

*Preliminary Draft*

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**Socioeconomic Impact Assessment Study  
in Support of the  
Commonwealth of the Northern Mariana Islands  
Joint Military Training Environmental Impact Statement/  
Overseas Environmental Impact Statement**



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# 1 **EXECUTIVE SUMMARY**

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## 2 **OVERVIEW**

3 This study to identify and evaluate potential socioeconomic impacts from the proposed action on the  
4 islands of Tinian and Pagan was conducted in support of the Commonwealth of the Northern Mariana  
5 Islands (CNMI) Joint Military Training Environmental Impact Statement/Overseas Environmental Impact  
6 Statement (CJMT EIS/OEIS), in accordance with Contract N62742-11-D-1801, Contract Task Order No.  
7 0002, issued by Naval Facilities Engineering Command (NAVFAC) Pacific.

8 The proposed action would be a means for the United States (U.S.) Pacific Command Service  
9 Components to address training deficiencies in the Western Pacific. The proposed live-fire ranges,  
10 training courses, and maneuver areas collectively constitute a Range and Training Area (RTA). The  
11 Military Lease Area on Tinian would be used as the unit level RTA and include support facilities such as  
12 a base camp. The island of Pagan would be used as a combined level RTA and include both live-fire and  
13 non-live-fire training. Construction of both RTAs and necessary support facilities and infrastructure is  
14 expected to take 8 to 10 years. The proposed action includes construction, range management, expanded  
15 training and operations (to include combined-arms, live-fire, and maneuver training at the unit and  
16 combined levels), designation of danger zones, designation of special use airspace, and acquisition of a real  
17 estate interest to support simultaneous and integrated training.

18 This socioeconomic impact assessment study identifies and assesses potential effects that the proposed  
19 action could have on the socioeconomic conditions in the CNMI; to do so, the following topics were  
20 analyzed:

- 21 • Population,
- 22 • Economic conditions,
- 23 • Public services, and
- 24 • Community and social topics.

25 This socioeconomic impact assessment study does not specifically address environmental justice, action  
26 alternatives to the proposed action, cumulative or other impacts unrelated to the proposed action,  
27 significance of impacts, or potential mitigations. Such issues are addressed in appropriate sections of the  
28 EIS/OEIS. This study was prepared using the most current and best available data for relevant issues such  
29 as geographic origin of the necessary construction labor force and the locations of residence for expected  
30 new population, project implementation schedules, and other factors that may change over time. This  
31 analysis represents a snapshot in time; however, ongoing planning, scheduling, and federal legislative  
32 activities could result in changes to various input assumptions and therefore to the impact conclusions as  
33 well.

## 34 **KEY FINDINGS**

35 When possible, potential impacts are presented as the percentage difference between conditions with the  
36 proposed action and conditions without the proposed action (i.e., the expected future baseline). Also when  
37 possible, a range of potential impacts is provided to reduce error inherent in making projections into the  
38 future; the ranges incorporate results of low, medium, and high economic growth and potential effect  
39 scenarios.

1 Impacts calculated in Table ES-1 are total impacts, meaning they combine construction-related impacts  
 2 and operations-related impacts; this is done because construction and operations could occur within the  
 3 same time frame. A larger proportion of potential impacts would be related to construction than to  
 4 operations and, as such, when the 8- to 10-year construction period ends, on an annual basis, most  
 5 impacts would be lower in magnitude.

**Table ES-1. Summary of Potential Impacts<sup>1</sup> of the Proposed Action**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Tinian Population	18%	23%	29%
Tourism Visitors <sup>2</sup>	-0.8%	-1.0%	-1.6%
CNMI Gross Domestic Product	3.0%	3.5%	4.6%
Tinian Employment	23%	27%	35%
Tinian Total Income	18%	21%	27%
CNMI Government Revenues	3.0%	3.4%	4.5%
CNMI Airport Arrivals <sup>2,3</sup>	-0.1%	-0.1%	-0.2%
CNMI Inbound Seaport Freight	8%	9%	12%

6 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

7 *Notes:* <sup>1</sup>Impacts are measured as the percentage change due to the  
 8 proposed action. The percentage is calculated by dividing the  
 9 change caused by the proposed action by the value of the  
 10 expected future baseline.

11 <sup>2</sup>Change would not be related to construction.

12 <sup>3</sup>Percentage change specifically due to change in number of  
 13 tourism visitors.

14 Information on potential impacts that are not presented on a percentage change basis is discussed below.  
 15 Potential impacts on Pagan are minimally discussed because presently there is very little to no economic  
 16 or public services activity on the island.

17 Population

18 *Tinian*

19 There would be a change to Tinian’s demographics during the 8 to 10 years of construction due to the  
 20 presence of between approximately 475 and 600 construction workers (and some dependents) each year,  
 21 primarily from foreign countries. The influx of construction workers would cause a shift in Tinian’s  
 22 demographic to more Asian and less Pacific Islander (Chamorro) as it is anticipated that the construction  
 23 workforce would primarily be from the Philippines.

24 *Pagan*

25 No consistent civilian construction worker population is anticipated to be on Pagan for extended periods  
 26 of time because most improvements would be built by training personnel during exercises. The U.S.  
 27 military would acquire additional interest in land on Pagan in order to conduct training associated with the  
 28 proposed action. Given this additional interest in land and the extent of surface danger zones during  
 29 training activities, homesteaders may have limited access that may infringe upon their ability to improve  
 30 lots on Pagan. As such, population would be lower than established in the expected future baseline, which  
 31 indicates that there would be people working homestead lots without the proposed action. Also, because  
 32 there would be reduced access to certain beaches and parts of the island for 16 weeks per year and less  
 33 time available to visit, there may be a reduced number of recreational and cultural visits to Pagan.



1 Economic Conditions

2 *Expenditures*

3 Construction expenditures related to the proposed action are anticipated to be approximately \$492 million  
4 for work on Tinian over an 8- to 10-year period. These expenditures are anticipated to contribute to the  
5 increase in gross domestic product identified in Table ES-1.

6 Military personnel training on Tinian would be expected to have liberty time to spend in town. During  
7 these liberty times, training personnel are estimated to spend a total of \$846,712 per year. These  
8 expenditures are anticipated to contribute to the increase in gross domestic product identified in Table  
9 ES-1.

10 Tourism in the CNMI is anticipated to experience a minor decline, relative to overall tourism activity, as a  
11 result of training operations associated with the proposed action on Tinian leading to a slight reduction in  
12 the number of visitors to the CNMI. Visitors that otherwise would have visited Tinian may not visit, and  
13 since visitors to Tinian typically also spend time on Saipan, the reduction in visitors to Tinian may also  
14 have the effect of reducing the number of visitors to Saipan. Tourism expenditures in the CNMI overall  
15 are anticipated to decline by between approximately \$512,000 and \$728,000 per year (compared to a total  
16 of about \$300 million in 2012).

17 It is anticipated that construction worker spending would contribute approximately \$3.7 million to \$4.6  
18 million to the Tinian economy per year. These expenditures would contribute to gross domestic product;  
19 however, this contribution is already accounted for by the contribution for construction expenditures  
20 (discussed above).

21 *Operations Employment*

22 Base camp and training operations would require some permanent employment. In total, 95 full-time  
23 positions would be needed for operation and maintenance of the proposed Tinian unit level RTA. Of these  
24 jobs, 19 would be filled by personnel or employees with specialized skills, and would be available to  
25 residents that meet the required skill level in accordance with federal human resource management and  
26 hiring regulations for appointment to these specialized technical positions; it is anticipated that, based on  
27 the current supply of available labor on Tinian, these positions would be filled by people that do not  
28 currently reside on Tinian. The remaining 76 would be available to qualified U.S. citizens and non-  
29 citizens in accordance with federal security and Department of Homeland Security civilian employee  
30 requirements. It is anticipated that up to half (38) of these positions would be filled by qualified current  
31 Tinian residents. The remaining jobs are anticipated to be filled by qualified U.S. citizens from Saipan,  
32 Guam, or areas outside the Mariana Islands.

33 *Commonwealth of the Northern Mariana Islands Government Revenues*

34 Government revenues are estimated to increase by between \$6.5 million and \$7.9 million per year due to  
35 short-term construction-related economic activity. Once construction ends, operations-related input to  
36 CNMI government revenues are estimated to be less; however, payments associated with the acquisition  
37 of interest in land would contribute positively to government revenues.

38 *Tinian Housing Demand*

39 Additional population moving to Tinian associated with operations employment and construction  
40 manager positions would increase the demand for housing on Tinian. The increase in demand is  
41 anticipated to be between 75 and 110 housing units while construction is occurring and between 57 and  
42 87 after construction ends. Anticipating some increase in Tinian housing in the near future, housing

1 supply would likely meet this additional demand and some additional housing development may be  
2 spurred.

### 3 *Commercial Farming*

4 Commercial farms on Tinian are not permitted in the Military Lease Area. Commercial agriculture  
5 located to the south of the Military Lease Area would not be impacted by the proposed action.

### 6 *Cattle Grazing*

7 Under the proposed action, there would be approximately 1,010 acres (409 hectares) made available by  
8 the Department of Defense for cattle grazing within the Military Lease Area. This amount of land was  
9 estimated to be the amount currently in use for cattle grazing and it is anticipated that it would sustain the  
10 current level of grazing on Tinian. Additional public lands would be required to increase the herd to a  
11 commercially sustainable level. Possible locations for this land are identified south of the Military Lease  
12 Area.

### 13 *Commercial Fishing*

14 Access to fishing areas would be reduced by the proposed action and would be anticipated to impact the  
15 effectiveness of the CNMI's commercial fishing industry. Since no data exists to indicate what proportion  
16 of the value of fish landed are caught in waters that would have access to them reduced, impacts are not  
17 quantified. Because access would be reduced for a small portion of the U.S. Exclusive Economic Zone  
18 around the CNMI and for less than half of the year (20 weeks in Tinian waters and 16 weeks in Pagan  
19 waters), the impact would likely be only a fraction of the total CNMI catch, which was estimated to be  
20 \$500,000 in 2011.

### 21 *Aquaculture*

22 Analysis of market conditions and public support of aquaculture initiatives indicated that an open-ocean  
23 aquaculture operation in the CNMI should be included in the expected future baseline. However, it is not  
24 anticipated that the proposed action would affect such an operation.

### 25 *Tinian Airport Improvements*

26 Tinian Airport improvements, which would be part of the proposed action, would provide a shared benefit  
27 to the public include additional lighting and a fire response facility.

### 28 *Tinian Cargo Transportation and Seaport Improvements*

29 Tinian Seaport improvements that would provide a shared benefit to the public include improvements to  
30 existing boat ramps.

31 *There is potential for the proposed action to affect the efficiency of shipping between Saipan and Tinian.*  
32 *The potential for an impact is low since very few cargo ships transship between Tinian and Saipan. The*  
33 *timetable for restricted access to the shipping route would be made known to shippers, who could*  
34 *schedule around restrictions.***Power and Water Utility Rates**

35 In the event that the International Broadcasting Bureau becomes non-operational, no electricity rate  
36 increase would be anticipated. The proposed action would generate more demand for electricity than the  
37 existing International Broadcasting Bureau facility allowing the local electricity utility to maintain  
38 consistent revenue levels without increasing rates.

39 For construction, the existing potable water system would be expected to meet increased water needs  
40 during construction and additional demand for drinking water should not, in and of itself, drive a rate  
41 increase.

1 *Minerals*

2 Analysis of market conditions and mining operation feasibility indicates that a pozzolan mining operation  
3 on Pagan would not be expected to reach profitability or provide an investor with an acceptable rate of  
4 return. As such, a pozzolan mining operation on Pagan is not considered part of the expected future  
5 baseline and thus could not be affected by the proposed action.

6 Public Services

7 *Public Education*

8 There would be an increase in the number of students due to the additional population that would relocate  
9 to Tinian for construction manager and operations jobs. The increase would be between 29 and 59  
10 students, an increase of between 5.3% and 13% over expected future baseline levels. It is not anticipated  
11 that the proposed action would lead to an excess capacity condition at Tinian schools.

12 *Public Safety*

13 Tinian public safety agencies could have an added burden related to additional population but agency  
14 staffing to service population ratios would continue to exceed U.S. averages and would not be expected to  
15 exceed operational capacity due to the proposed action.

16 *Public Health*

17 Construction workers would increase the service population of the Tinian Health Center but to levels  
18 below recent historical levels when 1,800 construction workers were on island building the Tinian  
19 Dynasty Hotel and Casino. Since construction contractors would cover construction worker healthcare  
20 expenses, Tinian Health Center revenues would be anticipated to increase, which should allow for hiring  
21 staff and purchasing equipment and supplies to meet additional demands. Military personnel training on  
22 Tinian should have little to no impact on Tinian public health services because the base camp would  
23 include medical and first aid capabilities.

24 Community and Social Topics

25 *Tinian*

26 Potential impacts on Tinian include decreased access to fresh locally grown food, decreased income for  
27 some residents whose livelihoods are related to subsistence, decreased access to recreational and cultural  
28 activity areas, and potential conflict with incoming populations. By limiting opportunity to access some  
29 areas of the Military Lease Area, the proposed action could affect community character on Tinian by  
30 changing the nature of everyday activities for some residents of Tinian, accelerating the trend of Tinian  
31 moving away from a traditional community to a more modern community less in touch with traditional  
32 skills and cultural activities, and shift the relationship between the population and the areas/landscapes  
33 where restrictions would be imposed. It could also affect community cohesion on Tinian by reducing  
34 community members' ability to provide "chenchule," thus disrupting one way in which social cohesion is  
35 maintained within the Chamorro culture. In addition, a potential decrease in the practice of cultural  
36 activity among the Chamorro community on Tinian could lessen opportunities for building and  
37 maintaining social cohesion.

38 *Pagan*

39 Potential impacts on Pagan include decreased opportunity to access recreational and cultural activity for  
40 visitors to the island, and decreased likelihood that former Pagan residents or their descendants will be  
41 able to work homestead permits on the island. The proposed action could affect community character on

1 Pagan by replacing the recreational and cultural activity currently occurring with combined level training,  
2 thereby impacting the place-based relationship that communities are able to have with their ancestral  
3 homeland. The proposed action could also affect community cohesion on Pagan by decreasing the  
4 opportunity for those with ties to the island to practice and pass down knowledge of cultural activities,  
5 lessening their ability to build social cohesion within their networks. In addition, the proposed action may  
6 impede the likelihood that those with ties to Pagan will be able to settle or homestead the island and any  
7 cohesion within the community built around that shared purpose would be affected.

8 The No-Action Alternative

9 The impacts from the four ranges, described in the September 2010 Record of Decision in the Guam and  
10 CNMI Military Relocation EIS/OEIS (Department of the Navy [DoN] 2010) span from beneficial, to less  
11 than significant, and significant (see Table 16.2-1, *Summary of Impacts*, DoN 2010). More jobs would be  
12 created during construction creating beneficial impacts; however, fewer agricultural leases would be  
13 available and reduce revenues. Less than significant impacts would occur to tourism revenues. Under  
14 Mariana Islands Range Complex training, no impacts to Tinian's economy would occur (see Table 3.16-  
15 4, *Summary of Environmental Effects of the Alternatives on the Regional Economy in the Mariana Islands*  
16 *Range Complex Study Area*, DoN 2010). The no-action alternative, therefore, would introduce mixed, but  
17 generally less than significant, impacts. There would be minimal impacts related to Pagan under the no-  
18 action alternative associated with the non-live fire training.

19 This differs from the expected future baseline conditions that are identified in Chapter 4 because the  
20 expected future baseline does not include the live-fire ranges, or any training that is considered part of the  
21 no-action alternative. The expected future baseline provides a scenario to which the no-action alternative  
22 can be compared to in order to assess the magnitude of impacts.

