

GAO

Testimony

Before the Committee on Energy and
Natural Resources, U.S. Senate

For Release on Delivery
Expected at 2:15 p.m. EDT
Thursday, May 1, 2008

DEFENSE INFRASTRUCTURE

Planning Efforts for the Proposed Military Buildup on Guam Are in Their Initial Stages, with Many Challenges Yet to Be Addressed

Statement of Brian J. Lepore, Director
Defense Capabilities and Management





Highlights of [GAO-08-722T](#), a testimony before the Committee on Energy and Natural Resources, U.S. Senate

Why GAO Did This Study

To reduce the burden of the U.S. military presence on Japanese communities while maintaining a continuing presence of U.S. forces in the region, in 2005 and 2006 the U.S.-Japan Defense Policy Review Initiative outlined the effort to relocate American military units in Japan to other areas, including Guam. The Department of Defense (DOD) plans to move 8,000 Marines and an estimated 9,000 dependents from Okinawa, Japan, to Guam by the 2014 goal.

GAO was asked to discuss the planning effort for the buildup of U.S. forces and facilities on Guam. Accordingly, this testimony addresses (1) DOD's planning process for the military buildup on Guam, (2) potential challenges for DOD and the government of Guam associated with the buildup, and (3) the status of planning efforts by the government of Guam to meet infrastructure challenges caused by the buildup.

This testimony is based largely on findings of a September 2007 GAO report on DOD's overseas master plans and prior work on issues related to the U.S. military presence in Okinawa. It is also based, in part, on preliminary observations from an ongoing GAO review of DOD's planning effort to address the challenges associated with the military buildup on Guam and on other GAO work on the effects of DOD-related growth on surrounding communities in the continental United States.

GAO is not making recommendations at this time.

To view the full product, including the scope and methodology, click on [GAO-08-722T](#). For more information, contact Brian Lepore at (202) 512-4523 or leporeb@gao.gov.

DEFENSE INFRASTRUCTURE

Planning Efforts for the Proposed Military Buildup on Guam Are in Their Initial Stages, with Many Challenges Yet to Be Addressed

What GAO Found

DOD has established a framework for the military buildup on Guam; however, many key decisions remain, such as the final size of the military population, which units will be stationed there, and what military facilities will be constructed. This part of the planning process is ongoing, along with the development of a required environmental impact statement, currently expected to be issued in 2010. However, DOD will submit budget requests for fiscal year 2010 prior to that date, and thus may not know the full extent of its facility requirements before asking Congress to provide the associated funding. Officials of the Navy's Joint Guam Program Office told us that immediately after the environmental impact statement is completed, DOD will commence construction of facilities in efforts to meet the 2014 goal discussed in the Defense Policy Review Initiative. However, other DOD and government of Guam officials believe that this is an optimistic schedule considering the possibility that the environmental impact statement could be delayed, the complexities of moving thousands of Marines and their dependents to Guam, and the need to obtain sufficient funding from the governments of United States and Japan to support the move.

DOD and the government of Guam face several significant challenges associated with the proposed military buildup on Guam. DOD's challenges include obtaining adequate funding and meeting operational needs, such as mobility support and training capabilities. There are also challenges in addressing the effects of military and civilian growth on Guam's community and civilian infrastructure. For example, according to DOD and government of Guam officials, Guam's highways may be unable to bear the increase in traffic associated with the military buildup, its electrical system may not be adequate to deliver the additional energy needed, its water and wastewater treatment systems are already near capacity, and its solid waste facilities face capacity and environmental challenges even without the additional burden associated with the projected increase in U.S. forces and their dependents.

The government of Guam's efforts to plan to meet infrastructure challenges caused by the buildup of military forces and facilities are in the initial stages, and existing uncertainties associated with the military buildup contribute to the difficulties Guam officials face in developing precise plans. These challenges are somewhat analogous to challenges communities around continental U.S. growth bases face. Government of Guam officials recognize that the island's infrastructure is inadequate to meet the projected demand; however, funding sources are uncertain. These same officials are uncertain as to whether and to what extent the government of Guam will be able to obtain financial assistance for projected infrastructure demands due to the military buildup. In September 2007, GAO reported that most communities experiencing civilian and military population growth at Army installations in the continental United States will likely incur costs to provide adequate schools, transportation, and other infrastructure improvements, and many of these communities are also seeking federal and state assistance.

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to be here today to discuss the planning effort for the buildup of U.S. forces and facilities in Guam and to describe the associated challenges for the Department of Defense (DOD) and the local community in accommodating the expansion of DOD's military presence on Guam. To reduce the burden of the U.S. military presence on Japanese communities while maintaining a continuing presence of U.S. forces in the region, the U.S.-Japan Defense Policy Review Initiative¹ established a framework for the future of U.S. force structure in Japan, including the relocation of American military units in Japan to other areas, including Guam. As a part of this initiative, DOD plans to move 8,000 Marines and their estimated 9,000 dependents from Okinawa, Japan, to Guam by the 2014 goal. At the same time, the other military services are also planning to expand their operations and military presence on Guam. For example, the Navy plans to enhance its infrastructure, logistic capabilities, and waterfront facilities; the Air Force plans to develop a global intelligence, surveillance, and reconnaissance strike hub at Andersen Air Force Base; and the Army plans to place a ballistic missile defense task force on Guam. As a result of these plans and the Marine Corps realignment, the total military buildup on Guam is estimated to cost over \$13 billion and increase Guam's current population of 171,000 by an estimated 25,000 active duty military personnel and dependents (or 14.6 percent) to 196,000. The government of Japan is expected to contribute about \$6.1 billion toward the costs of the Marine Corps move, although a portion of these funds could be repaid over time by the U.S. government.

