrade of the water lines. Long-term, direct, minor, beneficial impacts on the port would be expected because of additional fuel storage capacity. Long-term, direct, major, beneficial impacts on fuel storage would be expected at the airport.</p> <hr/> <p>Implementation Phase. On Saipan: Long-term, direct, negligible, adverse impacts on solid waste would be expected from the increased use. Long-term, direct, minor, adverse impacts on jet fuel supply, water supply, storm water, and communications would be expected from the increase in use. Long-term, indirect, negligible, adverse impacts on electrical supply would be expected due to increased use. Long-term, indirect, minor, adverse impacts on sanitary sewer and wastewater treatment would be expected. Long-term, direct, moderate, beneficial impacts would be expected from the increased liquid fuel supply at the airport.</p> <p>On Tinian: Long-term, direct, negligible, adverse impacts on the airfield would be expected from the increased use of the runway and taxiways. Long-term, indirect, minor, adverse impacts on electrical supply would be expected from increased use. Long-term, direct, minor, adverse impacts on the water supply, communications, and solid waste would be expected from increased use. Long-term, direct, moderate, adverse impacts on storm water would be expected from an increase in runoff and a reduction of groundwater recharge. Long-term, direct, minor to moderate, beneficial impacts would be expected from the increased liquid fuel supply and installation of a hydrant fuel system.</p>
	No Action Alternative	Long-term, direct and indirect, minor to moderate and adverse effects would be expected because the existing infrastructure would continue to degrade in quality over time.
Socioeconomics and Environmental Justice (Sections 3.14 and 4.14)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, negligible to minor, adverse impacts on the population of Saipan would be expected from the increase in foreign construction workers. Short-term, minor, adverse impact on housing and public services could occur due to the influx of construction workers. Short-term, minor, direct and indirect, adverse and short-term, negligible to moderate, direct and indirect, beneficial impacts on the Saipan economy would occur due to temporary disruption of services and from increased employment and spending due to construction. Short-term, negligible, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p>

Resource	Alternative	Summary of Environmental Impacts
		<p>Implementation Phase. Long-term, negligible, adverse impacts on Saipan’s population would be expected from the temporary increase in population during exercises. Long-term, negligible to minor, adverse impacts on housing and public services could occur from the temporary increase in population during exercises. Both long-term, negligible to minor, adverse and beneficial impacts on the CNMI and Saipan economy would occur due to temporary disruption of services and from increased spending. Long-term, minor, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options: Short-term, moderate, adverse impacts on the population, housing, and public services could be expected from the temporary increase in population during construction. Short-term, minor to moderate, direct and indirect, adverse and short-term, moderate, direct and indirect, beneficial impacts on economies of Tinian and the CNMI would occur due to temporary disruption of services and from increased employment and spending due to construction. Short-term, minor, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p> <p>Implementation Phase. Long-term, minor, adverse impacts on the population and housing could occur from the temporary increase in population during exercises. Long-term, negligible, direct, adverse impacts and long-term, negligible to minor, direct and indirect, beneficial impacts on the CNMI and Tinian economy would occur due to temporary disruption of services and from increased spending during exercises. Long-term, negligible to minor, adverse impacts on public services and, sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. On Saipan: Short-term, negligible, adverse impacts on the population of Saipan would be expected from the increase in foreign construction workers. Short-term, negligible, adverse impact on housing and public services could occur due to the influx of construction workers. Short-term, minor, direct and indirect, adverse and short-term, negligible to minor, direct and indirect, beneficial impacts on the Saipan economy would occur due to temporary disruption of services and from increased employment and spending due to construction. Short-term, negligible, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p> <p>On Tinian under the North and South Options: Short-term, moderate, adverse impacts on the population, housing, and public services could be expected from the temporary increase in population during construction. Short-term, minor to moderate, direct and indirect, adverse and short-term, moderate, direct and indirect, beneficial impacts on economies of Tinian and the CNMI would occur due to temporary disruption of services and from increased employment and spending due to construction. Short-term, negligible to minor, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p>