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3 **List of Appendices**

4	Appendix A	Methodological Notes and Intermediate Calculations
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**List of Acronyms and Abbreviations**

1					
	%	Percent	9	EIS	Environmental Impact Statement
2	A.D.	Anno Domini	10	NAVFAC	Naval Facilities Engineering Command
3	B.C.	Before Christ	11	NMC-CREES	Northern Marianas College-
4	CJMT	Commonwealth of the Northern	12		Cooperative Research Extension
5		Mariana Islands Joint Military Training	13		and Education Service
6	CNMI	Commonwealth of the Northern	14	OEIS	Overseas EIS
7		Mariana Islands	15	RTA	range and training area
8	DoN	Department of the Navy	16	U.S.	United States

1 **CHAPTER 1**  
2 **INTRODUCTION**

---

3 This study to identify and evaluate potential socioeconomic impacts from the proposed action on the  
4 islands of Tinian and Pagan was conducted in support of the Commonwealth of the Northern Mariana  
5 Islands (CNMI) Joint Military Training Environmental Impact Statement/Overseas Environmental Impact  
6 Statement (CJMT EIS/OEIS), in accordance with Contract N62742-11-D-1801, Contract Task Order No.  
7 0002, issued by Naval Facilities Engineering Command (NAVFAC) Pacific.

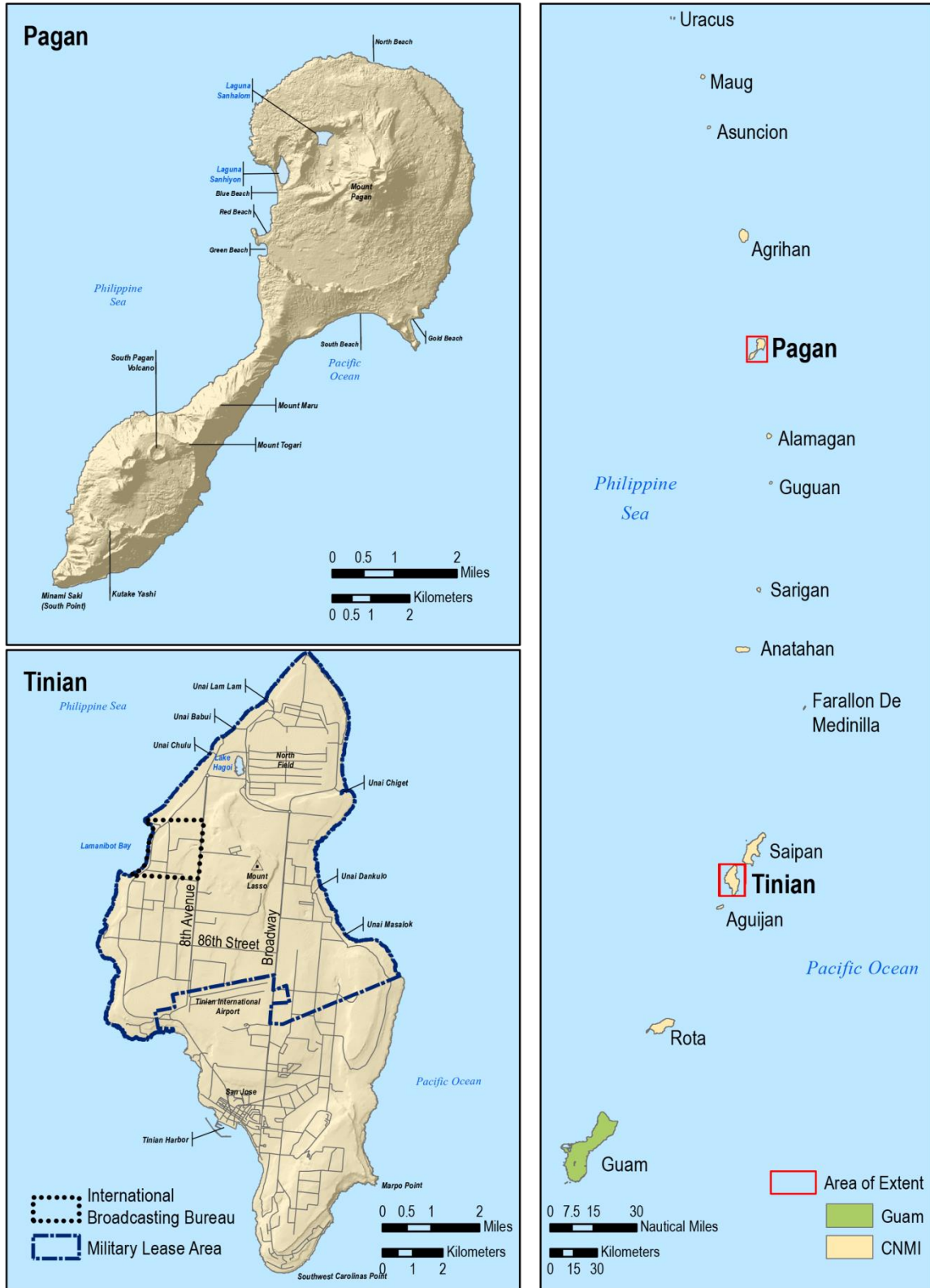
8 **1.1 OVERVIEW OF THE PROPOSED ACTION**

9 The proposed action is to establish a series of live-fire ranges, training courses, and maneuver areas in the  
10 CNMI to address the United States (U.S.) Pacific Command Service Components' training deficiencies in  
11 the Western Pacific. These live-fire ranges, training courses, and maneuver areas collectively constitute a  
12 Range and Training Area (RTA). The Military Lease Area on Tinian would be used as the unit level RTA  
13 and include support facilities such as a base camp. The island of Pagan would be used as a combined level  
14 RTA and include both live-fire and non-live-fire training (Figure 1.1-1). Construction of both RTAs and  
15 necessary support facilities and infrastructure is expected to take 8-10 years. The proposed action includes  
16 construction, range management, expanded training and operations (to include combined-arms, live-fire,  
17 and maneuver training at the unit and combined levels), establishment of danger zones, designation of  
18 special use airspace, and acquisition of a real estate interest to support simultaneous and integrated training.

19 **1.1.1 Tinian**

20 As described in Chapter 2 of the EIS/OEIS, unit level training would take place on Tinian as part of the  
21 proposed action. A unit level RTA would provide the capacity to support the number and type of weapons  
22 and equipment associated with ground combat and amphibious assault training; the associated logistics  
23 and aviation support; and would be linked to suitable special use airspace and sea space. The unit level  
24 RTA must be able to accommodate amphibious and land-based live-fire training for U.S. Pacific  
25 Command Service Components, as well as bilateral and multinational forces.

26 The cumulative duration of training in the unit level RTA would be up to 20 weeks per year (non-  
27 consecutive). This duration was defined by the planned deployment and training exercise tempo for units  
28 in and postured into the U.S. Pacific Command Area of Responsibility to meet the unfilled training  
29 requirements. There would be an 8- to 10-year construction period and operations would increase  
30 gradually over that period.



**Figure 1.1-1**  
**Commonwealth of Northern Mariana Islands Regional Map**



1 **1.1.2 Pagan**

2 Combined level training is proposed for the island of Pagan. The concept for the combined level RTA is  
3 to provide the capability and capacity to train and conduct exercises using the wide spectrum of weapons  
4 and equipment, to include, but not be limited to, ground troops, close air support from the U.S. and/or  
5 allied nation air forces, and sea-to-surface weapons coverage from the Navy and/or allied nation navies.  
6 To carry out large-scale, amphibious, ground-based, as well as air- and sea-based live-fire training,  
7 military units would use the proposed combined level RTA for combat and maneuver exercises of the  
8 Marines, Army, Navy, and Air Force, as well as multilaterally with other allied nations. Military units  
9 would use the combined level RTA for live-fire and maneuver training in combined arms scenarios that  
10 are unavailable elsewhere in the Mariana Islands or U.S. controlled lands in the Western Pacific.  
11 Combined level training is more beneficial to the training audience when there are opportunities to create  
12 varied and unique training scenarios.

13 The cumulative duration of training in the combined level RTA would be up to 16 weeks per year (non-  
14 consecutive). This duration was defined by the planned deployment and training exercise tempo for units  
15 in and postured into the U.S. Pacific Command Area of Responsibility to meet the unfilled training  
16 requirements. There would be an 8- to 10-year construction period and operations would increase  
17 gradually over that period.

18 **1.2 PURPOSE OF THE SOCIOECONOMIC STUDY**

19 Socioeconomics is a broadly defined field that studies how economic activity affects social processes.  
20 The purpose of this socioeconomic impact assessment study is to identify and assess any effects that the  
21 proposed action might have on social and economic conditions in the CNMI. Information in this study, in  
22 conjunction with other information, will be used by decision makers to assess the overall beneficial and  
23 adverse impacts on socioeconomics associated with the proposed action.

24 **1.3 REGULATORY FRAMEWORK**

25 The general regulatory framework for examining the environmental impacts of the proposed action on the  
26 socioeconomic character of a community or communities is NEPA itself. One of the fundamental  
27 purposes of the Act is to consider the environmental consequences of a proposed federal action on the  
28 natural and human environment; socioeconomics is part of the human environment. Two executive orders  
29 deal directly with the socioeconomic conditions and concerns of potentially affected communities.  
30 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and  
31 Low-Income Populations requires federal agencies to assess whether their actions could have  
32 disproportionately high and adverse environmental and health impacts on minority or low-income  
33 populations. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety  
34 Risks required a similar analysis for children.

35 In addition, the Department of Defense prepared a “Strategy on Environmental Justice” in 1995  
36 (Department of Defense 1995) that views the environmental justice analysis as integral to NEPA analysis.  
37 Five principles that foster environmental justice are:

- 38 • Promote partnerships with all stakeholders
- 39 • Identify the impacts of Department of Defense activities on minority and low-income populations
- 40 • Streamline government

- 1 • Improve the day-to-day operations of installations
  - 2 • Foster nondiscrimination in Department of Defense programs (Department of Defense 1995)
- 3 Provisions of the strategy that relate to the NEPA process include improving data collection, assessing  
4 how operations and activities affect local communities, and improving outreach efforts (Department of  
5 Defense 1995). On December 10, 1997, the Council on Environmental Quality published “Environmental  
6 Justice: Guidance Under the National Environmental Policy Act” (Council on Environmental Quality  
7 1997).

## 8 **1.4 TOPICS COVERED**

9 In order to identify and assess potential effects of the proposed action on socioeconomic conditions, data  
10 on the existing social and economic conditions of the CNMI were studied. Numerous potential  
11 interactions between the proposed action and socioeconomic conditions, including those identified during  
12 the scoping process, were identified. These potential interactions were used to develop the detailed  
13 socioeconomic topics that are covered in this study. For continuity in reporting structure, each of the  
14 detailed topics was considered as part of a broader category. These broader categories include population,  
15 economic conditions, public services, and community and social topics. General descriptions of each  
16 category are provided below. Note that environmental justice issues are not addressed in this  
17 socioeconomic impact assessment study. These issues are addressed in the EIS/OEIS Sections 3.15 and  
18 4.15.

### 19 **1.4.1 Population**

20 The study of population includes a count and demographic characterization of people in a region. The  
21 number of people in a region changes almost constantly while descriptions of people tend to be much  
22 more stable. While there may be drastic changes in population, population change is neither a good nor a  
23 bad thing in and of itself. Detailed topics studied under the population category include overall population  
24 trends and demographics.

### 25 **1.4.2 Economic Conditions**

26 When people buy something, sell something, go to work, hire someone, or do just about anything that  
27 involves production, exchange, or financial interaction, they are participating in the economy. These  
28 various interactions in an economy constitute economic conditions. Economic conditions are measured by  
29 a variety of statistical economic indicators. When the numeric values of most economic indicators  
30 increase, it is generally seen as a sign of improving economic conditions. Improving economic conditions  
31 indicate that people are more active in participating in an economy and this is generally thought to be  
32 beneficial to the people of a region.

33 Detailed topics studied under the economic conditions category include tourism, gross domestic product,  
34 employment and income, government finances, housing, agriculture, fishing and aquaculture, CNMI  
35 airports and seaports, power and water utility rates, and minerals.

### 36 **1.4.3 Public Services**

37 Public services such as education, police and fire protection, and health services have historically been  
38 under-provided by the private sector and since they tend to benefit everyone they are provided by  
39 governments. Public services are a key part of any relationship between citizens and their governments.  
40 They represent the primary benefits that individuals receive from payment of taxes. In theory, a change in  
41 the quality of public service is a function of a change in government revenues and a change in population.



1 Holding population constant, an increase in government revenues should improve the quality of public  
2 services. Likewise, holding government revenues constant, an increase in population will reduce the  
3 quality of public services. In most situations though, increases in population go hand-in-hand with  
4 increases in economic activity, which tends to increase tax revenues, so when population increases the  
5 level of public services that are provided tends to increase.

6 Detailed topics studied under the public services category include public education services, public safety  
7 services, and public health services.

#### 8 **1.4.4 Community and Social Topics**

9 Community and social topics are a collection of activities or goals that are important to a social group or  
10 community. Changes to community and social topics are measured in terms of changes in community  
11 character and community cohesion, as defined in Appendix A.

12 Disruptions within communities can alter cultural practices, community identity, the livelihoods of  
13 community members, the real or perceived value of a community, and the ability of a community to  
14 realize common goals, all of which impact community character and cohesion.

15 Whether the implications of changes to community character are positive or negative can be subjective, as  
16 in when some people in a community welcome a specific change and others do not. Specific impacts on  
17 community character can, however, be objectively labeled positive or negative, as in when the livelihood  
18 of a community is harmed leading to increased poverty and crime. Community cohesion may experience  
19 positive or negative changes due to outside effects. A change that brings people in a community together  
20 and strengthens their social networks improves community cohesion, whereas a change that pushes a  
21 community apart and breaks down traditional ties within that community harms community cohesion.

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## CHAPTER 2 APPROACH TO ANALYSIS

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This chapter presents the approach to analysis for this study. The approach to analysis discusses topics and issues regarding how analysis was conducted and how results are presented. More detailed methodological notes and intermediate calculations are presented in Appendix A.

### 2.1 APPROACH TO ANALYSIS: EXISTING CONDITIONS

Standard socioeconomic topics such as population, employment, income, housing, and public services were included in the analysis for existing conditions. In addition, some socioeconomic topics that are not typically analyzed in a standard study were identified in scoping comments and news reports as having the potential to be affected by the proposed action. Non-standard topics analyzed in this socioeconomic impact assessment study include tourism, agriculture (including cattle ranching and gathering), fishing and aquaculture, CNMI airports and seaports, power and water utility rates, minerals, and community and social topics.

Data presented reaches as far back as the year 1300 and as recent as 2014, when numerous interviews were conducted during a data gathering site visit to the CNMI. The meeting records of those interviews serve as source material and are presented in Appendix B of this study. Information from those interviews supplements data gathered from other sources, which include data published by the U.S. Census Bureau and other U.S. federal government agencies, CNMI government agencies, and academic institutions. While data that was gathered in interviews is invaluable, it has not gone through a rigorous vetting process; as such, the data is considered anecdotal.

While the proposed action would be limited to the islands of Tinian and Pagan, the entire population of the CNMI may be affected by the proposed action. The proposed action could have an overall effect on the CNMI (to include Saipan and Rota) through potential changes to the overall economic activity in the CNMI, including CNMI government revenues, which are distributed to each CNMI municipality. As such, data on the population and economy of the island of Saipan and Rota are presented in the socioeconomic analysis in order to characterize the potential affect the proposed action could have on the economy and people of the CNMI which is not limited to just the islands of Tinian and Pagan.

### 2.2 APPROACH TO ANALYSIS: EXPECTED FUTURE CONDITIONS

The objective of the approach to analysis for expected future conditions was to establish a baseline to which potential effects of the proposed action are compared, in order to gauge their magnitude. This baseline is referred to as the “expected future baseline.” The timeframe for which expected future conditions are established is from 2016, when the Record of Decision would be signed, to 2025, when construction related to the proposed action would be complete. The expected future baseline was established because establishing a baseline that accounted for no change in economic activity over time would likely lead to incorrect results (U.S. Environmental Protection Agency 2010). While the expected future baseline is not the no-action alternative for the proposed action, similar to a no-action alternative, the expected future baseline does not take potential effects from the proposed action into consideration. To establish the expected future baseline, assumptions were made and two distinct types of analyses were conducted: quantitative projections (estimates of a future data based on study of present data) and binary assessments (assessments for which there are two possible outcomes).