We have issued several reports on DOD's integrated global presence and basing strategy² and its overseas master plans for changing U.S. military infrastructure overseas as required by the fiscal year 2004 Senate military

¹DOD officials refer to the process through which the United States and Japan negotiated the initiatives that realign U.S. forces in Japan as the Defense Policy Review Initiative. The realignment initiatives were the result of Security Consultative Committee meetings in 2005 and 2006 between U.S. and Japan officials. The Security Consultative Committee is made up of the U.S. Secretaries of State and Defense and Japan's Minister of Foreign Affairs and Minister of State for Defense. The committee sets overall bilateral policy regarding the security relationship between the United States and Japan. The results of these meetings established a framework for the future U.S. force structure in Japan, including the Marine Corps move from Okinawa, Japan, to Guam.

²GAO, *Defense Management: Comprehensive Strategy and Annual Reporting Are Needed to Measure Progress and Costs of DOD's Global Posture Restructuring*, [GAO-06-852](#) (Washington, D.C.: Sept. 13, 2006).

construction appropriation bill report.³ Most recently, in September 2007, we reported on DOD's overseas master plans for changing its infrastructure overseas and on the status of DOD's planning effort and the challenges associated with the buildup of military forces and facilities on Guam.⁴ In that report, we found that DOD's planning effort for the military buildup on Guam was in its initial stages, with many key decisions and challenges yet to be addressed. Additionally, we found that the potential effects of the increase in military forces on Guam's infrastructure—in terms of population and military facilities—had not been fully addressed. Also, in September 2007, we reported how communities in the continental United States are planning and funding for infrastructure to support significant personnel growth in response to implementing base realignment and closure, overseas force rebasing, and force modularity actions.⁵

As requested, my testimony today will focus on three principal objectives. First, I will address DOD's planning process for the military buildup on Guam. Second, I will point out potential challenges for DOD and the government of Guam associated with the military buildup. Third, I will describe the status of planning efforts by the government of Guam to address infrastructure challenges to the local community caused by the buildup of military forces and facilities.

My testimony is based largely on findings of our September 2007 report on DOD's overseas master plans and information from a prior report on issues related to reducing the effects of the U.S. military presence in Okinawa.⁶ My testimony is also based, in part, on preliminary observations

³GAO, *DOD's Overseas Infrastructure Master Plans Continue to Evolve*, [GAO-06-913R](#) (Washington, D.C.: Aug. 22, 2006); *Opportunities Exist to Improve Comprehensive Master Plans for Changing U.S. Defense Infrastructure Overseas*, [GAO-05-680R](#) (Washington, D.C.: June 27, 2005); and *Defense Infrastructure: Factors Affecting U.S. Infrastructure Costs Overseas and the Development of Comprehensive Master Plans*, [GAO-04-609](#) (Washington, D.C.: July 15, 2004).

⁴GAO, *Defense Infrastructure: Overseas Master Plans Are Improving, but DOD Needs to Provide Congress Additional Information about the Military Buildup on Guam*, [GAO-07-1015](#) (Washington, D.C.: Sept. 12, 2007).

⁵GAO, *Defense Infrastructure: Challenges Increase Risks for Providing Timely Infrastructure Support for Army Installations Expecting Substantial Growth*, [GAO-07-1007](#) (Washington, D.C.: Sept. 13, 2007).

⁶GAO, *Overseas Presence: Issues Involved in Reducing the Impact of the U.S. Military Presence on Okinawa*, [GAO/NSIAD-98-66](#) (Washington, D.C.: Mar. 2, 1998).

from our ongoing review of DOD's overseas master plans and its planning effort to address the challenges associated with the military buildup on Guam and on two separate reports of the effects of DOD-related growth on surrounding communities in the continental United States.⁷ As part of our ongoing work, we met with officials from the Office of the Secretary of Defense, U.S. Pacific Command, Marine Forces Pacific, Third Marine Expeditionary Force, and the Navy's Joint Guam Program Office (JGPO)—the office established to plan and execute the military buildup on Guam—to discuss the planning process for DOD's military realignments on Guam and to identify challenges associated with the buildup of military forces and infrastructure on Guam. We also met with the Governor of Guam and his staff, members of the Guam legislature, staff from the office of the Guam Delegate to the House of Representatives, and various Guam community groups to discuss their planning efforts and any challenges they may face related to the military buildup. We expect to report the results of our ongoing review to congressional defense committees later this year. We conducted this performance audit and our prior reports in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Summary

DOD has established a framework for the military buildup on Guam; yet, many key decisions must still be made, such as the final size of the military population, which units will be stationed there, and what military facilities will be required. The U.S.-Japan Defense Policy Review Initiative established a framework for the future of U.S. force structure in Japan and the Marine Corps realignment to Guam. The U.S. Pacific Command then developed the Guam Integrated Military Development Plan⁸ to provide an overview of the projected military population and infrastructure requirements. However, the exact size and makeup of the forces to move to Guam and the housing, operational, quality of life, and service support

⁷GAO, *Defense Infrastructure: DOD Funding for Infrastructure and Road Improvements Surrounding Growth Installations*, [GAO-08-602R](#) (Washington, D.C.: Apr. 1, 2008), and [GAO-07-1007](#).

⁸U.S. Pacific Command, *Guam Integrated Military Development Plan* (Camp H.M. Smith, Hawaii: July 11, 2006).

infrastructure required are not yet fully known. This part of the planning process is ongoing, along with the development of a required environmental impact statement. Before JGPO can finalize its master plan for the military buildup on Guam, it needs to complete the required environmental impact statement, currently expected to be issued in 2010. Prior to that date, DOD will submit its fiscal year 2010 budget request to Congress for the first phase of military construction projects on Guam. Thus, DOD may be asking Congress to fund the military construction projects without the benefit of a completed environmental impact statement or a final decision on the full extent of its facility and funding requirements. DOD officials said that the department often requests funding during the same period environmental impact statements are being developed for large projects, including major base realignments and closures. JGPO officials told us that immediately after the environmental impact statement is completed, DOD will commence construction of facilities in efforts to meet the 2014 goal identified in the Defense Policy Review Initiative. However, other DOD and government of Guam officials believe that this is an ambitious and optimistic schedule considering the possibility that the environmental impact statement could be delayed, the complexities of moving thousands of Marines and their dependents from Okinawa to Guam, and the need to obtain sufficient funding from the governments of United States and Japan to support the Marine Corps move.