Resource	Alternative	Summary of Environmental Impacts
		<p>Implementation Phase. On Saipan: Long-term, negligible, adverse impacts on Saipan’s population would be expected from the temporary increase in population during exercises. Long-term, negligible to minor, adverse impacts on housing and public services could occur from the temporary increase in population during exercises. Both long-term, negligible to minor, direct, adverse and long-term, negligible to minor, direct and indirect, beneficial impacts on the CNMI and Saipan economy would occur due to temporary disruption of services and from increased spending. Long-term, minor, adverse sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p> <p>On Tinian: Long-term, minor, adverse impacts on the population and housing could occur from the temporary increase in population during exercises. Long-term, negligible, direct, adverse impacts and long-term, negligible to minor, direct and indirect, beneficial impacts on the CNMI and Tinian economy would occur due to temporary disruption of services and from increased spending during exercises. Long-term, negligible, adverse impacts on public services and sociocultural issues could occur. Disproportionately high and adverse significant environmental justice impacts would not be expected.</p>
	No Action Alternative	No impacts on socioeconomics or environmental justice would be expected.
Human Health and Safety (Sections 3.15 and 4.15)	Alternative 1 - Modified Saipan	<p>Construction Phase. Short-term, negligible to minor, adverse impacts on contractor health and safety could occur during construction. Short-term, minor, adverse impacts on airfield safety could occur during construction.</p> <p>Implementation Phase. Long-term, negligible, adverse impacts on contractor health and safety could occur from jet fuel operations. Long-term, minor, beneficial impacts on military health and safety would be expected due to improved airfield facilities. Long-term, negligible, adverse impacts on public health and safety would be expected due to increase in air operations. Long-term, minor, beneficial impacts on airfield safety would be expected due to improved airport facilities.</p>
	Alternative 2 - Modified Tinian	<p>Construction Phase. Under the North and South Options: Short-term, negligible to minor, adverse impacts on contractor health and safety could occur during construction. Short-term, minor, adverse impacts on airfield safety could occur during construction.</p> <p>Implementation Phase. Long-term, negligible, adverse impacts on contractor health and safety could occur from jet fuel operations. Long-term, minor, beneficial impacts on military health and safety and airfield safety would be expected due to improved airfield facilities. Long-term, minor, adverse impacts on public health and safety would be expected due to the increase in air operations. Long-term, minor, beneficial impacts on airfield safety would be expected due to improved airport facilities.</p>
	Alternative 3 - Hybrid Modified	<p>Construction Phase. On Saipan: Short-term, negligible to minor, adverse impacts on contractor health and safety could occur during construction. Short-term, minor, adverse impacts on airfield safety could occur during construction.</p> <p>On Tinian under the North Option: Short-term, negligible to minor, adverse impacts on contractor health and safety could occur during construction. Short-term, minor, adverse impacts on airfield safety could occur during construction.</p>

Resource	Alternative	Summary of Environmental Impacts
		On Tinian under the South Option: Short-term, negligible, adverse impacts on contractor health and safety could occur during construction. Short-term, negligible to minor, adverse impacts on airfield safety could occur during construction. <i>Implementation Phase.</i> On Saipan and Tinian: Long-term, negligible, adverse impacts on contractor health and safety could occur from jet fuel operations. Long-term, minor, beneficial impacts on military health and safety and airfield safety would be expected due to improved airfield facilities. Long-term, minor, adverse impacts on public health and safety would be expected due to the increase in air operations. Long-term, minor, beneficial impacts on airfield safety would be expected due to improved airport facilities.
	No Action Alternative	No impacts on the existing health and safety environment would be expected.

ES 7. Cumulative Effects

The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” Informed decisionmaking is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

CEQ guidance in considering cumulative effects states that the first steps in assessing cumulative effects define the scope of the other actions and their interrelationship with a proposed action. The scope must consider other projects that coincide with the location and timetable of a proposed action and other actions. Cumulative effects analyses must also evaluate the nature of interactions among these actions (CEQ 1997).

A cumulative project list was developed to identify projects on Saipan, Tinian, and in the region in general, based on readily available information. The most substantial projects from the cumulative projects list include the Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability Project on Andersen AFB; the MIRC improvements; the Guam and CNMI Military Relocation; the CNMI Joint Military Training; the MITT; improvements at Saipan International Airport, Tinian International Airport, and Tinian harbor; the Alter City resort development proposal, and other local development projects on each island. **Table ES-3** provides a summary of cumulative effects.