1 **2.2.1 Assumptions**

2 Assumptions were made to develop the expected future baseline. In order to establish the expected future  
3 baseline, it was assumed that existing trends would continue into the near-term future. This assumption  
4 implies that no major economic, social, or political variables would drastically change in the near future.  
5 While this assumption is generally reasonable, there are situations that could make the assumption  
6 invalid, such as a potential abrupt completion of federalization of CNMI immigration, which may  
7 potentially have the effect of sending non-resident workers home, and/or a potential change in the status  
8 of the Russian and Chinese parole in place programs. By assuming existing data are relevant and that  
9 certain trends will generally continue, the expected future conditions analysis assumes that these  
10 potentially abrupt and unexpected changes will not occur.

11 Also assumed was the timeframe for the expected future baseline. The timeframe conceptually assumes a  
12 near-term future concept, which is defined as beginning in 2016 and extending through the year 2025.  
13 This timeframe was established to resemble the timeframe of the construction for the proposed action.  
14 Since construction under the proposed action would begin in the year 2016 and would last 8 to 10 years,  
15 possibly to the end of 2025, the timeframe of 2016 through 2025 was established as the conceptual near-  
16 future timeframe for the expected future baseline.

17 **2.2.2 Quantitative Projections**

18 Quantitative projections were made using an approach similar to the Office of Insular Affairs study titled  
19 *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to Seven Insular Areas* (Office  
20 of Insular Affairs 2012a). Both in this study and the Office of Insular Affairs study, relationships between  
21 economic indicators are established to estimate changes in one economic indicator based on changes in  
22 another economic indicator. Best available data was used to determine whether projections could be made  
23 for particular economic indicators; if data were not available then projections were not made.

24 Projections involve development of base-year projections and out-year projections. As noted in Appendix  
25 A, the base-year projections are rooted in the projection of year 2014 CNMI visitors that was developed  
26 by the Marianas Visitors Authority. Through this projection, and the establishment of various  
27 relationships between economic indicators, base-year projections are established for other economic  
28 indicators. Once base-year projections were made for each variable, escalating factors (year-to-year rates  
29 of change) were applied to develop out-year projections. The escalating factors were derived from recent  
30 data and trends that were provided by and/or corroborated by knowledgeable sources from the CNMI (see  
31 Appendix A of this study for methodological notes and intermediate calculations and Appendix B for  
32 interview meeting records).

33 In order to reduce error inherent in making the out-year projections, three sets of escalating factors were  
34 developed. Each of these sets of factors represented a possible economic growth scenario for the CNMI  
35 economy. The first set that was established represents a trend growth scenario. This trend growth scenario  
36 was calculated by projecting existing trends into future years. However, because there is variation from  
37 trends over time, relying on existing trends alone would likely lead to error. As such, additional scenarios  
38 were developed, one scenario estimates lower than trend growth and one scenario estimates higher than  
39 trend growth. None of the scenarios are considered more accurate than another and thus all values along  
40 the range of projections should be considered equally likely. Growth scenarios were plotted over time but  
41 for purposes of analysis, single data points (averages of time-series projections) serve as low, medium,  
42 and high baseline values.

### 2.2.3 Binary Assessments

Binary assessments were conducted to determine whether or not certain economic development activities should be expected to occur in the near future. These economic development activities, if they were to occur, would be important to the economic future of the CNMI and are therefore analyzed to determine whether they should be included in the expected future baseline. Analysis consists of a detailed review of planning and economic information and the determination of whether an activity is included in the expected future baseline, which is based on whether or not data or analyses indicate that an activity should be expected. The activity should be expected if it is “sufficiently likely to occur, that a person of ordinary prudence would take it into account in making a decision” (Sierra Club v. Marsh, 976 F.2d 763, 767 [1st Cir. 1992]). Subjects that are considered or analyzed to determine whether an activity should be expected include: government approval or funding, private funding, previous investment of funds, viability of the market for a product or service, marketing agreements, feasibility of the business, and others as needed. If a binary assessment determines that an activity should be expected in the near future, then the activity is considered in the expected future baseline as something that has the potential to be impacted by the proposed action.

### 2.3 APPROACH TO ANALYSIS: IMPACTS OF THE PROPOSED ACTION

Potential impacts of the proposed action are assessed either quantitatively or qualitatively. In cases where potential impacts are assessed qualitatively, effects of the proposed action are discussed and statements are made as to whether or not the effect would constitute an adverse impact. For both qualitative and quantitative assessments, the term “significant” is not used as part of this analysis.

The Council on Environmental Quality regulations for implementing NEPA provides broad guidelines for determining whether impacts are considered significant based on intensity and/or the context of existing socioeconomic conditions. None of the guidelines is specific to socioeconomic topics, but some refer to the “public” or the “human environment” rather than physical resources or places. There are military-specific legislation (Public Law 110-17 10 U.S. Code 2391: *Military Base Reuse Studies and Community Planning Assistance*) and implementing Department of Defense Directives (3030.01 and 5410.12) that address the issue of what is a significant impact to communities due to changes in military programs. Significance determinations are presented in the Socioeconomics section of the EIS/OEIS, Section 4.15.

Since there is not a viable economic model that simulates inputs and outputs of regional economic activity for the CNMI as there are for many other locations (Office of Insular Affairs 2012a), and data are limited due to lack of U.S. federal coverage in many statistical programs that are standard for states and counties, this study takes an approach similar to, and applies data from, the Office of Insular Affairs study titled *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to Seven Insular Areas* (Office of Insular Affairs 2012a). The Office of Insular Affairs study established relationships between economic indicators to estimate changes in one economic indicator based on changes in another economic indicator. Relationships between variables in this study are presumed to be valid based on the statistical relationships that variables displayed in historic data.

In cases where potential impacts are assessed quantitatively, nominal change data (that are established to potentially result from the proposed action) are divided by expected future baseline data. The quotient represents the percentage change from the expected future baseline that may potentially be caused by the proposed action. This percentage change is considered the impact of the proposed action.

Similar to how low, medium, and high scenarios were developed for the expected future baseline, low, medium, and high scenarios were developed to estimate effects of the proposed action. Because three

1 expected future baseline scenarios and three estimated effect scenarios were applied to estimate impacts, a  
2 total of nine quotients were produced as estimates of impacts. The nine estimates of impacts formed a  
3 range of estimated impacts. Three of the nine estimates of impacts are presented in tabular format – the  
4 lowest and highest of the nine, and the middle estimate.

5 Because the entire population of the CNMI (residing on Saipan, Tinian, and Rota) participates in the same  
6 CNMI economy and government, the various action alternatives would each have similar island-wide or  
7 CNMI-wide effects. As such impact analysis is focused on the proposed action in general with  
8 alternative-specific analysis presented only when there is potential for noticeable differences between  
9 alternatives. Impacts associated with the no-action alternative do not consider the effects of the proposed  
10 action, but rather a continuation of current training activities on Tinian that includes construction of four  
11 live-fire ranges on Tinian contained in the Record of Decision for the Guam and CNMI Military  
12 Relocation EIS.

## CHAPTER 3 EXISTING CONDITIONS

---

### 3.1 OVERVIEW OF SOCIOECONOMIC HISTORY

This overview section provides information on the modern economic history of the CNMI, with a specific discussion of both Tinian and Pagan, to provide context for the remaining topics covered in the chapter. Major historical economic events, long-term trends, and recent trends are discussed.

#### 3.1.1 Commonwealth of the Northern Mariana Islands

In June of 1975, with 78.8% of votes cast in favor, the people of the CNMI accepted the Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America. On November 4, 1986 the Covenant was fully commenced and U.S. citizenship was conferred upon CNMI residents. That date has been considered the point of “takeoff” for the CNMI economy because of three factors that have contributed to the CNMI economic growth since – stability through association with the U.S., the opening of air service to Japan, and the abatement of restrictions on foreign investment (Stewart 2009).

The late 1980s and early 1990s were a boom period for the CNMI economy, in large part due to Japanese investments that were geared towards making the CNMI a tourist destination. Also part of the boom period was growth in the garment manufacturing industry; garment manufacturing in the CNMI had been popular because the CNMI had a lower minimum wage than the U.S., but clothing brands could label their products “Made in the USA.” During the boom period, it became clear that the CNMI population could not support the magnitude of its economy and the CNMI became reliant upon non-resident workers to staff its tourism and garment manufacturing industries (Stewart 2009).

Due to a contraction in the Japanese economy, Japanese investment did not continue to support growth in tourism infrastructure into the mid-1990s and the 1997 Asian financial crisis further damaged the CNMI economy by reducing the number of visitors (Stewart 2009). The garment manufacturing industry did continue to provide support to the economy in the mid to late 1990s. During peak production (1999-2000), about 30 garment factories operated on Saipan producing around \$1 billion worth of garments and employing about 15,000 temporary Asian workers (Office of Insular Affairs 2012b).

During every year in the 2002 to 2011 period, the CNMI economy contracted; the extended contraction was primarily due to the closing down of the garment manufacturing industry. In 2005, the U.S. entered a global trade agreement that eliminated quotas on textiles imports to the U.S. Removing quotas made it possible for economies with low production costs, such as China, to export unlimited quantities of textiles to the U.S., which forced higher-cost textile producers in the CNMI out of business (Office of Insular Affairs 2012b). While CNMI production costs were lower than in the U.S., they were still significantly higher than labor costs in China (Office of Insular Affairs 2012b). With the new trade agreement coming into effect in January 2005, garment factories began to consolidate, move, and close; the last garment factories in the CNMI closed in the beginning of 2009 (Office of Insular Affairs 2012b).

Also during the 2002 to 2011 period, the CNMI’s tourism industry experienced problems as Korean Airlines and Japan Airlines withdrew from the market and Continental Airlines stopped direct service to the CNMI, leaving potential CNMI tourists from Asia with only high cost, non-direct, flight options. Problems were further exacerbated as the world fell into a recession coinciding with the financial crisis that peaked in 2008 to 2009. Price adjusted gross domestic product declined by 53% from 2002 to 2011 in

1 large part due to substantial declines in the value of goods exported (a decline of 98%) and the value of  
2 services exported (a measure largely driven by visitor spending associated with tourism), which declined  
3 by 19% over the period (U.S. Bureau of Economic Analysis 2012, 2013).

4 From 2011 to 2012, the CNMI economy began showing signs of improvement as gross domestic product  
5 increased by 7.7% (U.S. Bureau of Economic Analysis 2013); the improvement was in large part due to a  
6 15% increase in visitor arrivals, from 340,957 in 2011 to 401,082 in 2012, as Chinese tour operations that  
7 offered low-cost charter flights expanded their presence in the market (CNMI Department of Commerce  
8 2012a). There are signs that the economy will continue to improve as estimates of visitor arrivals for  
9 January to March 2013 were 7% higher than arrivals during January to March of 2012 (First Hawaiian  
10 Bank 2013). The Marianas Visitors Authority forecast that 456,417 visitors will visit the CNMI in 2013,  
11 the highest level since 2004 to 2005 when Japan Airlines stopped service to the CNMI (First Hawaiian  
12 Bank 2013), which would be a 14% increase over 2012. An increase in the Hotel Occupancy Tax from  
13 10% to 15%, which went into effect on April 1, 2013, is expected to improve the overall budget condition  
14 of the CNMI government and increase revenues to the Marianas Visitors Authority to fund efforts to  
15 improve and increase the CNMI's image as a tourist destination (Erediano 2013).

### 16 **3.1.2 Tinian**

17 In January 1983, the U.S. federal government and the CNMI government finalized a lease agreement for  
18 military use of the northern two-thirds of Tinian (i.e., the Military Lease Area). In 1994, the U.S. military  
19 signed a lease back agreement for a portion of the land that it had leased; this Lease Back Area was made  
20 available to Tinian residents for subsistence agriculture and grazing. Agricultural permits were  
21 administered by the CNMI Department of Public Lands and were limited to 5 hectares and 1 year in  
22 duration. The 1994 lease back agreement has now expired and the CNMI and U.S. have continued the  
23 terms of the lease back agreement on an interim basis while negotiations continue on a longer term lease  
24 back agreement.

25 Since the 1990s, Tinian's economy had been led by tourism and local government employment (U.S.  
26 Census Bureau 2000, 2010a). The Tinian Dynasty Hotel and Casino, which opened on April 25, 1998  
27 draws visitors to Tinian, primarily from China. Tinian Dynasty management indicated that the Dynasty  
28 works with tour companies in China to bring in visitors who typically stay on Saipan for a couple of  
29 nights and on Tinian for a couple of nights (Tinian Dynasty, personal communication, January 2014).  
30 Tinian Dynasty Management and a local tour operator indicated that while on Tinian, visitors are taken on  
31 windshield tours of the island, stopping at historical, scenic, or beach sites (Deborah Flemming, personal  
32 communication, January 2014; Tinian Dynasty, personal communication, January 2014). In 2013, the  
33 Tinian Dynasty had 55,785 guests; this number represents almost all visitors (about 99%) to Tinian  
34 (Tinian Dynasty, personal communication, January 2014).

### 35 **3.1.3 Pagan**

36 The first post-war economic development on Pagan took place in 1951 when the Northern Islands  
37 Development Company brought Chamorros to Pagan to collect and market copra (coconut meat) (Russell  
38 1998). In 1967, the first school was built on Pagan by the Peace Corps and other volunteers. In 1976,  
39 about 75 tons of copra was produced on Pagan, generating sales of about \$13,000 (Office of Transition  
40 Studies and Planning 1978). As of 1978, there were no stores on Pagan or evidence of cash exchanges  
41 among residents for goods or services. There was "limited potential for development" on Pagan due to  
42 lack of comparative advantage over other islands in the Marianas, relative inaccessibility, and lack of



1 modern infrastructure necessary to make potentially productive operations (e.g., basalt mining) feasible  
2 (Office of Transition Studies and Planning 1978).

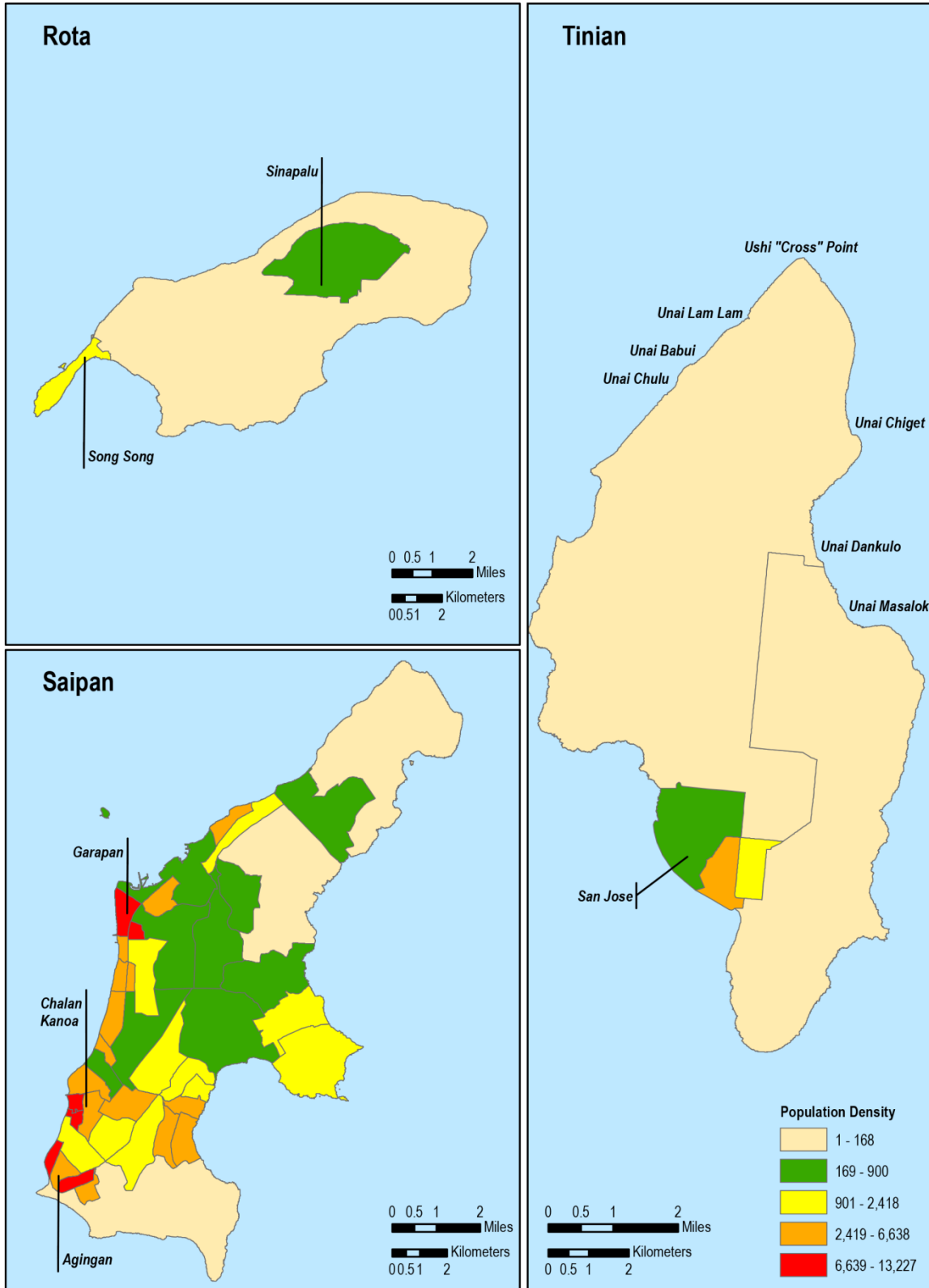
3 Pagan is home to two active volcanoes, one of which (Mount Pagan) erupted in May 1981 forcing the  
4 evacuation of all residents to Saipan. In 2010, the CNMI enacted Public Law 16-50, a homesteading law  
5 to establish the Northern Islands Village and Agricultural Homesteading program for current or former  
6 residents of the Northern Islands or any qualified person interested in residing on the Northern Islands.  
7 Said statute requires extensive municipal planning and infrastructure development prior to homesteading  
8 deeds being issued. To date, the CNMI has not deeded any land on Pagan, though some past residents and  
9 descendants of Northern Islanders have expressed the desire to return (Pagan Economic Development  
10 Conference, personal communication, February 2014; Northern Islands Mayor's Office, personal  
11 communication, February 2014; Mariana Resource Conservation and Development Council, personal  
12 communication, February 2014). There are no official residents of Pagan (U.S. Census Bureau 2010a) but  
13 anecdotal information indicates that people periodically visit and that some may stay for extended  
14 periods.