DOD and the government of Guam face several significant challenges associated with the proposed military buildup on Guam. DOD's challenges include obtaining adequate funding and meeting operational needs, such as mobility support and training capabilities. There are also challenges in addressing the effects of military and civilian growth on Guam's community and infrastructure. For example, according to DOD and government of Guam officials, Guam's highways may be unable to bear the increase in traffic associated with the military buildup, its electrical system may not be adequate to deliver the additional energy needed, its water and wastewater treatment systems are already near capacity, and its solid waste facilities face capacity and environmental challenges even without the additional burden associated with relocation of U.S. forces and their dependents.

The government of Guam's efforts to plan to meet infrastructure challenges caused by the buildup of military forces and facilities on Guam are in the initial stages, and existing uncertainties associated with the military buildup further contribute to the difficulties Guam officials face in developing precise plans. These challenges are somewhat analogous to the

challenges communities around continental United States growth bases face. Furthermore, government of Guam officials stated that Guam will likely require significant funding to address the island's inadequate infrastructure capacity; however, funding sources are uncertain. These same officials are uncertain as to whether and to what extent the government of Guam will be able to obtain financial assistance for projected infrastructure demands due to the military buildup. In September 2007, we reported that most U.S. communities surrounding growing Army bases have unique infrastructure improvement needs, such as schools, transportation, and other infrastructure improvements, and many of these communities are also seeking state and federal assistance.⁹

Background

Since the end of World War II, the U.S. military has based forces in Okinawa and other locations in Japan. The U.S. military occupation of Japan ended in 1952, but the United States administered the Ryukyu Islands, including Okinawa, until 1972. Efforts to address the Japanese population's concerns regarding U.S. military presence in Okinawa began more than a decade ago. One chief complaint is that the Okinawa prefecture hosts over half of the U.S. forces in Japan and that more than 70 percent of the land U.S. forces utilize in Japan is on Okinawa. Many citizens of Okinawa believe the U.S. presence has hampered economic development. The public outcry in Okinawa following the September 1995 abduction and rape of an Okinawan schoolgirl by three U.S. servicemembers brought to the forefront long-standing concerns among the Okinawan people about the effects of the U.S. military presence on the island. According to the Office of the Secretary of Defense, at that time, the continued ability of the United States to remain in Japan was at risk, and it was important to reduce the effects of the U.S. military presence on the Okinawan people. To address these concerns, bilateral negotiations between the United States and Japan began, and the Security Consultative Committee established the Special Action Committee on Okinawa in November 1995. The committee developed recommendations on ways to limit the effects of the U.S. military presence on Okinawa by closing Marine Corps Air Station Futenma and relocating forces from that base to another base on Okinawa, and recommended numerous other operational changes. On December 2, 1996, the U.S. Secretary of Defense, U.S. Ambassador to Japan, Japan Ministers of Foreign Affairs and State, and

⁹See [GAO-07-1007](#).

the Director General of the Japan Defense Agency issued the committee's final report.

In 1998, we reviewed the Special Action Committee's Final Report.¹⁰ At that time, among other things, we reported that the forward deployment on Okinawa significantly shortens transit times, thereby promoting early arrival in potential regional trouble spots such as the Korean peninsula and the Taiwan straits. For example, it takes 2 hours to fly to the Korean peninsula from Okinawa, as compared with about 5 hours from Guam, 11 hours from Hawaii, and 16 hours from the continental United States. Similarly, it takes about 1-1/2 days to make the trip from Okinawa by ship to South Korea, as compared with about 5 days from Guam, 12 days from Hawaii, and 17 days from the continental United States. Also, the cost of this presence is shared by the government of Japan, which provides land and other infrastructure on Okinawa rent free and pays part of the annual cost of Okinawa-based Marine Corps forces, such as a portion of the costs for utilities and local Japanese labor. Most initiatives of the Special Action Committee on Okinawa involving training operations, changes to the status of forces agreement procedures, and noise reduction were successfully implemented. In contrast, initiatives involving land returns have not been as successful, with the majority still ongoing. For example, the closure of Marine Corps Air Station Futenma was never completed and the air station remains open and operational. According to U.S. Forces Japan officials, these initiatives may involve multiple construction projects to satisfy the requirements of the initiatives as well as detailed coordination between the government of Japan and the local communities to gain consensus for these projects.

In 2004, the United States and Japan began a series of sustained security consultations aimed at strengthening the U.S.-Japan security alliance to better address today's rapidly changing global security environment. DOD's Defense Policy Review Initiative established a framework for the future of U.S. force structure in Japan designed to create the conditions to reduce the burden on Japanese communities and create a continuing presence for U.S. forces in the Pacific theater by relocating units to other areas, including Guam (app. I shows the location of Guam). This initiative also includes a significant reduction and reorganization of the Marine Corps presence on Okinawa to include relocating 8,000 Marines and their estimated 9,000 dependents to Guam. More than 10,000 Marines and their

¹⁰See [GAO/NSIAD-98-66](#).

dependents will remain stationed in Okinawa after this relocation. Another initiative includes the closure and replacement of Marine Corps Air Station Futenma at a less densely populated location on Okinawa by the 2014 goal as a result of local concerns involving safety and noise. DOD officials view the success of the Futenma replacement facility as a key objective of the initiative that will need to be completed in order for other realignment actions to take place. Previously, the United States and Japan were unsuccessful in closing and replacing the Marine Corps Air Station Futenma as a part of the Special Action Committee effort on Okinawa.