Table ES-3. Summary of Cumulative Impacts

Resource	Alternative	Summary of Cumulative Impacts
Noise	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, minor to moderate, adverse cumulative impacts on the noise environment would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short- and long-term, minor to moderate, adverse cumulative impacts on the noise environment would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> Short-term, minor to moderate, and long-term, moderate, adverse cumulative impacts on the noise environment would be expected on Saipan and Tinian.
Air Quality	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short-term, minor, adverse cumulative impacts would be expected from construction and other land disturbance. Periodic, minor, adverse cumulative impacts on local and regional air quality would be expected from operational activities.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short-term, minor, adverse cumulative impacts would be expected from construction and other land disturbance. Periodic, minor, adverse cumulative impacts on local and regional air quality would be expected from operational activities.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> Short-term, minor, adverse cumulative impacts would be expected from construction and other land disturbance on Saipan and Tinian. Periodic, minor, adverse cumulative impacts on local and regional air quality would be expected from operational activities on Saipan and Tinian.
Airspace Management and Airport Operations	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short term, minor, adverse cumulative impacts on airport use are expected. Long-term, negligible, adverse and minor, beneficial cumulative impacts would occur.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short term, minor to moderate, adverse cumulative impacts on airport use are expected. Long-term, moderate, adverse and minor, beneficial cumulative impacts would occur.
	Alternative 3 – Hybrid Modified	<p>On Saipan:</p> <ul style="list-style-type: none"> Short term, minor, adverse cumulative impacts on airport use are expected. Long-term, negligible, adverse and minor, beneficial cumulative impacts would occur. <p>On Tinian:</p> <ul style="list-style-type: none"> Short term, minor to moderate, adverse cumulative impacts on airport use are expected. Long-term, moderate, adverse and minor, beneficial cumulative impacts would occur.
Geological Resources and Soils	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative impacts on geological resources and soils would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short-term, minor to moderate, adverse and long-term minor adverse cumulative impacts on geological resources and soils would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan and Tinian, short-term, minor to moderate, adverse and long-term minor adverse cumulative impacts on geological

Resource	Alternative	Summary of Cumulative Impacts
		resources and soils would be expected.
Water Resources	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative impacts on water resources would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short- and long-term, minor to moderate, adverse cumulative impacts on water resources would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan, short-term, negligible and long-term, minor adverse cumulative impacts on water resources would be expected. On Tinian, short-term, minor to moderate, and long-term minor to moderate adverse cumulative impacts on water resources would be expected.
Terrestrial Biological Resources	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative impacts on wildlife, and threatened and endangered species, are expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Long-term, minor to moderate, adverse cumulative impacts on vegetation would be expected. Short- and long-term, minor to moderate, adverse cumulative impacts on wildlife are expected. No or negligible cumulative impacts on terrestrial threatened and endangered species would be expected.
	Alternative 3 – Hybrid Modified	<p>On Saipan:</p> <ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative effects on wildlife and threatened and endangered species, are expected to occur. <p>On Tinian:</p> <ul style="list-style-type: none"> Long-term, minor to moderate, adverse cumulative impacts on vegetation would be expected. Short- and long-term, moderate, adverse cumulative impacts on wildlife are expected to occur. No or negligible cumulative impacts on terrestrial threatened and endangered species would be expected.
Marine Biological Resources	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, periodic, minor, adverse cumulative impacts on sea turtles and marine mammals would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short and long-term, periodic, minor, adverse cumulative impacts on sea turtles and marine mammals would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan and Tinian, short and long-term, periodic, minor, adverse cumulative impacts on sea turtles and marine mammals would be expected.
Cultural Resources	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Minor, adverse cumulative impacts on contributing elements of the Aslito/Isley Field NHLD could occur.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Minor to major, adverse cumulative impacts could occur on the West Field archaeological site at Tinian International Airport.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan, minor, adverse cumulative impacts on contributing elements of the Aslito/Isley Field NHLD could occur. On Tinian, minor to major, adverse cumulative impacts could occur within the West Field archaeological site.

Resource	Alternative	Summary of Cumulative Impacts
Recreation	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short-term, minor to moderate, adverse cumulative impacts and long-term, periodic, minor, adverse cumulative impacts are expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short-term, moderate, adverse cumulative impacts and long-term, periodic, minor, adverse cumulative impacts are expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan and Tinian, short-term, moderate, adverse cumulative impacts and long-term, periodic, minor, adverse cumulative impacts are expected.
Land Use	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> No short-term cumulative impacts on land use are expected; however, long-term, negligible, adverse cumulative impacts would occur.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> No short-term cumulative impacts on land use are expected; however, long-term, minor, adverse cumulative impacts would occur.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan and Tinian, no short-term cumulative impacts on land use are expected. On Saipan, long-term, negligible, adverse cumulative impacts would occur. On Tinian, long-term, minor, adverse cumulative impacts would occur.
Transportation	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short-term, minor to moderate, adverse and long-term, periodic, minor, adverse cumulative impacts on local roadway transportation would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short-term, moderate, adverse and long-term, periodic, minor to moderate, adverse cumulative impacts on local roadway transportation would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan, short-term, minor to moderate, adverse and long-term, periodic, minor, adverse cumulative impacts on local roadway transportation would be expected. On Tinian, short-term, moderate, adverse and long-term, periodic, minor to moderate, adverse cumulative impacts on local roadway transportation would be expected.
Hazardous Materials and Wastes	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative impacts associated with hazardous materials and waste would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> Short- and long-term, minor, adverse cumulative impacts associated with hazardous materials and waste would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> On Saipan and Tinian, short- and long-term, minor, adverse cumulative impacts associated with hazardous materials and waste would be expected.