### 15 **3.2 POPULATION**

16 The population section presents data from the U.S. Census Bureau on overall population trends,  
17 demographics, educational attainment, and household characteristics. Population data by municipality is  
18 presented from 1958 until 2010, when the most recent Census was completed. For most other population  
19 topics, only the most recent data from the 2010 Census are presented.

20 The 2010 U.S. Census did not attempt to count the population of Pagan, so no recent population or  
21 demographic data is available (U.S. Census Bureau 2010a); however, anecdotal reports indicate that there  
22 are usually some people on the island.

23 Figure 3.2-1 shows population density (persons per square mile) in the CNMI for 2010. The most  
24 populated areas of the CNMI were on the west side of Saipan, in Garapan, and in areas in the southwest  
25 of Saipan including Chalan Kanoa and Agingan. Outside of Saipan, the most densely populated area in  
26 the CNMI was San Jose, on Tinian. Song Song was the most populated part of Rota.



**Figure 3.2-1**  
**Population Density in the CNMI**

**NORTH**  
 Source: U.S. Census Bureau 2010a

1 **3.2.1 Overall Trends**

2 Table 3.2-1 shows that from 1958 to 2010 the population of the CNMI increased by 550%. Population  
 3 increase from 1958 to 2000 was 730%, but population declined from 2000 to 2010. The first major influx  
 4 of population to the CNMI was during the 1980s; during that decade, the CNMI population more than  
 5 doubled from 16,780 to 43,345. The CNMI population increased substantially again during the 1990s,  
 6 growing 60%, from 43,345 to 69,221. The massive population influxes during the 1980s and 1990s were  
 7 driven by the introduction and increasing numbers of temporary non-resident workers in the tourism and  
 8 garment manufacturing industries.

**Table 3.2-1. Population Trends by Municipality, 1958 to 2010**

	<i>1958</i>	<i>1970</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>
<b>CNMI Total</b>	<b>8,290</b>	<b>9,640</b>	<b>16,780</b>	<b>43,345</b>	<b>69,221</b>	<b>53,883</b>
Saipan	6,654	7,967	14,549	38,896	62,392	48,220
Tinian	405	710	866	2,118	3,540	3,136
Rota	969	895	1,261	2,395	3,283	2,527
Northern Islands	262	68	104	36	6	0
<i>Pagan<sup>1</sup></i>	<i>76</i>	<i>43</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>0</i>

9 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands; NA = Not Available

10 *Note:* <sup>1</sup>The most recent published Census population count for Pagan was in 1974. In  
 11 1974 Pagan had 57 inhabitants. Pagan currently has no permanent residents.

12 *Sources:* Pacific Web 2013; U.S. Census Bureau 2000, 2010a.

13 In 1980, although citizenship was not asked in the 1980 Census, less specific data indicate that there were  
 14 about 2,000 CNMI residents that were likely to not be U.S. citizens (Pacific Web 2013), but by 1990 the  
 15 number of non-citizens had increased dramatically to include 21,075 temporary non-resident workers. By  
 16 2000, there were 34,741 temporary non-resident workers (more than 50% of the total CNMI population).  
 17 As of 2010, the number of temporary non-resident workers had declined to 18,439. The primary driver of  
 18 population increases from 1980 to 2000 was temporary non-resident workers and they were also the  
 19 primary driver of population decreases from 2000 to 2010.

1 **3.2.2 Demographics**

2 Table 3.2-2 shows race and ethnicity in the CNMI in 2000 and 2010. In both 2000 and 2010 the vast  
 3 majority of the CNMI population was Asian, Native Hawaiian, or Other Pacific Islander (88% in 2000  
 4 and 85% in 2010). From 2000 to 2010, the Asian population declined from 38,616 to 26,908 (by 30%),  
 5 resulting in the Asian proportion falling from 56% to 50%. The cause of the reduction in the number of  
 6 Asians was mainly due to the decline in the number of Chinese from 15,314 in 2000 to 3,925 in 2010 (a  
 7 74% decrease). The decline in the number of Chinese was largely due to the contraction in the garment  
 8 manufacturing industry, which employed primarily Chinese workers.

9 As of 2010, Filipinos and Pacific Islanders made up the same percentage of the CNMI population; there  
 10 were 19,017 Filipinos (35% of the population) and 18,800 Pacific Islanders (35% of the population).  
 11 Pacific Islanders were primarily Chamorro (12,902, 24% of the population) and Carolinian (2,461, 5% of  
 12 the population). In 2010, 2% of the CNMI population was White and 13% reported to the Census that  
 13 they were an Other Ethnic Origin or Race.

**Table 3.2-2. CNMI Race and Ethnicity, 2000 and 2010**

	2000		2010	
	Number	%	Number	%
Total Population	69,221	100%	53,883	100%
Asian	38,616	56%	26,908	50%
<i>Bangladeshi</i>	873	1%	501	1%
<i>Chinese</i>	15,314	22%	3,925	7%
<i>Filipino</i>	18,141	26%	19,017	35%
<i>Japanese</i>	952	1%	795	1%
<i>Korean</i>	2,021	3%	2,253	4%
<i>Nepalese</i>	300	0%	227	0%
<i>Other Asian</i>	1,015	1%	190	0%
Native Hawaiian and Other Pacific Islander	22,006	32%	18,800	35%
<i>Carolinian</i>	2,652	4%	2,461	5%
<i>Chamorro</i>	14,754	21%	12,902	24%
<i>Chuukese</i>	1,394	2%	1,242	2%
<i>Kosraean</i>	56	0%	37	0%
<i>Marshallese</i>	112	0%	68	0%
<i>Palauan</i>	1,685	2%	1,169	2%
<i>Pohnpeian</i>	640	1%	425	1%
<i>Yapese</i>	204	0%	228	0%
<i>Other Native Hawaiian and Other Pacific Islander</i>	509	1%	268	0%
White	1,274	2%	1,117	2%
Black or African American	43	0%	55	0%
Other Ethnic Origin or Race	7,282	11%	7,003	13%

Sources: U.S. Census Bureau 2000, 2010a.

14

1 Table 3.2-3 shows race and ethnicity by municipality in 2010. Compared to the CNMI overall (Table  
 2 3.2-3), Tinian had a lower proportion of Asians (47%) and a higher proportion of Pacific Islanders (39%).  
 3 Most of the Asians on Tinian were Filipino (950 of 1,463); Filipinos made up 30% of the population of  
 4 Tinian. Most of the Pacific Islanders on Tinian were Chamorro (1,183 of 1,222); Chamorro made up 38%  
 5 of the population of Tinian.

**Table 3.2-3. Race and Ethnicity by Municipality, 2010**

	<i>Saipan</i>		<i>Tinian</i>		<i>Rota</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Total	48,220	100%	3,136	100%	2,527	100%
One Ethnic Origin or Race	41,993	87%	2,762	88%	2,296	91%
Asian	24,562	51%	1,463	47%	883	35%
<i>Bangladeshi</i>	382	1%	55	2%	64	3%
<i>Chinese (except Taiwanese)</i>	3,419	7%	237	8%	3	0%
<i>Filipino</i>	17,285	36%	950	30%	782	31%
<i>Japanese</i>	738	2%	37	1%	20	1%
<i>Korean</i>	2,202	5%	42	1%	9	0%
<i>Nepalese</i>	129	0%	97	3%	1	0%
<i>Thai</i>	256	1%	9	0%	1	0%
<i>Other Asian</i>	151	0%	36	1%	3	0%
Native Hawaiian and Other Pacific Islander	16,210	34%	1,222	39%	1,368	54%
<i>Carolinian</i>	2,446	5%	10	0%	5	0%
<i>Chamorro</i>	10,411	22%	1,183	38%	1,308	52%
<i>Chuukese</i>	1,225	3%	7	0%	10	0%
<i>Kosraean</i>	36	0%	1	0%	0	0%
<i>Marshallese</i>	67	0%	0	0%	1	0%
<i>Palauan</i>	1,128	2%	12	0%	29	1%
<i>Pohnpeian</i>	411	1%	2	0%	12	0%
<i>Yapese</i>	219	0%	6	0%	3	0%
<i>Other Native Hawaiian and Other Pacific Islander</i>	267	1%	1	0%	0	0%
White	1,021	2%	57	2%	39	2%
Black or African American	45	0%	6	0%	4	0%
Hispanic or Latino	46	0%	6	0%	2	0%
Other Ethnic Origin or Race	109	0%	8	0%	0	0%
Two or more Ethnic Origins or Races	6,227	13%	374	12%	231	9%

6 Source: U.S. Census Bureau 2010a.

1 Table 3.2-4 shows prominent places of birth for those that were counted in the Census of the CNMI but  
 2 were born outside the CNMI in 2010. Due to the high number of non-resident temporary workers in the  
 3 CNMI, more than half of those counted in the Census of the CNMI were born outside of the CNMI. Of  
 4 those born outside of the CNMI, most (53%) were born in the Philippines. Because the population of  
 5 Saipan makes up such a large proportion of total CNMI population, places of birth outside the CNMI for  
 6 Saipan are very similar to the CNMI overall. Places of birth for those born outside the CNMI, for Tinian,  
 7 were also similar to the CNMI overall. Compared to the CNMI overall, Rota had a lower proportion of its  
 8 population born outside of the CNMI (43%), with most who were born outside the CNMI, from the  
 9 Philippines (62%) or Guam (18%).

**Table 3.2-4. Prominent Places of Birth for Those Born Outside the CNMI, 2010**

	CNMI		Saipan		Tinian		Rota	
	Number	% <sup>1</sup>	Number	% <sup>1</sup>	Number	% <sup>1</sup>	Number	% <sup>1</sup>
Total Born Outside the CNMI	27,284	50.6%	24,655	51.1%	1,539	49%	1,090	43%
Philippines	14,596	53%	13,092	53%	828	54%	676	62%
China	3,413	13%	3,186	13%	222	14%	5	0%
Korea	1,894	7%	1,840	7%	46	3%	8	1%
United States	1,641	6%	1,493	6%	87	6%	61	6%
Federated States of Micronesia	1,532	6%	1,470	6%	33	2%	29	3%
Other Asia	1,171	4%	928	4%	176	11%	67	6%
Guam	1,170	4%	887	4%	85	6%	198	18%
Palau	775	3%	749	3%	11	1%	15	1%
Japan	726	3%	664	3%	39	3%	23	2%

10 Legend: CNMI = Commonwealth of the Northern Mariana Islands  
 11 Note: <sup>1</sup>Percentages for Total Born Outside the CNMI are percentages of total population. Percentages for each place of  
 12 birth is the percentage of the Total Born Outside the CNMI.  
 13 Source: U.S. Census Bureau 2010a.

14 Table 3.2-5 shows gender in the CNMI and individual municipalities, in 2010. The CNMI overall, and all  
 15 municipalities in the CNMI, were more male than female. The CNMI overall, and Saipan, were 51% male  
 16 and 49% female. Tinian and Rota each had many more males than females, 53% of the populations were  
 17 male and 47% were female.

**Table 3.2-5. Gender for CNMI Overall and Municipalities, 2010**

	CNMI		Saipan		Tinian		Rota	
	Number	%	Number	%	Number	%	Number	%
Total	53,883	100%	48,220	100%	3,136	100%	2,527	100%
Male	27,746	51%	24,735	51%	1,674	53%	1,337	53%
Female	26,137	49%	23,485	49%	1,462	47%	1,190	47%

18 Legend: CNMI = Commonwealth of the Northern Mariana Islands  
 19 Source: U.S. Census Bureau 2010a.

1 Table 3.2-6 shows the age breakdowns and median ages for the CNMI overall and individual  
2 municipalities in 2010. The largest age groups for the CNMI overall and for Saipan all municipalities  
3 were between 35 and 49 years of age and between 5 and 17 years of age. Rota had the oldest population  
4 with a median age of 35 years old and the largest proportion of the population 50 years and older. Tinian  
5 had the largest proportion of its population between 22 and 49 years old (18% between 22 and 34, and  
6 33% between 35 and 49).

**Table 3.2-6. Age for CNMI Overall and Municipalities, 2010**

	<i>CNMI</i>		<i>Saipan</i>		<i>Tinian</i>		<i>Rota</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Total	53,883	100%	48,220	100%	3,136	100%	2,527	100%
Under 5 years	4,827	9%	4,349	9%	275	9%	203	8%
5 to 17 years	12,322	23%	11,036	23%	662	21%	624	25%
18 to 21 years	2,557	5%	2,349	5%	128	4%	80	3%
22 to 34 years	8,500	16%	7,572	16%	571	18%	357	14%
35 to 49 years	15,832	29%	14,045	29%	1,043	33%	744	29%
50 to 64 years	8,279	15%	7,453	15%	396	13%	430	17%
65 to 74 years	1,139	2%	1,037	2%	44	1%	58	2%
75 years and over	427	1%	379	1%	17	1%	31	1%
Median Age	33.4		33.3		33.8		35	
Median Age Male	34.4		34.2		35.4		37.2	
Median Age Female	32.5		32.5		32.3		32.6	

7 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands  
8 *Source:* U.S. Census Bureau 2010a.

9 Table 3.2-7 shows languages other than English that were spoken at home for the CNMI overall and  
10 individual municipalities in 2010. In the CNMI overall and in each municipality, over 80% of the  
11 population spoke a language other than English when they were at home. Prominent languages spoken at  
12 home were Chamorro and Philippine languages. Carolinian was spoken prominently on Saipan but not on  
13 Tinian or Rota. Asian languages (Chinese/Korean/Others) were spoken prominently on Saipan and  
14 Tinian, but not as prominently on Rota.

**Table 3.2-7. Language Spoken at Home, 2010**

	<i>CNMI</i>	<i>Saipan</i>	<i>Tinian</i>	<i>Rota</i>
Population 5 Years and Older	49,506	43,871	2,861	2,324
% Language other than English	82.2%	82.9%	82.8%	85.4%
Language other than English	40,702	36,349	2,368	1,985
Pacific Island languages	32,875	29,116	1,887	1,872
<i>Chamorro</i>	11,819	9,668	1,040	1,111
<i>Carolinian</i>	2,466	2,453	9	4
<i>Philippine Languages</i>	16,100	14,558	823	719
<i>Other Pacific Island Languages</i>	2,490	2,437	15	38
Asian Languages	6,897	6,539	322	36
<i>Chinese</i>	3,316	3,098	215	3
<i>Korean</i>	2,295	2,235	52	8
<i>Other Asian Languages</i>	1,286	1,206	55	25
Other Non-English Languages	930	694	159	77

15 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands  
16 *Source:* U.S. Census Bureau 2010a.