Other Global Realignments

In recent years, DOD has been undergoing a transformation that has been described as the most comprehensive restructuring of U.S. military forces overseas since the end of the Korean War. The initiative is intended to close bases no longer needed to meet Cold War threats as well as bring home U.S. forces while stationing more flexible, deployable capabilities in strategic locations around the world. As part of its transformation, DOD has been reexamining overseas basing requirements to allow for greater U.S. military flexibility to combat conventional and asymmetric threats worldwide.

The Marine Corps realignment from Okinawa to Guam is just one of several initiatives to move military forces and equipment and construct supporting military facilities on Guam. In addition to the Marine Corps' move to Guam, the Navy plans to enhance its infrastructure, logistic capabilities, and waterfront facilities to support transient nuclear aircraft carrier berthing, combat logistics force ships, submarines, surface combatants, and high-speed transport ships at Naval Base Guam. The Air Force plans to develop a global intelligence, surveillance, and reconnaissance strike hub at Andersen Air Force Base by hosting various types of aircraft, such as fighters, bombers, and tankers, and the Global Hawk system, which is a high-altitude, long-endurance unmanned aerial reconnaissance system, on both permanent and rotational bases. The Army also plans to place a ballistic missile defense task force on Guam with approximately 630 soldiers and 950 dependents. As a result of these plans and the Marine Corps realignment, the active duty military personnel and dependent population of more than 14,000 on Guam is expected to increase approximately 176 percent to more than 39,000 (app. II shows current U.S. military bases on Guam).

Master Planning Requirements for the Military Buildup on Guam

As initiatives for expanding the U.S. military presence on Guam began to emerge, the Senate Appropriations Committee noted the ambitiousness of the military construction program and the need for a well-developed master plan to efficiently use the available land and infrastructure. In July 2006, the committee recommended deferral of two military construction projects at Andersen Air Force Base that were included in the President's budget request until such time as they can be incorporated into a master plan for Guam and viewed in that context. Further, the committee directed the Secretary of Defense to submit to the appropriation committees a master plan for Guam by December 29, 2006, and a report accounting for the United States' share of this construction program to project-level detail and the year in which each project is expected to be funded.¹¹ The Senate report also directed GAO to review DOD's master planning effort for Guam as part of its annual review of DOD's overseas master plans.¹² As discussed in our 2007 report, DOD has not issued a Guam master plan for several reasons. First, the required environmental impact statement, which will take at least 3 years to complete according to DOD documents and officials, was initiated on March 7, 2007.¹³ According to DOD officials, the results of that environmental impact statement will influence many of the key decisions on the exact location, size, and makeup of the military infrastructure development on Guam. Second, exact size and makeup of the forces to be moved to Guam are not yet identified. Third, DOD officials said that additional time is needed to fully address the challenges related to funding uncertainties, operational requirements, and Guam's economic and infrastructure requirements.

Organizations and Responsibilities

The U.S. Pacific Command was responsible for the initial planning for the movement of Marine Corps forces to Guam. In August 2006, the Office of

¹¹S. Rep. No. 109-286, at 15 (2006).

¹²See [GAO-07-1015](#).

¹³The primary purpose of an environmental impact statement is to serve as an action-forcing device to ensure that the policies and goals defined in the National Environmental Policy Act are infused into the ongoing programs and actions of the federal government. Further, regulations for implementing the act established by the Council on Environmental Quality specify that to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with other environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act, the National Historic Preservation Act of 1966, the Endangered Species Act of 1973, and other environmental review laws and executive orders. See 40 C.F.R. § 1502.25.

the Secretary of Defense directed the Navy to establish JGPO to facilitate, manage, and execute requirements associated with the rebasing of Marine Corps assets from Okinawa to Guam, including the planning for all the other remaining military realignments on Guam. Specifically, JGPO was tasked to lead the coordinated planning efforts among all the DOD components and other stakeholders to consolidate, optimize, and integrate the existing DOD infrastructure on Guam. The office's responsibilities include integration of operational support requirements, development, and program and budget synchronization; oversight of the construction; and coordination of government and business activities. JGPO is expected to work closely with the local Guam government, the government of Japan, other federal agencies, and Congress in order to manage this comprehensive effort and to develop a master plan.

The Secretary of the Interior has administrative responsibility over the insular areas for all matters that do not fall within the program responsibility of other federal departments or agencies. Also, the Interior Secretary presides over the Interagency Group on Insular Areas and may make recommendations to the President or heads of agencies regarding policy or policy implementation actions of the federal government affecting insular areas. The Secretary, as the presiding officer of this interagency group, established a Working Group on Guam Military Expansion to address issues related to the military buildup. The working group includes representatives of the Departments of State, Agriculture, Health and Human Services, Labor, Justice, Transportation, Housing and Urban Development, Education, and Veterans Affairs as well as the Navy, the Small Business Administration, the Office of Management and Budget, and others. Five ongoing subgroups were established to discuss policy and resource requirements relating to (1) labor and workforce issues, (2) Guam civilian infrastructure needs, (3) health and human services requirements, (4) the environment, and (5) socioeconomic issues.

DOD Has Established a Framework for Military Buildup on Guam, but the Planning Process Is Ongoing

The U.S.-Japan Defense Policy Review Initiative has established the framework for the future of the U.S. force structure in Japan, including the realignments on Okinawa and Guam. However, no final decision on the exact size and makeup of the forces to move to Guam, including their operational, housing, and installation support facilities, has been made. The environmental impact statement expected in 2010 may affect many key planning decisions.