Resource	Alternative	Summary of Cumulative Impacts
Infrastructure and Utilities	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> • Short-term, negligible to minor, adverse cumulative impacts on airport and seaport operations, and on utilities, would be expected during construction. • Long-term, minor, beneficial cumulative impacts would occur from increased aircraft parking and increased liquid fuel supplies at the airport and seaport during operations. • Long-term, negligible to minor, adverse cumulative impacts on utilities would occur.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> • Short-term, negligible to minor, adverse cumulative impacts on airport and seaport operations would be expected during construction. • Short-term, negligible to minor, adverse cumulative impacts would occur for utilities during construction, except for potable water, which would be short-term, moderate, and adverse. • Long-term, minor to moderate, adverse cumulative impacts on airport operations due to increased military flights, but long-term, minor, beneficial cumulative impacts from increased aircraft parking. • Minor, beneficial cumulative impacts would be expected from increased liquid fuel supplies at the airport and seaport. • Long-term, negligible to minor, adverse cumulative impacts on utilities would occur.
	Alternative 3 – Hybrid Modified	<p>On Saipan:</p> <ul style="list-style-type: none"> • Short-term, negligible to minor, adverse cumulative impacts on airport and seaport operations, and on utilities, would be expected during construction. • Long-term, minor, beneficial cumulative impacts would occur from increased aircraft parking and increased liquid fuel supplies at the airport and seaport during operations. • Long-term, negligible to minor, adverse cumulative impacts on utilities would occur. <p>On Tinian:</p> <ul style="list-style-type: none"> • Short-term, negligible to minor, adverse cumulative impacts on airport and seaport operations would be expected during construction. • Short-term, negligible to minor, adverse cumulative impacts would occur for utilities during construction, except for potable water, which would be short-term, moderate, and adverse. • Long-term, minor to moderate, adverse cumulative impacts on airport operations due to increased military flights, but long-term, minor, beneficial cumulative impacts from increased aircraft parking. • Minor, beneficial cumulative impacts would be expected from increased liquid fuel supplies at the airport and seaport. • Long-term, negligible to minor, adverse cumulative impacts on utilities would occur.

Resource	Alternative	Summary of Cumulative Impacts
Socioeconomics and Environmental Justice	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> • Short-term, adverse cumulative impacts on population and public services would be expected. • Short-term, adverse and long-term beneficial cumulative impacts on housing could occur. • Short-term and long-term beneficial cumulative impacts on economics could occur. • Short-term, negligible to minor, adverse and long-term, minor, adverse cumulative impacts could occur on sociocultural issues. • Significant adverse impacts would not be expected on disproportionately high minority and low-income populations.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> • Short-term, adverse cumulative impacts on population and public services would be expected. • Short-term, adverse and long-term beneficial cumulative impacts on housing could occur. • Short-term and long-term beneficial cumulative impacts on economics could occur. • Short-term, negligible to minor, adverse and long-term, adverse cumulative impacts could occur on sociocultural issues. • Significant adverse impacts would not be expected on disproportionately high minority and low-income populations.
	Alternative 3 – Hybrid Modified	<p>On Saipan and Tinian:</p> <ul style="list-style-type: none"> • Short-term, adverse cumulative impacts on population and public services would be expected. • Short-term, adverse and long-term, beneficial cumulative impacts on housing could occur. • Short-term and long-term beneficial cumulative impacts on economics could occur. • Short-term, negligible to minor, adverse and long-term, adverse minor cumulative impacts could occur on sociocultural issues. • Significant adverse impacts would not be expected on disproportionately high minority and low-income populations.
Human Health and Safety	Alternative 1 – Modified Saipan	<ul style="list-style-type: none"> • Short- and long-term, minor, adverse cumulative impacts on health and safety would be expected.
	Alternative 2 – Modified Tinian	<ul style="list-style-type: none"> • Short- and long-term, minor, adverse cumulative impacts on health and safety would be expected.
	Alternative 3 – Hybrid Modified	<ul style="list-style-type: none"> • On Saipan and Tinian, short- and long-term, minor, adverse cumulative impacts on health and safety would be expected.

ES 8. Mitigation Measures

The Proposed Action, under Alternatives 1, 2, and 3, has the potential to result in adverse environmental impacts as described in **Section 4**. Mitigations to facilitate the implementation of the Proposed Action and minimize, avoid, or compensate for potential impacts on specific resource areas have been identified and would be implemented as required. Unavoidable impacts would be minimized or compensated to the extent practicable. In accordance with CEQ regulations, mitigation measures are considered for adverse environmental impacts. Mitigations are described by alternative in **Section 4.16**.

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