1 3.2.2.1 Educational Attainment

2 Table 3.2-8 shows educational attainment in the U.S., the CNMI overall, and CNMI municipalities in  
 3 2010. As of 2010, compared to the U.S., the CNMI overall had a lower level of educational attainment; a  
 4 lower proportion of the CNMI population had attended some college or had a bachelor’s degree or post-  
 5 graduate degree. Municipalities within the CNMI had similar levels of educational attainment as the  
 6 CNMI overall; Rota had the highest percentage that had, at minimum, graduated high school, while  
 7 Saipan had the lowest percentage.

**Table 3.2-8. Educational Attainment, 2010**

	<i>U.S.</i>	<i>CNMI</i>	<i>Saipan</i>	<i>Tinian</i>	<i>Rota</i>
Population 25 years and over	199,726,659	32,602	29,054	1,984	1,564
Less than 9th grade	6.2%	7.8%	8.0%	5.8%	7.9%
9th to 12th grade, no diploma	8.7%	9.8%	9.8%	11.6%	7.0%
High school graduate (includes equivalency)	29.0%	37.0%	36.8%	37.0%	40.5%
Some college or associate's degree	28.1%	25.2%	24.9%	27.8%	28.3%
Bachelor's degree	17.6%	16.5%	16.7%	15.4%	13.9%
Graduate or professional degree	10.3%	3.7%	3.8%	2.3%	2.5%

8 *Legend:* U.S. = United States; CNMI = Commonwealth of the Northern Mariana Islands  
 9 *Source:* U.S. Census Bureau 2010a, 2010b.

10 3.2.2.2 Household Characteristics

11 Table 3.2-9 shows household characteristics for the CNMI overall and CNMI municipalities for 2010. In  
 12 2010, about two-thirds of households in the CNMI were family households and about one-third of  
 13 households had children living in them. On average, CNMI households had 3.26 people and a median  
 14 annual income of \$19,958. Of the municipalities in the CNMI, Tinian had the fewest persons per  
 15 household (3.21) and the highest median household income (\$24,470), while Saipan had the highest  
 16 number of persons per household (3.27) and the lowest median household income (\$19,607).

**Table 3.2-9. Household Characteristics, 2010**

	<i>CNMI</i>	<i>Saipan</i>	<i>Tinian</i>	<i>Rota</i>
Total households	16,035	14,406	874	755
% Family households	66.8%	66.9%	65.6%	67.3%
% Households with Children	36.1%	36.2%	34.8%	34.6%
Average household size	3.26	3.27	3.21	3.24
Median household Income	\$19,958	\$19,607	\$24,470	\$23,125

17 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands  
 18 *Source:* U.S. Census Bureau 2010a.

19 **3.3 ECONOMIC CONDITIONS**

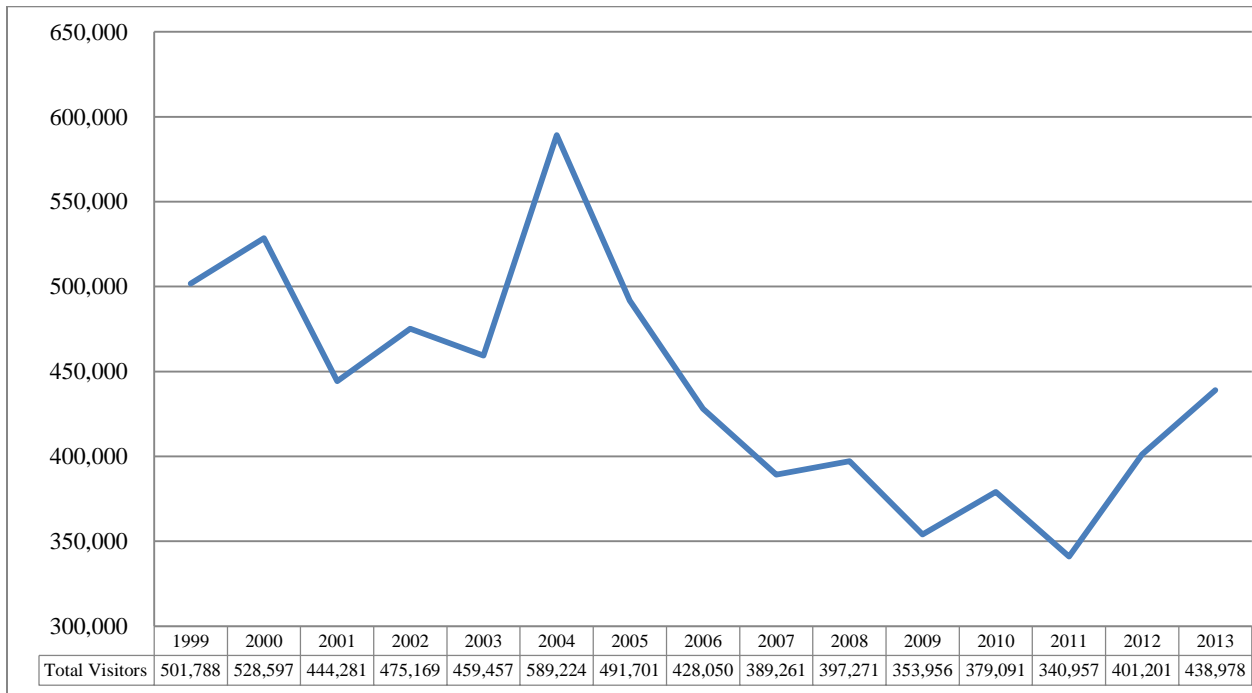
20 The economic conditions section presents data from numerous sources on employment and income, gross  
 21 domestic product, government finances, housing, tourism, agriculture, fishing and aquaculture, minerals,  
 22 air and seaports, and power utility rates. The most recent available data and relevant trends are presented  
 23 and discussed.



1 **3.3.1 Tourism**

2 3.3.1.1 Commonwealth of the Northern Mariana Islands Overall

3 Figure 3.3-1 shows that the number of visitors to the CNMI declined from a peak of 589,224 in 2004 to a  
 4 low of 340,957 in 2011. The total number of visitors to the CNMI over the 2004 to 2011 period has  
 5 experienced decreases for a variety of reasons, including, but not limited to, the exit of Japan Airlines  
 6 from the CNMI market; the global economic crisis; the March 2011 earthquake, tsunami, and failure of a  
 7 nuclear power plant in Japan; and confusion and anticipated changes to CNMI visa systems (Marianas  
 8 Visitors Authority 2012). However, in 2012 the first meaningful signs of improvement were seen with a  
 9 15% increase (from 340,957 to 401,082) in the number of visitors over the 2011 low. The CNMI tourism  
 10 industry built on that growth in 2013; from 2012 to 2013, the number of visitors increased by 9.4%.



11 Sources: CNMI Department of Commerce 2006, 2008, 2012b, 2013; Marianas Visitors Authority 2013.

12 **Figure 3.3-1. Number of Visitors to the CNMI from 1999 to 2013**

13  
 14 Table 3.3-1 shows the total number of visitors by place of origin and, for each place of origin, a  
 15 percentage breakdown of the country's contribution to the number of total CNMI visitors, from 2006 to  
 16 2013. As of 2013, there were more visitors from Japan than any other country. However, the trend in  
 17 Japanese visits is clearly down; in 2006 there were 269,780 visitors from Japan (63% of all visitors) and  
 18 in 2013 there were 141,747 (32% of all visitors). In contrast there were meaningful increases in visitors  
 19 from Korea, China, and Russia – in 2006 these three countries contributed less than 30% of visitors but  
 20 by 2013 that number had increased to 62%.

**Table 3.3-1. Visitors by Country of Origin and County % of Total Visitors, 2006 to 2013**

	2006	2007	2008	2009	2010	2011	2012	2013
Japan	269,780	200,109	213,299	191,111	185,032	142,946	153,259	141,747
Japan %	63%	51%	54%	54%	49%	42%	38%	32%
Korea	82,891	108,321	111,116	89,132	115,811	107,503	129,394	139,958
Korea %	19%	28%	28%	25%	31%	32%	32%	32%
U.S. & Guam	24,579	27,849	31,064	29,259	27,126	23,980	21,994	22,085
U.S. & Guam %	6%	7%	8%	8%	7%	7%	5%	5%
China/HK	38,313	40,331	26,878	29,814	41,992	56,191	86,578	117,242
China/HK %	9%	10%	7%	8%	11%	16%	22%	27%
Philippines	4,320	5,025	1,780	1,591	703	544	528	1,222
Philippines %	1%	1%	0%	0%	0%	0%	0%	0%
Russia	1,675	3,671	6,814	6,222	4,391	5,276	6,282	12,563
Russia %	0%	1%	2%	2%	1%	2%	2%	3%
Taiwan	314	445	284	418	208	114	114	119
Taiwan %	0%	0%	0%	0%	0%	0%	0%	0%
Other Areas	6,178	3,510	6,036	6,409	3,828	4,403	3,052	4,042
Other Areas %	1%	1%	2%	2%	1%	1%	1%	1%
<b>Total</b>	<b>428,050</b>	<b>389,261</b>	<b>397,271</b>	<b>353,956</b>	<b>379,091</b>	<b>340,957</b>	<b>401,201</b>	<b>438,978</b>

Sources: CNMI Department of Commerce 2006, 2008, 2012b, 2013; Marianas Visitors Authority 2013.

In 2012 tourism expenditures accounted for an influx of nearly \$300 million dollars to the CNMI economy. Table 3.3-2 provides information on the number of visitors, the average length of stay, per night on-island expenditures for each country of origin, and total expenditures (visitors x length of visit x per night expenditures). Japanese visitors spent the most money in the CNMI; they typically stayed 3.3 nights and spent \$234.93 each night, totaling almost \$119 million spent. Russian visitors spent the most number of nights (12.4) and spent the most money per night (\$340.47); however, only 6,282 Russians visited in 2012, resulting in total expenditures of \$26.5 million. Visitors from Korea, China, Guam, and the United States all typically stayed 4 nights. Of that group, Korean tourists spent the least amount of money per night stayed in the CNMI (\$145.38) and those visitors from China spent the most (\$174.18).

**Table 3.3-2. Total Expenditures by Country of Origin, 2012**

Country of Origin	Number of Visitors	Length of Visit (nights)	On-island Expenditures per Night <sup>1,2</sup>	Expenditures by Country of Origin
Japan	153,259	3.3	\$234.93	\$118,815,744
Korea	129,394	4	\$145.38	\$75,244,071
China	86,578	4	\$174.18	\$60,321,109
Russia	6,282	12.4	\$340.47	\$26,521,459
Guam & U.S.	21,994	4	\$166.76	\$14,670,712
Other <sup>2</sup>	3,694	4	\$212.37	\$3,138,001
<b>TOTAL:</b>	<b>401,201</b>			<b>\$298,711,095</b>

Notes: <sup>1</sup>Excludes expenditures for hotel stays.

<sup>2</sup>Fiscal Year 2011 per night expenditures from Marianas Visitors Bureau 2012, escalated to US\$ (2012) using the rate of change in implied gross domestic product deflator from 2011 to 2012 of 2.25% (U.S. Bureau of Economic Analysis 2013).

<sup>3</sup>For "other" countries of origin, length of visit and per night expenditures are estimated based on median (for length of visit) average (for per night expenditures) of countries of origin for which data was available (Japan, Korea, etc.).

Sources: CNMI Department of Commerce 2013; Marianas Visitors Authority 2012; U.S. Bureau of Economic Analysis 2013.

The majority of visitors to the CNMI in Fiscal Year 2011 were there for pleasure/vacation. The prominent reason why visitors chose CNMI as a destination was the tropical climate and access to the sea and

1 beaches. Visitors from Japan, China, and Korea also cited the CNMI’s “nature activities” as a reason for  
2 visiting. Russian tourists preferred the CNMI because of its fishing opportunities, while visitors from  
3 Guam and the U.S. visited the CNMI for business trips and to see friends and family. While in the CNMI,  
4 visitors typically participated in marine sporting activities including snorkeling, scuba diving, and fishing,  
5 and other activities such as visits to the beach, shopping, and tours such as the tour of Managaha islet, off  
6 the west coast of Saipan (Marianas Visitors Authority 2012).

7 3.3.1.2 Tinian

8 Table 3.3-3 shows the number of visitors to the Tinian Dynasty Hotel and Casino from 2004 to 2013. The  
9 data are indicative of the number of total visitors to Tinian because, according to Tinian Dynasty  
10 Management, over 90% of all Tinian visitors stay at the Tinian Dynasty (Tinian Dynasty, personal  
11 communication, February 2014). Over the 2004 to 2013 period, the number of visitors generally declined  
12 from 2004 to 2010 and, then, generally increased from 2010 to 2013. Also over the period, the percentage  
13 of Tinian Dynasty Chinese visitors steadily increased from 55% in 2004 to 82% in 2013, while the  
14 percentage of Japanese visitors declined from 24% to 3%.

**Table 3.3-3 Tinian Dynasty Visitors from Off-Island and Visitor Origin, 2004 to 2013**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Visitors	49,744	52,560	53,394	45,573	36,500	33,193	31,136	36,553	57,674	54,814
% Change		6%	2%	-15%	-20%	-9%	-6%	17%	58%	-5%
Average Daily Visitors	341	360	366	312	250	227	213	250	395	375
China %	55%	58%	65%	63%	56%	64%	66%	77%	83%	82%
Japan %	24%	22%	20%	18%	24%	17%	11%	9%	5%	3%
Korea %	10%	7%	5%	8%	10%	9%	9%	10%	9%	10%
Other %	11%	13%	10%	11%	11%	10%	14%	4%	4%	4%

15 Note: Total visitor data provided by the Tinian Dynasty along with information on average length of stay. Average length  
16 of stay used for each year is 2.5 nights.

17 Source: Tinian Dynasty, personal communication, January 2014.

18 Figure 3.3-2 shows natural and scenic attractions on Tinian. These locations include beaches and parks,  
19 historic and cultural attractions, scenic points, and diving spots. Many of these attractions are in the  
20 Military Lease Area and others are south of the Military Lease Area.



Figure 3.3-2  
 Tinian Natural and Scenic Attractions

1 3.3.1.3 Pagan

2 Scientific research draws some visitors to Pagan, as does camping and hunting activities; however, there  
3 has been little economic activity related to tourism on Pagan since the 1981 evacuation.

4 **3.3.2 Gross Domestic Product**

5 3.3.2.1 Nominal Gross Domestic Product

6 Table 3.3-4 shows CNMI gross domestic product from 2002 to 2012; gross domestic product is a measure  
7 of overall economic activity in a region. Nominal gross domestic product means that the numbers are in  
8 current year dollars and have not been adjusted for inflation. The gross domestic product of the CNMI  
9 declined every year from 2002 to 2011, decreasing from \$1.22 billion in 2002 to \$651 million in 2011 (a  
10 46% decline). From 2011 to 2012, the gross domestic product of the CNMI increased for the first time  
11 since 2002, to \$701 million, up 7.7% from 2011 levels.

**Table 3.3-4. CNMI Nominal Gross Domestic Product, 2002 to 2012 (Millions of \$)**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gross Domestic Product	\$1,221	\$1,177	\$1,151	\$1,001	\$918	\$867	\$846	\$717	\$716	\$651	\$701
% Change from Previous Year		-3.6%	-2.2%	-13.0%	-8.3%	-5.6%	-2.4%	-15.2%	-0%	-9.1%	7.7%

12 *Source:* U.S. Bureau of Economic Analysis 2012, 2013.

13 3.3.2.2 Real Gross Domestic Product

14 Table 3.3-5 shows CNMI real gross domestic product, which is nominal gross domestic product adjusted  
15 for changes in prices, and the implied gross domestic product deflator, which is an index of price change  
16 for all goods and services in the economy. Because there were economic declines as well as increases in  
17 prices, real gross domestic product had more severe declines than nominal gross domestic product (Table  
18 3.3-5). For instance, because there was a large increase in prices from 2007 to 2008 (Table 3.3-5 shows  
19 the implied gross domestic product deflator increased from 102.1 to 114.3), the percentage decline in real  
20 gross domestic product from 2007 to 2008 was much larger than the decline in nominal gross domestic  
21 product (-12.8% as shown in Table 3.3-5 compared to -2.4% as shown in Table 3.3-4).