Framework for the Military Realignment and Buildup

DOD has established various planning and implementation documents that serve as a framework to guide the military realignment and buildup on Guam. Originally, the Marine Corps realignment was discussed in the U.S.-Japan Defense Policy Review Initiative, which established the framework for the future of U.S. force structure in Japan designed to create the conditions to reduce the burden of American military presence on local Japanese communities and to create a continuing presence for U.S. forces by relocating units to other areas, including Guam. In its *Defense of Japan 2006* publication, the Japan Ministry of Defense reported that more than 70 percent of U.S. facilities and areas are concentrated in Okinawa and regional development has been greatly affected by the concentration.¹⁴ That publication recommended that the relocation of the U.S. Marine Corps forces from Okinawa to Guam should occur as soon as possible. It further noted that based on bilateral meetings in 2005 and 2006, the government of Japan had decided to support the United States in its development of necessary facilities and infrastructure, including headquarters buildings, barracks, and family housing, to hasten the process of moving Marine Corps forces from Okinawa to Guam.

Subsequently, in July 2006, the U.S. Pacific Command developed the Guam Integrated Military Development Plan¹⁵ to provide an overview of the projected military population and infrastructure requirements; however, it provides limited information on the expected effects of the military buildup on the local community and off base infrastructure. The plan is based upon a notional force structure that was used to generate land and facility requirements for basing, operations, logistics, training, and quality of life involving the Marine Corps, Army, Navy, Air Force, and Special Operations Forces in Guam. Also, JGPO has completed its first phase of the Guam master planning process and developed basic facility requirements with general cost estimates and mapping concepts. The second phase of the master planning is in progress and will include more detailed infrastructure requirements, facility layouts, and cost estimates for fiscal years 2010 and 2011. JGPO is developing a planning-level Guam joint military master plan that will be submitted to congressional staff by September 15, 2008. However, that plan is not considered a final master plan since DOD is awaiting the results of the environmental impact statement and record of decision, which are due in 2010.

¹⁴Japan Ministry of Defense, *Defense of Japan 2006* (Japan: October 2006).

¹⁵U.S. Pacific Command, *Guam Integrated Military Development Plan*.

Size and Makeup of Forces and Other Variables Are Not Yet Known

The exact size and makeup of the forces to move to Guam and the operational, housing, and installation support facilities required are not yet fully known. While the U.S.-Japan Defense Policy Review Initiative identified Marine Corps units for relocation from Okinawa, assessments are still under way within DOD to determine the optimal mix of units to move to Guam, which may also include Marines from other locations, such as Hawaii and the continental United States.

Approximately 8,000 Marines and their estimated 9,000 dependents of the Third Marine Expeditionary Forces Command Element, Third Marine Division Headquarters, Third Marine Logistics Group Headquarters, 1st Marine Air Wing Headquarters, and 12th Marine Regiment Headquarters are expected to be included in the move to Guam. The Marine Corps forces remaining on Okinawa will consist of approximately 10,000 Marines plus their dependents of the Marine Air-Ground Task Force. While these broad estimates provide a baseline, according to DOD officials we spoke with, the Marine Corps is still determining the specific mix of units and capabilities needed to meet mission requirements on Guam. In addition, Marine Corps officials said that the department was reviewing the mix of units moving to Guam in light of the department's plan to increase the number of Marines to 202,000 from 180,000.¹⁶

The number and mix of units is significant because, according to Marine Corps officials, the operational, housing, and installation support facilities on Guam will depend on the type, size, and number of units that will make the move. That determination will define the training and facility requirements, such as the number and size of family housing units, barracks, and schools and the capacity of the installation support facilities needed to support the military population and operations. In response to the ongoing assessment by the Marine Corps, JGPO officials said that they were initiating a master plan that will reflect the building of "flexible" infrastructure that could accommodate any mix of military units that may move to Guam. However, the lack of information on the number and mix of forces makes it difficult to provide an accurate assessment of specific facility and funding requirements at this time.

¹⁶The planned increase in the Army's and Marine Corps' forces collectively is commonly referred to as Grow the Force.

Results of the Required Environmental Impact Statement May Affect Several Key Decisions

Before JGPO can finalize its Guam master plan, it will need to complete the required environmental impact statement. According to DOD officials, the results of the environmental statement, currently expected to be issued in 2010, can affect many of the key decisions on the exact location, size, and makeup of the military infrastructure development.

On March 7, 2007, the Navy issued a public notice of intent to prepare an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA),¹⁷ as implemented by the Council on Environmental Quality Regulations,¹⁸ and Executive Order 12114. The notice of intent in the *Federal Register*¹⁹ states that the environmental impact statement will:

- Examine the potential environmental effects associated with relocating Marine Corps command, air, ground, and logistics units (which comprise approximately 8,000 Marines and their estimated 9,000 dependents) from Okinawa to Guam. The environmental impact statement will examine potential effects from activities associated with Marine Corps units' relocation to include operations, training, and infrastructure changes.
- Examine the Navy's plan to enhance the infrastructure, logistic capabilities, and pier/waterfront facilities to support transient nuclear aircraft carrier berthing at Naval Base Guam. The environmental impact statement will examine potential effects of the waterfront improvements associated with the proposed transient berthing.
- Evaluate placing a ballistic missile defense task force (approximately 630 soldiers and their estimated 950 dependents) in Guam. The environmental impact statement will examine potential effects from activities associated with the task force, including operations, training, and infrastructure changes.

JGPO officials recognize that the results of this environmental assessment process may affect the development and timing of JGPO's master plan for Guam. Under NEPA and the regulations established by the Council on Environmental Quality, an environmental impact statement must include a

¹⁷National Environmental Policy Act of 1969, codified as amended at 42 U.S.C. § 4321-4347.

¹⁸40 C.F.R. pts. 1500-1508.

¹⁹72 Fed. Reg. 10186-7 (Mar. 7, 2007).

purpose and need statement, a description of all reasonable project alternatives and their environmental effects (including a “no action” alternative), a description of the environment of the area to be affected or created by the alternatives being considered, and an analysis of the environmental impacts of the proposed action and each alternative.²⁰ Further, accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. For example, federal agencies such as DOD are required to ensure the professional integrity, including scientific integrity, of the discussions and analyses contained in the environmental impact statement. Additionally, after preparing a draft environmental impact statement, federal agencies such as DOD are required to obtain the comments of any federal agency that has jurisdiction by law or certain special expertise and request the comments of appropriate state and local agencies, Native American tribes, and any agency that has requested that it receive such statements. Until an agency issues a final environmental impact statement and record of decision, it generally may not take any action concerning the proposal that would either have adverse environmental effects or limit the choice of reasonable alternatives.

DOD officials stated that performing these alternative site analyses and cumulative effects analyses may delay the completion of Guam master plan and thus affect the construction schedule of military facilities needed to accommodate thousands of Marines and dependents by the 2014 goal identified in the Defense Policy Review Initiative. DOD will submit its fiscal year 2010 budget request to Congress for the first phase of military construction projects prior to the completion of the environmental impact statement. Thus, DOD may be asking Congress to fund the military construction projects without the benefit of a completed environmental impact statement or a final decision on the full extent of its facility and funding requirements. DOD officials said that this practice of requesting funding during the development of environmental impact statements is common within the department for large projects, such as major base realignments and closures. JGPO officials told us that immediately after the environmental impact statement and record of decision are completed, the department will commence construction of facilities in efforts to meet the 2014 goal. However, other DOD and government of Guam officials believe that this is an ambitious and optimistic schedule considering the possibility that the environmental impact statement could be delayed, the

²⁰ 40 C.F.R. § 1502.13-1502.16.

complexities of moving thousands of Marines and dependents from Okinawa to Guam, and the need to obtain funding from the United States and Japan to support military construction projects.

Several DOD and Government of Guam Challenges Have Yet to Be Addressed

DOD and the government of Guam face several significant challenges associated with the military buildup, including addressing funding and operational challenges and community and infrastructure impacts, which could affect the development and implementation of their planning efforts. First, DOD has not identified all funding requirements and may encounter difficulties in obtaining funding given competing priorities within the department. Second, DOD officials need to address the operational and training limitations on Guam, such as for sea and airlift capabilities, and training requirements for thousands of Marines. Third, the increase in military personnel and their dependents on Guam and the large number of the construction workers needed to build military facilities will create challenges for Guam's community and civilian infrastructure.

DOD Faces Funding Challenges

The military services' realignments on Guam are estimated to cost over \$13 billion. Included in this \$13 billion cost estimate, the Marine Corps buildup is estimated to cost \$10.3 billion. However, these estimates do not include the estimated costs of all other defense organizations that will be needed to support the additional military personnel and dependents on Guam. For example, the Defense Logistics Agency, which will help support the services' influx of personnel, missions, and equipment to Guam, will likely incur additional costs that are not included in the current estimate. Also, the costs to move and accommodate Marine Corps units from locations other than Okinawa to Guam are not included in the estimate. In addition, the costs associated with the development of training ranges²¹ and facilities on nearby islands are not included in the current estimate for the military buildup. According to JGPO officials, the total costs for the military buildup will eventually be identified and integrated into JGPO's master plan for Guam.

Of the \$10.3 billion estimate for the Marine Corps buildup, the government of Japan is expected to contribute up to \$2.8 billion in funds without reimbursement for the construction of facilities, such as barracks and office buildings. The government of Japan is also expected to provide

²¹Adequate training ranges are critical to maintaining military readiness.

another \$3.3 billion in loans and equity investments for installation support infrastructure, such as on base power and water systems, and military family housing. Most of this \$3.3 billion is expected over time to be recouped by Japan in the form of service charges paid by the U.S. government and in rents paid by American servicemembers with their overseas housing allowance provided by DOD.

In addition, according to DOD officials, there are several conditions that must be met before the government of Japan contributes to the cost of the Marine Corps move. First, the government of Japan has stipulated that its funds will not be made available until it has reviewed and agreed to specific infrastructure plans for Guam. Second, failure or delay of any initiative outlined in the Defense Policy Review Initiative may affect the other initiatives, because various planning variables need to fall into place in order for the initiatives to move forward. For example, DOD officials expect that if the Futenma replacement facility in Okinawa (estimated to cost from \$4 billion to \$5 billion) is not built, the Marine Corps relocation to Guam may be canceled or delayed. Previously, the United States and Japan were unsuccessful in closing and replacing Marine Corps Air Station Futenma as a part of the Special Action Committee on Okinawa process in 1996.²² DOD officials view the success of the Futenma replacement facility as a key objective of the initiative that will need to be completed in order for other realignment actions to take place, including the move to Guam. Finally, the government of Japan may encounter challenges in funding its share of the Marine Corps move considering Japan's other national priorities and its commitments associated with funding several other major realignments of U.S. forces in Japan under the Defense Policy Review Initiative.

DOD Faces Operational Challenges

Operational challenges, such as providing appropriate mobility support and training capabilities to meet Marine Corps requirements, have not been fully addressed. According to Marine Forces Pacific officials, the Marine Corps in Guam will depend on strategic military sealift and airlift to reach destinations in Asia that may be farther away than was the case when the units were based in Okinawa. For example, in a contingency operation that requires sealift, the ships may have to deploy from Sasebo, Japan, or other locations to collect the Marines and their equipment on

²²The United States and Japan are continuing their effort to close and replace Marine Corps Air Station Futenma as a part of the Defense Policy Review Initiative.