**Table 3.3-5. CNMI Real Gross Domestic Product and Implied Gross Domestic Product Price Deflator (Millions of 2005 \$)**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Real Gross Domestic Product	\$1,188	\$1,193	\$1,161	\$1,001	\$920	\$849	\$740	\$598	\$604	\$563	\$593
% Change from Previous Year		0.4%	-2.7%	-13.8%	-8.1%	-7.7%	-12.8%	-19.2%	1.0%	-6.8%	5.3%
Implied Gross Domestic Product Deflator (2005 = 100)	102.8	98.7	99.1	100.0	99.8	102.1	114.3	119.9	118.5	115.6	118.2

22 *Note:* Implied gross domestic product deflator calculated by dividing nominal gross domestic product figures in Table 3.3-5  
23 by real gross domestic product figures in Table 3.3-6.

24 *Source:* U.S. Bureau of Economic Analysis 2012, 2013.

1 **3.3.3 Employment and Income**

2 3.3.3.1 Employment

3 Table 3.3-6 provides statistics on labor force, employment, and unemployment for the CNMI overall and  
4 CNMI municipalities. In 2010, the labor force of the CNMI included 27,949 people, 24,826 of whom  
5 were employed, and the unemployment rate was 11.2%. The unemployment rate on Saipan (11.7%),  
6 where the bulk of the CNMI labor force is located, was far greater than that of Tinian (6.7%) and Rota  
7 (7.6%).

**Table 3.3-6. Labor Force, Employment, and Unemployment, 2010**

	<i>CNMI</i>	<i>Saipan</i>	<i>Tinian</i>	<i>Rota</i>
Population 16 Years and Over	38,679	34,581	2,311	1,787
Not in Labor Force	10,711	9,855	433	423
Labor Force Participation Rate <sup>1</sup>	72%	71%	81%	76%
In Civilian Labor Force	27,949	24,709	1,878	1,362
Employed	24,826	21,816	1,752	1,258
Unemployed	3,123	2,893	126	104
Unemployment Rate	11.2%	11.7%	6.7%	7.6%

8 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

9 *Source:* U.S. Census Bureau 2010a.

10 Table 3.3-7 shows employment by industry for the CNMI overall and for Tinian in 2010. In 2010, the  
11 industry with the highest number employed in the CNMI overall and on Tinian was the arts,  
12 entertainment, recreation, and the accommodation and food services industry; this tourism-related  
13 industry employed 672 (38% of employment) people on Tinian and 5,519 people in the CNMI overall  
14 (22% of employment).

**Table 3.3-7. Employment by Industry, CNMI and Tinian 2010**

<i>Industry</i>	<i>CNMI Overall</i>	<i>CNMI %</i>	<i>Tinian</i>	<i>Tinian %</i>
Arts, entertainment, and recreation, and accommodation and food services	5,519	22%	672	38%
Educational services, health care, and social assistance	3,085	12%	178	10%
Retail trade	2,645	11%	76	4%
Other services, except public administration	2,553	10%	131	7%
Public administration	2,414	10%	320	18%
Professional, scientific, and management, and administrative and waste management services	1,974	8%	53	3%
Construction	1,786	7%	79	5%
Transportation and warehousing, and utilities	1,429	6%	127	7%
Finance and insurance, and real estate and rental and leasing	1,064	4%	31	2%
Wholesale trade	700	3%	10	1%
Manufacturing	689	3%	5	0%
Information	496	2%	29	2%
Agriculture, forestry, fishing and hunting, and mining	472	2%	41	2%
<b>Totals</b>	<b>24,826</b>	<b>100%</b>	<b>1,752</b>	<b>100%</b>

15 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

16 *Source:* U.S. Census Bureau 2010a.

17 More recent employment information indicates that, as of 2011, there were 21,399 employees in the  
18 CNMI including 883 on Tinian (CNMI Department of Commerce 2012b).

1 3.3.3.2 Income

2 In 2010, 52% of CNMI residents and 44% of Tinian residents had incomes below the poverty line (U.S.  
 3 Census Bureau 2010a). Table 3.3-8 shows average and median hourly wages and annual pay, by  
 4 occupation, in the CNMI in 2011. The average hourly wage in the CNMI was \$9.67 and the median  
 5 hourly wage was \$6.00 (which is lower than the U.S. minimum wage of \$7.25/hour). Average annual pay  
 6 in the CNMI was \$20,114 per year and the median annual pay was \$12,480. The highest paying  
 7 occupations in the CNMI were Legal occupations (average annual pay of \$59,467) and Healthcare  
 8 occupations (average annual pay of \$48,693). The lowest paying occupation was the Food Preparation  
 9 and Service Related occupations (average annual pay of \$11,606), and several occupations, including  
 10 Food Preparation and Service Related occupations, had low levels of median annual pay at \$10,504 per  
 11 year.

**Table 3.3-8. Income by Occupation, CNMI, 2011**

<i>Occupation</i>	<i>Hourly Wage</i>		<i>Annual Pay</i>	
	<i>Average</i>	<i>Median</i>	<i>Average</i>	<i>Median</i>
<b>Weighted Average<sup>1</sup></b>	<b>\$9.67</b>	<b>\$6.00</b>	<b>\$20,114</b>	<b>\$12,480</b>
Management	\$15.55	\$13.07	\$32,344	\$27,186
Business and Financial Operations	\$11.56	\$9.30	\$24,045	\$19,344
Computer and Mathematical	\$16.11	\$14.18	\$33,509	\$29,494
Architecture and Engineering	\$14.48	\$10.13	\$30,118	\$21,070
Life, Physics, and Social Science	\$12.58	\$10.50	\$26,166	\$21,840
Community and Social Services	\$9.12	\$8.40	\$18,970	\$17,472
Legal	\$28.59	\$27.31	\$59,467	\$56,805
Education, Training, and Library	\$16.18	\$16.43	\$33,654	\$34,174
Arts, Design, Entertainment, Sports, and Media	\$8.36	\$6.09	\$17,389	\$12,667
Healthcare (Practitioners and Technical)	\$23.41	\$16.68	\$48,693	\$34,694
Healthcare Support	\$7.52	\$5.94	\$15,642	\$12,355
Protective Service	\$8.27	\$7.56	\$17,202	\$15,725
Food Preparation and Serving Related	\$5.58	\$5.05	\$11,606	\$10,504
Building and Grounds Cleaning and Maintenance	\$5.79	\$5.05	\$12,043	\$10,504
Personal Care and Service	\$6.42	\$5.09	\$13,354	\$10,587
Sales and Related	\$5.80	\$5.05	\$12,064	\$10,504
Office and Administrative Support	\$8.45	\$5.82	\$17,576	\$12,106
Farming, Fishing, and Forestry	\$6.58	\$5.05	\$13,686	\$10,504
Construction and Extraction	\$6.21	\$5.05	\$12,917	\$10,504
Installation, Maintenance, and Repair	\$7.38	\$5.67	\$15,350	\$11,794
Production	\$7.27	\$5.15	\$15,122	\$10,712
Transportation and Material Moving	\$7.11	\$5.25	\$14,789	\$10,920

Note: <sup>1</sup>Weighting based on number of employees in each occupation.

Source: CNMI Department of Commerce 2012b.

12

1 Table 3.3-9 shows total compensation for all workers in the CNMI from 2002 to 2012. Over the 2002 to  
2 2012 period, total compensation was greatest in the year 2004 (\$752 million), the year prior to the  
3 beginning of the reduction of the garment manufacturing activities in the CNMI. After 2004, total  
4 compensation declined every year up to 2009, slightly increased in 2010, then continued downward to a  
5 new low of \$482 million in 2012 (\$270 million less than in 2004).

**Table 3.3-9. Total Compensation, CNMI, 2002 to 2012 (Millions of \$)**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Compensation of Employees	\$699	\$702	\$752	\$659	\$598	\$569	\$518	\$514	\$525	\$508	\$482
% Change from Previous Year		0.4%	7.1%	-12.4%	-9.3%	-4.8%	-9.0%	-0.08%	2.1%	-3.2%	-5.1%

6 *Source:* U.S. Bureau of Economic Analysis 2012, 2013.

### 7 3.3.4 Government Finances

8 Table 3.3-10 shows CNMI government revenues and the sources of those revenues, from 2002 to 2009.  
9 CNMI government revenues increased from 2002 to 2004 primarily due to increases in business gross  
10 receipts tax revenues, wage and salary tax revenues, excise tax revenues, and fees and charges. After  
11 2004, CNMI government revenues began to decline, and from 2004 to 2009 government revenues fell by  
12 almost 30%. From 2004 to 2009, garment certification fee revenue declined from \$30.6 million to \$0.1  
13 million – a decline of nearly 100%. Business gross receipts tax revenue also declined substantially over  
14 the 2002 to 2009 period falling from \$54.5 million to \$44.8 million (an 18% decline). As of 2009, the  
15 major revenue sources for the CNMI government were the business gross receipts tax (\$44.8 million),  
16 fees and charges (\$30 million), and the wage and salary tax (\$24.4 million). Early data from the first two  
17 quarters of 2010 indicate that government revenues increased from 2009 to 2010 (CNMI Department of  
18 Commerce 2013).

**Table 3.3-10. CNMI Government Revenues by Source, 2002 to 2009 (Millions of \$)**

	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total</b>	<b>\$187.9</b>	<b>\$209.8</b>	<b>\$217.9</b>	<b>\$210.3</b>	<b>\$192.0</b>	<b>\$163.0</b>	<b>\$162.8</b>	<b>\$154.7</b>
Business Gross Receipt Tax	\$48.6	\$50.6	\$54.5	\$58.3	\$54.1	\$49.0	\$51.8	\$44.8
Wage & Salary Tax	\$31.2	\$31.1	\$35.0	\$32.7	\$28.6	\$26.2	\$25.1	\$24.4
Northern Marianas Territorial Income Tax Personal/Corp. Income	\$12.8	\$17.0	\$11.2	\$10.0	\$15.1	\$8.3	\$12.9	\$15.5
Garment Certification Fee	\$30.9	\$29.3	\$30.6	\$24.1	\$18.1	\$11.4	\$3.6	\$0.1
Excise Tax	\$18.7	\$22.3	\$24.4	\$23.9	\$24.4	\$20.6	\$19.7	\$18.0
Hotel Occupancy Tax	\$4.9	\$5.4	\$6.0	\$6.5	\$5.5	\$4.9	\$5.6	\$5.1
Fuel/Container/Bar tax	\$6.8	\$8.2	\$9.9	\$10.2	\$7.3	\$6.8	\$7.3	\$6.4
Fees, Charges, and Other Revenues	\$34.2	\$45.8	\$46.4	\$44.6	\$33.8	\$39.3	\$33.2	\$30.0
Transfers From Other Funds	-	-	-	-	-	-	\$7.3	\$12.1
Revenue Transfer to Other Funds	-	-	-	-	-	-\$3.5	-\$3.6	-\$1.7

19 *Source:* CNMI Department of Commerce 2012c.



1 Table 3.3-11 shows CNMI government expenditures from 2002 to 2009. From 2002 to 2005, government  
2 expenditures increased, but declined from 2005 to 2009. The largest decline in government expenditures  
3 was from 2006 to 2007 (a decline of 16.8%). Except for 2004 and 2007, every year from 2002 to 2009  
4 government expenditures exceeded government revenues. Early data from the first two quarters of 2010  
5 indicate that government expenditures were little changed from 2009 to 2010 (CNMI Department of  
6 Commerce 2013).

**Table 3.3-11. CNMI Government Expenditures, 2002 to 2009 (Millions of \$)**

	2002	2003	2004	2005	2006	2007	2008	2009
Government Expenditures	\$210.6	\$213.9	\$215.4	\$224.1	\$195.6	\$162.7	\$172.2	\$168.1
% Change from previous Year		1.6%	0.7%	4.0%	-12.7%	-16.8%	5.9%	-2.4%

7 *Source:* CNMI Department of Commerce 2012c.

### 8 3.3.5 Housing

#### 9 3.3.5.1 Housing Characteristics

10 Table 3.3-12 shows housing characteristics for the CNMI and individual municipalities in 2010. In 2010,  
11 there were 20,850 housing units in the CNMI, most of which were in Saipan (18,683). Vacancy rates for  
12 the CNMI and each municipality were above 20%, high compared to the U.S. average of 11.3% (U.S.  
13 Census Bureau 2010b). The most expensive housing units in the CNMI in terms of median gross rent and  
14 median value were on Saipan (\$328 and \$127,600 respectively). The least expensive rents in the CNMI  
15 were on Tinian (\$261), and Rota had the lowest median housing value (\$109,900).

**Table 3.3-12. Housing Characteristics, 2010**

	CNMI	Saipan	Tinian	Rota
Housing Units	20,850	18,683	1,118	1,049
Occupied	16,035	14,406	874	755
Vacant	4,815	4,277	244	294
<i>For rent</i>	2,629	2,383	101	145
<i>Rented, not occupied</i>	76	67	6	3
<i>For sale only</i>	46	41	1	4
<i>Sold, not occupied</i>	29	29	0	0
<i>For seasonal, recreational, or occasional use</i>	387	332	9	46
<i>For migrant workers</i>	33	24	4	5
<i>Other vacant</i>	1,615	1,401	123	91
Vacancy Rate	23%	23%	22%	28%
Median number of rooms	3.3	3.3	3.3	3.7
Average number of bedrooms	1.9	1.9	1.9	2.1
Median gross rent	\$324	\$328	\$261	\$297
Median value	\$123,800	\$127,600	\$121,200	\$109,900

16 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

17 *Source:* U.S. Census Bureau 2010a.

1 **3.3.6 Agriculture**

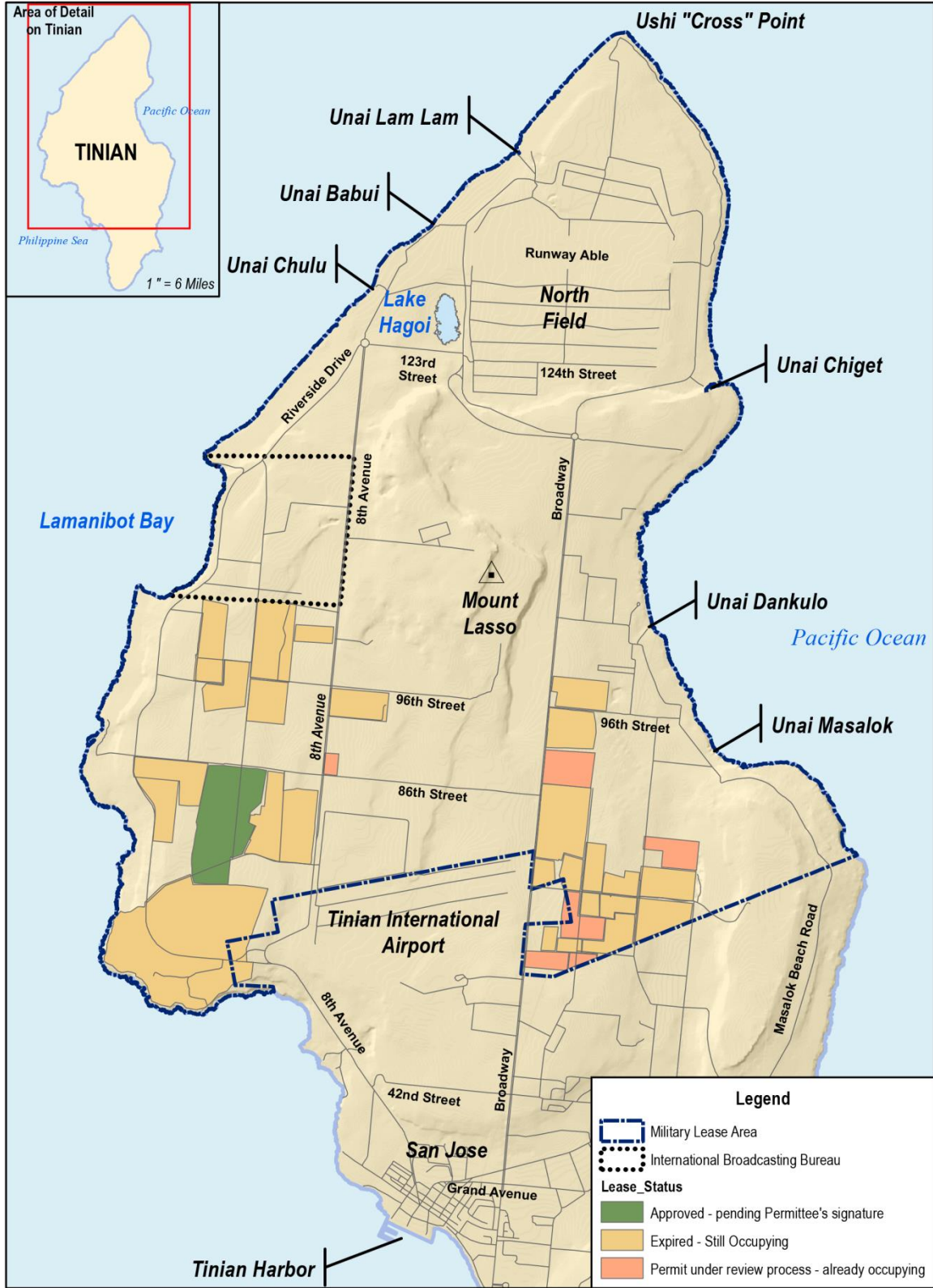
2 Agricultural activities take place on all of the populated islands in the CNMI. Data presented in this  
3 section from the 2007 Agricultural Census (U.S. Department of Agriculture 2009) relate to places with  
4 agricultural operations qualifying as farms according to the Census definition; this included all places  
5 from which \$1,000 or more of agricultural products were produced and sold during the 2007 calendar  
6 year. The 2007 Agricultural Census is the most recent that was conducted for the CNMI and the U.S.  
7 Department of Agriculture has not conducted and does not intend to publish a 2012 Agricultural Census  
8 (U.S. Department of Agriculture 2014).