Guam and then go to the area where the contingency is taking place, potentially risking a delayed arrival at certain potential trouble spots. According to Marine Corps officials, amphibious shipping capability and airlift capacity are needed in Guam, which may include expanding existing staging facilities and systems support for both sealift and airlift. The Marine Corps estimated additional costs for strategic lift operating from Guam to be nearly \$88 million annually.

Existing training ranges and facilities on Guam are not sufficient to meet the training requirements of the projected Marine Corps force. A DOD analysis of training opportunities in Guam concluded that no ranges on Guam are suitable for the needs of the projected Marine Corps force because of inadequacy in size or lack of availability. U.S. Pacific Command is also in the process of conducting a training study that covers both Guam and the Commonwealth of the Northern Mariana Islands to see what options are available for training in the region. Marine Forces Pacific officials stated that live-fire artillery training, amphibious landings, and tracked vehicle operations will be challenging because of the combination of factors associated with the limited size of training areas available and the environmental concerns on the Northern Mariana Islands.

Increase in Military Presence Is Likely to Cause Local Community and Infrastructure Challenges

The increase in military presence is expected to have significant effects on Guam's community and infrastructure, and these challenges have not been fully addressed. This undertaking is estimated to increase the current Guam population of approximately 171,000 by an estimated 25,000 active duty military personnel and dependents (or 14.6 percent) to 196,000. The Guam population could also swell further because DOD's personnel estimates do not include defense civilians and contractors who are also likely to move to Guam to support DOD operations.

DOD and government of Guam officials recognize that the military buildup will have significant effects on the local community. For example:

- As a result of the military buildup on Guam, construction demands will exceed local capacity and the availability of workers, though the extent to which the local workers can meet this increase has yet to be determined. For example, on the basis of trend data, government of Guam officials estimate the current construction capacity to be approximately \$800 million per year, as compared with the estimated construction capacity of more than \$3 billion per year needed by DOD to meet the planned 2014 completion date. In addition, Guam currently faces a shortage of skilled construction workers. Preliminary analysis

indicates that 15,000 to 20,000 construction workers will be required to support the projected development on Guam. One estimate is that Guam may be able to meet only 10 to 15 percent of the labor requirement locally, a concern to federal, military, and local officials. Nearby countries may have workers willing to come to Guam to take jobs to construct needed facilities, but these workers will have to temporarily enter the United States on temporary nonagricultural workers visas, currently capped at 66,000 per year. JGPO officials said that legislation recently passed by both the Senate and the House of Representatives that will increase the cap in the short term is a first step toward addressing many of their concerns with temporary nonagricultural workers visas.

- The government of Guam has expressed several concerns about the potential effects of an influx of foreign workers on Guam's community. The Civilian Military Task Force recommended that Guam needs to establish a department that would focus on processing foreign workers. Further, a government of Guam report stated that the influx of foreign workers would put a strain on existing emergency care services, medical facilities, and public utilities.

In addition, DOD and government of Guam officials recognize that the island's infrastructure is inadequate to meet the increased demand due to the military buildup. For example:

- Guam's commercial port has capacity constraints with pier berthing space, crane operations, and container storage locations. The military buildup requires a port with double the current capacity, and military cargo is expected to increase sixfold during construction of facilities required for the buildup.
- Guam's two major highways are in poor condition and, when ordnance (ammunition and explosives) is unloaded from ships for Andersen Air Force Base now and for the Marine Corps in the future, the ordnance must be transported on one of these major roads that run through highly populated areas. The current highway system also experiences slippery surfaces, potholes, and occasional flooding. Traffic between military installations and commercial, business, and residential areas is anticipated to increase significantly with the military buildup.
- Guam's electrical system—the sole power provider on the island—is not reliable and has transmission problems resulting in brownouts and voltage and frequency fluctuations. The system may not be adequate to

deliver the additional energy requirements associated with the military buildup.

- Guam's water and wastewater treatment systems are near capacity and have a history of failure due to aged and deteriorated distribution lines. The military buildup may increase demand by at least 25 percent.
- Guam's solid waste facilities face capacity and environmental challenges as they have reached the end of their useful life. Currently, the solid waste landfills in Guam have a number of unresolved issues related to discharge of pollutants and are near capacity.

Government of Guam's Planning Efforts Are in Their Initial Stages

The government of Guam's planning efforts to address infrastructure challenges associated with the buildup of military forces are in the initial stages, and several uncertainties further contribute to the difficulties the government of Guam faces in developing precise plans to address the effects of the military buildup on the local community and infrastructure. In addition, funding sources to address infrastructure challenges are uncertain. As we have found with some communities experiencing civilian and military population growth surrounding Army installations in the continental United States, the government of Guam will likely ask for assistance to provide civilian infrastructure improvements.

Two recent studies that examine the various effects of the military buildup on the local infrastructure and community were developed by the government of Guam and KPMG. First, the Governor of Guam commissioned the Civilian Military Task Force to develop a plan that would both accommodate the military personnel expansion and provide opportunities for the Guam community. The task force issued its report in November 2007, which provided a synopsis of the various funding and resource needs.²³ Second, the government of Guam contracted KPMG to examine the needs and challenges Guam faces in regard to the military buildup. The October 2007 report made preliminary assessments on the effects of the military buildup on Guam's infrastructure, economy, and social services.²⁴ One study estimated that more than \$3 billion will be

²³Guam Civilian Military Task Force, *Planning for Military Growth: November 2007 Needs Assessment* (Hagåtña, Guam: Nov. 2007).