9 On Tinian, in the Military Lease Area, only subsistence agricultural activities are permitted (CNMI  
10 Department of Public Lands, personal communication, February 2014) while agricultural activities south  
11 of the Military Lease Area may be for profit farms. Agriculture is considered a subsistence activity when  
12 it is mainly conducted for a person's or family's own use and needs and not primarily for commercial  
13 purposes (U.S. Census Bureau 2014). Figure 3.3-3 shows areas where subsistence agriculture, including  
14 subsistence cattle grazing, is permitted in the Military Lease Area.

15 **3.3.6.1 Grants**

16 The U.S. Department of Agriculture provided the CNMI with a total of \$17,212,094 in grant money via  
17 nine different grants in Fiscal Year 2011. The grants provided to the CNMI include:

- 18 • Specialty Crop Block Grant Program – to enhance the competitiveness of specialty crops, such as  
19 fruits, vegetables, horticulture, tree nuts, nuts, and nursery crops.
- 20 • Cooperative Agreements with States for Intrastate Meat and Poultry Inspection – designed for  
21 meat and poultry inspection programs in order to ensure a supply of safe, wholesome, and  
22 properly labeled products.
- 23 • Supplemental Nutrition Assistance Program – provides nutrition assistance to families who meet  
24 specific income guidelines.
- 25 • Special Supplemental Nutrition Program for Women, Infants, and Children/Women, Infants, and  
26 Children Grants to States – provides supplemental foods, health care referrals, and nutrition  
27 education for women who are pregnant, breastfeeding, or not breastfeeding but are postpartum  
28 and to infants and children up to age 5 who meet specific income guidelines.
- 29 • Cooperative Forestry Assistance – provides assistance to private landowners to help protect,  
30 improve, restore, and sustain private forests.
- 31 • Rural Business Enterprises Grants – provides assistance for rural projects that facilitate small and  
32 emerging rural businesses.
- 33 • Wildlife Habitat Incentive Program – provides money for private landowners who are interested  
34 in developing and/or improving wildlife habitat on private land.
- 35 • Agricultural Statistics Reports – provides statistical reports related to U.S. agriculture.



1 Table 3.3-13 provides information on the type of grants and associated amount of money. The largest  
 2 amount of grant money (\$11.9 million) came from the Supplemental Nutrition Assistance Program.  
 3 Grants that went directly to farm operators in the CNMI include the Specialty Crop Block Grant Program  
 4 and the Cooperative Agreements with States for Intrastate Meat and Poultry Inspection. Combined, those  
 5 two grants only made up \$86,530, or 0.5%, of the grant money provided by the U.S. Department of  
 6 Agriculture in Fiscal Year 2011 (Deloitte and Touche LLC 2013a).

**Table 3.3-13. U.S. Department of Agriculture Grants to the CNMI, Fiscal Year 2011**

<i>Grant Name</i>	<i>Value</i>
Specialty Crop Block Grant Program – Farm Bill	\$40,822
Cooperative Agreements with States for Intrastate Meat and Poultry Inspection	\$45,648
Supplemental Nutrition Assistance Program	\$11,889,287
Special Supplemental Nutrition Program for Women, Infants, and Children/Women, Infants, and Children Grants to States	\$5,040,627
Cooperative Forestry Assistance	\$118,747
Rural Business Enterprises Grants	\$73,150
Wildlife Habitat Incentive Program	\$1,769
Agricultural Statistics Reports	\$2,044
<b>TOTAL</b>	<b>\$17,212,094</b>

7 *Source:* Deloitte and Touche LLC 2013a.

8 3.3.6.2 Farms

9 Table 3.3-14 provides information on the number of farms, the amount of land in farms, and the average  
 10 size of farms in the CNMI overall and for individual municipalities in 2002 and 2007. In 2007, there were  
 11 a total of 256 farms in the CNMI, an increase of 42 farms from 2002. The largest number of farms in  
 12 2007 were on Saipan (128 farms), while Rota had 97 and Tinian had 31. The number of farms increased  
 13 between 2002 and 2007 on both Saipan (by 36) and Tinian (by 8), but decreased by two on Rota. The  
 14 average size of a farm in the CNMI in 2007 was 15.7 acres. The largest farms were located on Tinian,  
 15 where the average farm size was 66.8 acres, an increase of 37.6 acres from the average Tinian farm size in  
 16 2002. Average farm sizes on Rota and Saipan were 8 acres and 9.2 acres respectively. Although Saipan  
 17 had the largest number of farms, the large farm sizes on Tinian resulted in Tinian having the highest  
 18 number of acres dedicated to farming (2,071 acres), 899 acres more than Saipan and 1,301 acres more  
 19 than Rota.

**Table 3.3-14. Farms, Land in Farms, and Land Use by Municipality, 2002 and 2007**

	<i>CNMI</i>		<i>Saipan</i>		<i>Tinian</i>		<i>Rota</i>	
	<i>2002</i>	<i>2007</i>	<i>2002</i>	<i>2007</i>	<i>2002</i>	<i>2007</i>	<i>2002</i>	<i>2007</i>
Number of Farms	214	256	92	128	23	31	99	97
Land In Farms (acres)	2,353	4,013	802	1,172	672	2,071	897	770
Average Size of Farm (acres)	11	15.7	8.7	9.2	29.2	66.8	8.9	8

20 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

21 *Source:* U.S. Department of Agriculture 2009.

1 Table 3.3-15 provides information on the types of organizations that own farms in the CNMI and  
 2 individual municipalities for 2002 and 2007. In 2007, the majority of farms in the CNMI were owned by  
 3 individuals (232 of 256, or 91%); corporations owned 13 farms and partnerships owned 10 farms.  
 4 Between 2002 and 2007, the number of individually owned farms in the CNMI increased by 47. There  
 5 was growth in the number of individually owned farms on Saipan and Tinian, but a decrease on Rota.  
 6 Between 2002 and 2007, the number of farms owned by corporations decreased (19 to 13 in the CNMI  
 7 overall). Between 2002 and 2007, the number of farms owned by partnerships increased on Tinian, but  
 8 decreased on Rota. The number of farms owned by a partnership in the CNMI doubled from 5 to 10  
 9 between 2002 and 2007.

**Table 3.3-15. Type of Organization by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Total	214	256	92	128	23	31	99	97
Individual	185	232	74	115	16	23	95	94
Partnership	5	10	0	3	2	5	3	2
Corporation	19	13	13	10	5	2	1	1
Other	5	1	5	0	0	1	0	0

10 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

11 *Source:* U.S. Department of Agriculture 2009.

12 Of the 256 farms in the CNMI in 2007, 141 farms were operated by full owners (those who operate farms  
 13 only on land they own), 110 farms were operated by tenants (those who rent the land from others or work  
 14 land on shares for others), and 5 farms were operated by part owners (those who operate farms on land  
 15 they own and also on land they rent from others). Between 2002 and 2007, there was an increase only in  
 16 the number of farms operated by tenants; the number of full owners operating farms decreased by 13 and  
 17 the number of part owners operating farms decreased by 8.

18 Although the total amount of farms operated by full owners decreased in the CNMI between 2002 and  
 19 2007, the total amount of land in farms operated by full owners increased (from 950 acres to 1,080 acres).  
 20 The total amount of land in farms operated by tenants also increased (955 acres to 2,766 acres), but the  
 21 amount of land operated by part owners decreased (448 acres to 166 acres). From 2002 to 2007, the  
 22 amount of land in farms that were operated by full owners increased on Tinian and Saipan, but decreased  
 23 on Rota. As of 2007, there were no part owners of farm land on Tinian. Table 3.3-16 provides more  
 24 information on the number of farms and acreage operated by full owners, part owners, and tenants.

**Table 3.3-16. Farms, Land in Farms, and Tenure by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Total Farms	214	256	92	128	23	31	99	97
Full Owners (farms)	154	141	63	65	11	9	80	67
Total Land in Farms (acres)	950	1,080	286	505	102	139	562	437
Part Owners (farms)	13	5	3	2	2	0	8	3
Total Land in Farms (acres)	448	166	D	D	D	0	257	D
Tenants (farms)	47	110	26	61	10	22	11	27
Total Land in Farms (acres)	955	2,766	D	D	D	1,933	59	D

25 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

26 *Note:* "D" denotes data withheld to avoid disclosing data on individual farms.

27 *Source:* U.S. Department of Agriculture 2009.

1 Table 3.3-17 provides data on the number of farms on owned and rented land, and the associated acreages  
 2 for 2002 and 2007. Approximately 57% of the farms in the CNMI were farms on which the land was  
 3 owned, as opposed to farms on which the land was rented. However, the total amount of acreage rented  
 4 for farms in the CNMI was larger than the total amount of acreage for farms that were owned (2,865 acres  
 5 versus 1,148 acres, respectively). Rota is the only municipality that had more farms on owned land than  
 6 on land rented from others. Land rented from others on Tinian made up 67% of the CNMI total in 2007.  
 7 On Tinian in 2007, 22 of the 31 total farms operated on rented land.

**Table 3.3-17. Farms, Land in Farms and Type of Land Ownership by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Farms with owned land (number)	167	146	66	67	13	9	88	70
Land owned (acres)	1,075	1,148	309	518	107	139	659	492
Farms with land rented from others (number)	60	115	29	63	12	22	19	30
Land rented from others (acres)	1,278	2,865	493	654	565	1,933	221	278

8 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

9 *Source:* U.S. Department of Agriculture 2009.

10 Table 3.3-18 provides information on the labor status by municipalities for 2002 and 2007. The  
 11 operations of farms on the CNMI rely on both paid and unpaid labor; unpaid labor indicates that labor  
 12 was provided by family members. In 2007, the split between paid and unpaid labor was almost even,  
 13 approximately 55% of farms used unpaid labor, while 45% used paid labor. The amount of both paid and  
 14 unpaid labor increased between 2002 and 2007, although Rota experienced a decrease in the amount of  
 15 unpaid labor during that time.

**Table 3.3-18. Labor Status by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Farms with Unpaid Labor	194	217	81	108	16	29	97	80
Farms with Paid Labor	136	178	53	78	12	24	71	76

16 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

17 *Source:* U.S. Department of Agriculture 2009.

18 Table 3.3-19 provides information on the off-farm work of operators for the CNMI overall and for  
 19 municipalities for 2002 and 2007. The majority of CNMI operators (188 of 256, or 73%) worked both on  
 20 and off the farms during the year; only 68 operators worked solely on a farm (27%). Between 2002 and  
 21 2007, the number of operators in the CNMI working only on farms increased by 74% from 39 to 68.

**Table 3.3-19. Off-Farm Work of Operators by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Total	214	256	92	128	23	31	99	97
Did not work off-farm	39	68	35	59	1	3	3	6
Did work off-farm	175	188	57	69	22	28	96	91

22 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

23 *Source:* U.S. Department of Agriculture 2009.

1 Even though 73% of the operators of CNMI farms work both on and off farms, 55% of CNMI farm  
 2 operators identified agricultural work as their main occupation. As of 2007, the majority of CNMI  
 3 operators did not live on the farm that they operated; however, the number of operators living on the  
 4 farms that they operated increased between 2002 and 2007 by 74% compared to a 7% increase for the  
 5 number of operators not living on farms they operated.

6 Approximately 72% of the farm operators in the CNMI identified themselves as Chamorro; other  
 7 prominent races of farm operators included Chinese (11%) and Filipino (8%). As of 2007, there were no  
 8 Chinese or Japanese farm operators on Rota, and no white farm operators on Tinian.

9 Table 3.3-20 provides more data on operator characteristics by municipalities. The average age of the  
 10 farm operators on the CNMI is increasing. In 2002, the average age of a farm operator was 48 and by  
 11 2007 it was 52. The largest increase in the average age of farm operators occurred on both Rota and  
 12 Tinian, where the average age increased by 6 years over a 5-year period. Of the farm operators on the  
 13 CNMI, 82% were U.S. citizens, 89% of whom were born on the CNMI.

**Table 3.3-20. Operator Characteristics by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Total Number of Operators	214	256	92	128	23	31	99	97
Operators by place of residence								
On farm operated	39	68	35	59	1	3	3	6
Not on farm operated	175	188	57	69	22	28	96	91
Operators by main occupation:								
Agricultural	92	140	49	86	14	15	29	39
Nonagricultural	122	116	43	42	9	16	70	58
Operators by race:								
Chamorro	167	184	57	81	18	24	82	79
Chinese	24	27	20	24	4	3	0	0
Filipino	9	15	6	9	1	2	2	4
Japanese	2	1	2	0	0	1	0	0
White	5	6	3	4	0	0	2	2
Other	7	23	4	10	0	1	3	12
Operators by citizenship								
U.S. citizen born in CNMI	165	188	56	88	17	21	92	79
U.S. citizen born elsewhere in the U.S.	7	10	5	5	0	3	2	2
Naturalized U.S. citizen	6	13	3	6	1	3	2	4
Not a U.S. citizen	36	45	28	29	5	4	3	12

14 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands; U.S. = United States

15 *Source:* U.S. Department of Agriculture 2009.

1 Agricultural Products

2 In 2007, the market value of all agricultural products sold in the CNMI totaled over \$2 million. Table  
 3 3.3-21 provides data on the market value of the agricultural products sold by municipality. Fruits and nuts  
 4 were the most widely grown agricultural product, growing on approximately 45% of all of the farms in  
 5 the CNMI (Figure 3.3-4), even with a reduction in the number of farms growing fruits and nuts on Rota  
 6 and Tinian. Typical fruits grown on the CNMI included avocados, bananas, mangos, oranges, and lemons  
 7 and limes. In 2007, the market value of the fruits and nuts sold was \$401,664, lower than the market  
 8 values for root crops (\$638,498) and vegetables and melons (\$631,470).