²⁴KPMG, *Conduct Studies Associated with Military Growth and Integration Initiatives for the Island of Guam* (Oct. 31, 2007).

required for civilian infrastructure and government services to address the military buildup.²⁵

The uncertainties associated with exact size, makeup, and timing of the forces to be moved to Guam make it difficult for the government of Guam to develop comprehensive plans to address the effects of the proposed military buildup. Guam officials said that without accurate information it is difficult to develop an infrastructure program that identifies civilian construction projects and financing to support the military buildup and to form an administrative structure to oversee and coordinate project scheduling and implementation. In our September 2007 report on communities experiencing civilian and military population growth at continental U.S. Army installations, we found that without knowing whether Army headquarters-level offices or the local base plans have accurate information about the expected growth, communities are not well positioned to plan for and provide adequate schools, housing, transportation, and other infrastructure.

As discussed previously, government of Guam officials recognize that the island's infrastructure is inadequate to meet the projected demand and will likely require significant funding to address this challenge. However, the extent to which the government of Guam will be able to obtain financial assistance for projected infrastructure demands from the federal government is unclear. Government of Guam officials we met with were uncertain as to whether and to what extent federal grant programs will be available to address Guam's public infrastructure to support the military realignments. On the basis of its initial review, KPMG reported that the data it collected from the government of Guam suggested that it is likely there will be a significant funding gap between the availability of funds and requirements for Guam's infrastructure program.²⁶ KPMG further reported that \$282 million in federal funding was provided to Guam in 2006. Without additional federal assistance, government of Guam officials believe that local infrastructure improvements to accommodate the military buildup would take decades to complete. In our September 2007 report on U.S. communities experiencing civilian and military population

²⁵ According to KPMG, the cost estimates and figures presented in the study are incomplete and were not verified or validated by government of Guam or KPMG officials. Moreover, KPMG officials concluded that more work in terms of testing and analysis needed to be conducted on financial data presented in the report.

²⁶ See footnote 24.

growth at Army installations, we found that communities will likely incur costs to provide adequate schools, transportation, and other infrastructure improvements.²⁷ Because of limited local funding, some of these communities are seeking federal and state assistance.

Mr. Chairman, this concludes my statement. I would be pleased to answer any questions you or any members of the committee may have at this time.

Contacts and Acknowledgments

For further information regarding this statement, please contact Brian J. Lepore at (202) 512-4523 or leporeb@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. GAO staff members making major contributions to this testimony are listed in appendix III.

²⁷See [GAO-07-1007](#).

Appendix I: Location of Guam

Guam is the westernmost territory of the United States and is located in the Pacific Ocean approximately 3,810 miles southwest of Honolulu, Hawaii; 1,600 miles east of Manila, the Philippines; and 1,560 miles southeast of Tokyo, Japan (see fig. 1).

Figure 1: Location of Guam

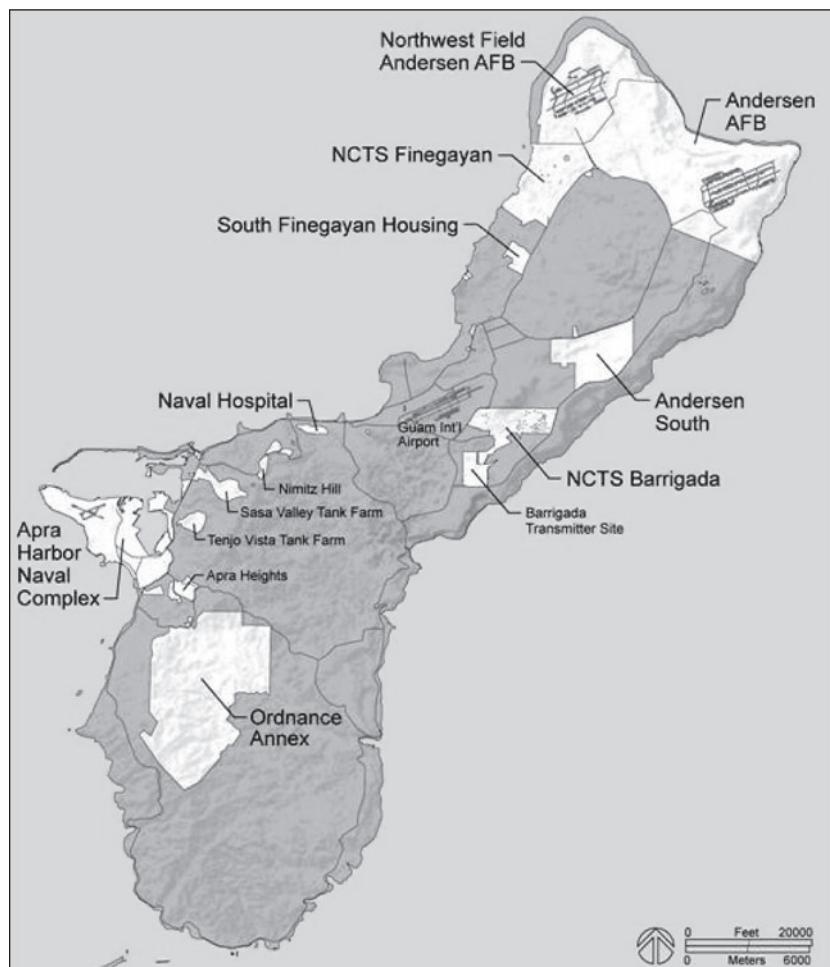


Source: DOD.

Appendix II: Military Installations on Guam

According to the Department of Defense (DOD), about 29 percent of the land on Guam is controlled by DOD (as indicated in white in fig. 2), 52 percent is privately owned, and 19 percent is under the supervision of the government of Guam.

Figure 2: U.S. Military Installations on Guam



Source: DOD.

Note: NCTS is the abbreviation for naval computer and telecommunications station and AFB is the abbreviation for air force base.

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Brian J. Lepore, (202) 512-4523 or leporeb@gao.gov

Acknowledgments

In addition to the contact named above, Mark Little, Assistant Director; Nelsie Alcoser; Susan Ditto; Kate Lenane; and Jamilah Moon made major contributions to this testimony.

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