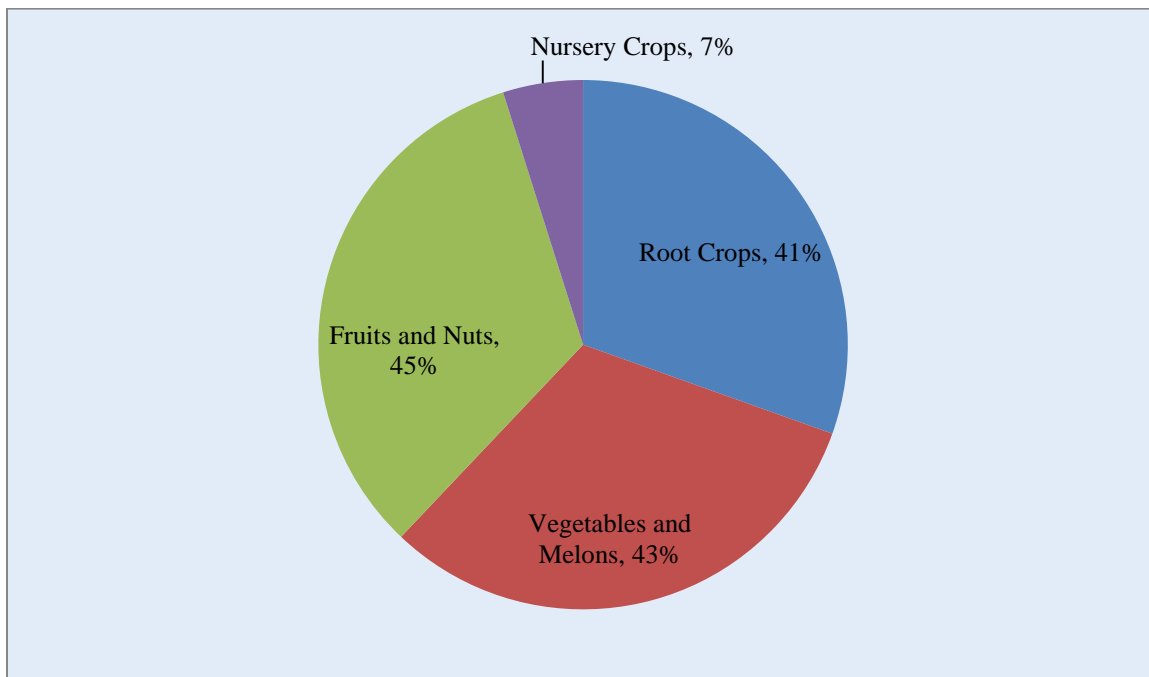
**Table 3.3-21. Market Value of Agricultural Products Sold by Municipality, 2002 and 2007**

Agricultural Product	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Root Crops								
Farms	85	106	37	54	2	5	46	47
Sales	\$404,734	\$638,498	D	\$184,228	D	\$3,010	\$297,284	\$451,260
Vegetables and Melons								
Farms	102	110	64	69	6	7	32	34
Sales	\$821,293	\$631,470	\$684,178	\$340,182	\$54,500	\$77,188	\$82,615	\$214,100
Fruits and Nuts								
Farms	103	115	37	74	9	8	57	33
Sales	\$343,021	\$401,664	\$122,083	\$217,480	\$16,000	\$72,339	\$204,938	\$111,845
Nursery crops (including ornamental plants)								
Farms	10	17	6	10	1	2	3	5
Sales	\$93,247	\$178,311	\$72,600	D	D	D	D	\$26,500

9 Legend: CNMI = Commonwealth of the Northern Mariana Islands

10 Note: "D" denotes data withheld to avoid disclosing data on individual farms.

11 Source: U.S. Department of Agriculture 2009.



12 Source: U.S. Department of Agriculture 2009.

13 **Figure 3.3-4. Breakdown of Agricultural Products Grown on CNMI Farms, 2007**



1 Vegetables and melons were the second most-widely grown agricultural products on the CNMI.  
2 Examples of these products include beans, okra, corn, cucumbers, eggplant, tomatoes, and cantaloupes.  
3 The number of farms growing vegetables and melons increased from 2002 to 2007 (102 to 110), but the  
4 market value of these crops decreased during that time (\$821,293 to \$631,470).

5 Root crops were the third most widely grown crops on the CNMI, but had the highest market value of all  
6 agricultural products sold. Typical root crops grown on the CNMI included cassava, gado, ginger, sweet  
7 potatoes, taro, and yams. Between 2002 and 2007, farms growing root crops increased from 85 to 106 and  
8 the market value of the root crops sold increased by over \$200,000.

9 On Tinian in 2007, vegetables and melons made up 51% of agricultural sales, fruits and nuts made up  
10 47% of sales, and root crops made up 2% of sales.

11 Livestock and Poultry

12 Table 3.3-22 shows the market value of livestock, poultry, and eggs (poultry) produced in the CNMI in  
13 2002 and 2007. In 2007, livestock sales in the CNMI were \$279,485 compared to \$475,167 in 2002.  
14 Poultry sales were \$214,360 in 2007 compared to \$143,795 in 2002. As of 2007, approximately 38% of  
15 all of the farms on the CNMI sold livestock and 7% sold poultry. The market value of poultry sold in the  
16 CNMI in 2007 was \$11,909 per farm, which was \$9,057 higher than the market value per farm for  
17 livestock. From 2002 to 2007, the number of farms that sold livestock increased, but the number of farms  
18 that sold poultry decreased.

**Table 3.3-22. Market Value of Livestock and Poultry and Eggs Sold by Municipality, 2002 and 2007**

	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
<b>Livestock</b>								
Farms	71	98	16	36	11	26	44	36
Sales	\$475,167	\$279,485	\$365,027	\$107,415	\$52,800	\$77,945	\$57,340	\$94,125
Sales per farm	\$6,692	\$2,852	\$22,814	\$2,984	\$4,800	\$2,998	\$1,303	\$2,615
<b>Poultry and Eggs</b>								
Farms	32	18	3	9	1	3	28	6
Sales	\$143,795	\$214,360	D	\$187,745	D	D	\$24,345	D
Sales per farm	\$4,494	\$11,909	NA	\$20,861	NA	NA	\$869	NA

19 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

20 *Note:* “D” denotes data withheld to avoid disclosing data on individual farms. NA = Not Applicable.

21 *Source:* U.S. Department of Agriculture 2009.

22 Table 3.3-23 provides detailed data on livestock, and poultry and eggs on CNMI farms. The number of  
23 farms with cattle and calves on the CNMI increased slightly between 2002 and 2007 from 55 to 63. In  
24 2002, there were no farms with milk cows on the CNMI, but by 2007 there were a total of seven farms  
25 with milk cows (six farms on Tinian and one farm on Rota). The number of farms with hogs and pigs  
26 stayed fairly constant (an increase of one farm between 2002 and 2007); however, there was a decrease of  
27 759 hogs and pigs kept on hand, and 2,364 fewer hogs and pigs were sold in 2007 than in 2002. The large  
28 difference in the number of hogs and pigs sold between 2002 and 2007 is primarily related to the  
29 difference in number of hogs and pigs sold on Saipan – in 2002 there were 2,683 sold and in 2007 there  
30 were only 348 sold. The number of CNMI farms with goats and kids increased between 2002 and 2007 as  
31 did the number kept on hand. There were a total of two farms with horses and mules in 2002, both of  
32 which were located on Tinian; in 2007 there was only one farm with horses and mules (also located on  
33 Tinian). The number of farms with poultry (chicken and hens 4 months old or older) decreased between  
34 2002 and 2007, as did the number sold (1,098 fewer) and the number kept on hand (646 fewer kept on

1 hand). The number of farms with commercial egg layers stayed the same between 2002 and 2007. There  
 2 were two farms with commercial egg layers in 2002 and 2007, both located on Saipan.

**Table 3.3-23. Livestock, Poultry, and Their Products by Municipality, 2002 and 2007**

Item	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
<b>Cattle and Calves</b>								
Farms	55	63	15	25	11	21	29	17
Number on Hand	1,319	1,395	463	461	599	669	257	265
Number Sold	296	275	80	89	135	103	81	83
<b>Milk Cows</b>								
Farms	0	7	0	0	0	6	0	1
Number on Hand	0	83	0	0	0	D	0	D
Number Sold	0	13	0	0	0	D	0	D
<b>Hogs and Pigs of all Ages</b>								
Farms	61	62	18	28	7	11	36	23
Number on Hand	2,242	1,483	1,628	1,042	194	201	420	240
Number Sold	3,039	675	2,683	348	84	143	272	184
<b>Goats and Kids of all Ages</b>								
Farms	15	19	6	11	7	6	2	2
Number on Hand	198	276	D	130	96	D	D	D
Number Sold	92	43	D	15	D	D	D	D
<b>Horses, Mules, and Colts of all Ages</b>								
Farms	2	1	0	0	2	1	0	0
Number on Hand	D	D	0	0	D	D	0	0
Number Sold	D	D	0	0	D	D	0	0
<b>Poultry and Poultry Products: Chicken Hens 4 Months Old or Older</b>								
Farms	68	41	17	25	13	2	38	14
Number on Hand	7,027	6,381	4,882	5,578	550	180	1,595	623
Number Sold	503	1,596	D	1,491	0	0	D	105
<b>Poultry and Poultry Products: Commercial Egg Layers</b>								
Farms	2	2	2	2	0	0	0	0
Number on Hand	D	D	D	D	0	0	0	0
Number Sold	D	D	D	D	0	0	D	0

3 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

4 *Note:* "D" denotes data withheld to avoid disclosing data on individual farms.

5 *Source:* U.S. Department of Agriculture 2009.

6 Data and a historical background of cattle grazing on Tinian have been published in the Beef Cattle Herd  
 7 Survey, 2013, by the Northern Marianas College-Cooperative Research Extension and Education Service  
 8 (NMC-CREES). Table 3.3-24 provides information on the Tinian herd as presented in that report.  
 9 According to the Cattle Herd Survey, in 2013, there were 37 ranching operations that covered 1,834 acres  
 10 (742.5 hectares). Of these 37, representatives of the Tinian Cattlemen's Association estimate that 32 were  
 11 located in the Military Lease Area (Tinian Cattlemen's Association, personal communication, January  
 12 2014). Of the 1,834 acres on Tinian being used for cattle grazing, an estimated 1,010 were in the Military  
 13 Lease Area.

14 In 2012, 177 cattle were sold (with a permit) for \$97,350. In 2013, the herd numbered 1,043 and the live  
 15 weight value, calculated approximately based on sales in 2012, was about \$548,000 (NMC-CREES  
 16 2013). According to the survey there were about 0.6 cattle per acre (1.4 per hectare) on Tinian around the  
 17 start of 2013 and the Tinian Cattlemen's Association indicated that there was no crowding of cattle, and  
 18 that ideally there would be more cows per hectare (2.5 head of cattle per hectare was noted to be ideal)  
 19 (NMC-CREES 2013).

**Table 3.3-24. Tinian Cattle Ranching Data, 2013**

Ranching Operations	Cattle and Calves	Hectares in Production	Cattle/Calves per Hectare	Estimated Value of Tinian Herd (2012 \$) <sup>1</sup>
37	1,043	742.5	1.4	\$547,850

Note: <sup>1</sup>Live weight value as determined in the cattle survey. Based on average live weight Tinian market values for 2012.

Source: NMC-CREES 2013.

1

2 3.3.6.3 Gathering

3 Multiple Tinian government agencies and other anecdotal reports indicated that hot peppers named  
 4 “Donni Sali” are sometimes gathered, processed, and sold. According to the Tinian Department of Labor,  
 5 gathering the pepper is a common source of income for community members that are not working and is a  
 6 supplement to income for those who need extra money (Tinian Department of Labor, personal  
 7 communication, January 2014).

8 **3.3.7 Fishing and Aquaculture**

9 3.3.7.1 Fishing

10 Commonwealth of the Northern Mariana Islands Overall

11 Since the mid-1970s, the CNMI Division of Fish and Wildlife has been collecting data on fishing in  
 12 Saipan. Data collection was later expanded to include Rota and Tinian but efforts in Rota stopped in 2009  
 13 and data collection on Tinian has been difficult due to understaffing (National Oceanic and Atmospheric  
 14 Administration 2012a). The current system collects data from dealers in Saipan, where the CNMI  
 15 Division of Fish and Wildlife estimates that more than 90% of all CNMI commercial landings occur. In  
 16 2011, fisheries managers noted concerns regarding incomplete participation (by vendors); incomplete  
 17 listing of species, incorrect identification of species, and incomplete coverage of the CNMI.

18 Table 3.3-25 shows estimated commercial landings for the CNMI in 2011. Over the course of the year,  
 19 \$503,821 worth of fish were landed in the CNMI (217,092 pounds at an average price of \$2.32 per  
 20 pound), over 90% of which was landed on Saipan. The fish that brought in the most money was the  
 21 Skipjack tuna; in 2011, 58,420 pounds were landed in the CNMI, with an average sales price of  
 22 \$1.94/pound, accounting for \$113,308 in sales – about 20% of total fish sales in the CNMI.

**Table 3.3-25. CNMI Estimated Commercial Landings, 2011**

<i>Species</i>	<i>Pounds</i>	<i>Value (\$)</i>	<i>Price/Pound</i>
Skipjack tuna	58,420	\$113,308	\$1.94
Bigeye scad (atulai)	24,798	\$59,341	\$2.39
Reef fishes (unknown)	21,386	\$58,270	\$2.72
Parrotfishes	13,214	\$40,852	\$3.09
Mahimahi	19,361	\$36,988	\$1.91
Yellowfin tuna	17,720	\$33,765	\$1.91
Wahoo	7,526	\$14,891	\$1.98
Onaga (red snapper)	3292	\$14,136	\$4.29
Rabbitfishes	3,978	\$11,900	\$2.99
Surgeonfishes	4,643	\$11,460	\$2.47
Other	42,761	\$108,911	\$2.55
<b>Total</b>	<b>217,099</b>	<b>503,822</b>	<b>\$2.32</b>

Source: National Oceanic and Atmospheric Administration 2013a.

23

24 The bottomfish fishery consists of two segments – shallow-water (100 to 500 feet) and deepwater (greater  
 25 than 500 feet). Both of these segments are fished mainly by local boats less than 25 feet in length within a

1 30 to 50 mile radius of Saipan. In addition, about 150 skiffs fish the islands and banks from Rota to  
2 Zealandia Bank north of Sariguan (National Oceanic and Atmospheric Administration 2013b). As of 2010  
3 to 2011, the fleet of fishing boats on Saipan numbered 100 (with about 60 less than 25 feet in length) and  
4 the fleet of fishing boats on Tinian was between 15 and 20 with the majority of those boats less than 25  
5 feet in length (National Oceanic and Atmospheric Administration 2012a).

6 Saipan residents surveyed in 2005 (Van Beukering et al. 2006) who said they were active and/or  
7 commercial fishermen were asked questions so that researchers could better understand the cultural  
8 importance of fishing on Saipan and the social and economic role it plays among households and  
9 individuals (Van Beukering et al. 2006). The survey identified motivations for fishing – 32% said they  
10 just really like fishing; 23% said they really need the fish to feed their family; 13% reported that giving  
11 catch to family and friends strengthened social bonds; 12% said their family has always fished and fishing  
12 is their life; 6% said it strengthens the bond with their children/family; and 4% said they needed the  
13 money from the fish they sold. Other reasons included strengthening the bond with their fellow  
14 fishermen, fishing to catch fish for fiestas/parties, and seasonal fishing for *manahak*, *ti'ao*, and *i'e* (2%  
15 each) (National Oceanic and Atmospheric Administration 2012b).

16 Saipan fishermen reported that about 90% of their catch was consumed by themselves, family, and  
17 friends, while about 8% of their catch was sold. The fishermen who identified themselves as commercial  
18 fishermen reported a median monthly income from fishing of \$200 and an average of just over \$1,000  
19 (National Oceanic and Atmospheric Administration 2012b); the average was greater than the median  
20 because three fishermen had monthly incomes of more than \$3,000 (Van Beukering et al. 2006).

21 The survey showed that the cost of fishing exceeded fish sales for almost every income group except  
22 those fishermen earning over \$501 a month and those earning less than \$26 (National Oceanic and  
23 Atmospheric Administration 2012b). The survey authors concluded that even those fishermen who sell  
24 fish do not sell to earn a profit but rather sell fish to recover some of the costs of fishing (Van Beukering  
25 et al. 2006).

26 That survey also addressed characteristics of fish consumption on Saipan. The survey showed that fish are  
27 an important part of Saipan's diet and an important part of the history and culture of Saipan residents; a  
28 majority (78%) said they ate fish between 1 and 3 times a week (28% every 2 days, 27% twice per week,  
29 and 23% once per week). However, the survey showed that as time passes and the CNMI lifestyle adapts  
30 with the passing of time, fish have become less important to diets (Van Beukering et al. 2006); about half  
31 (45%) of the survey respondents reported eating "somewhat less fish" than they did 10 years ago  
32 (National Oceanic and Atmospheric Administration 2012b).

### 33 Tinian

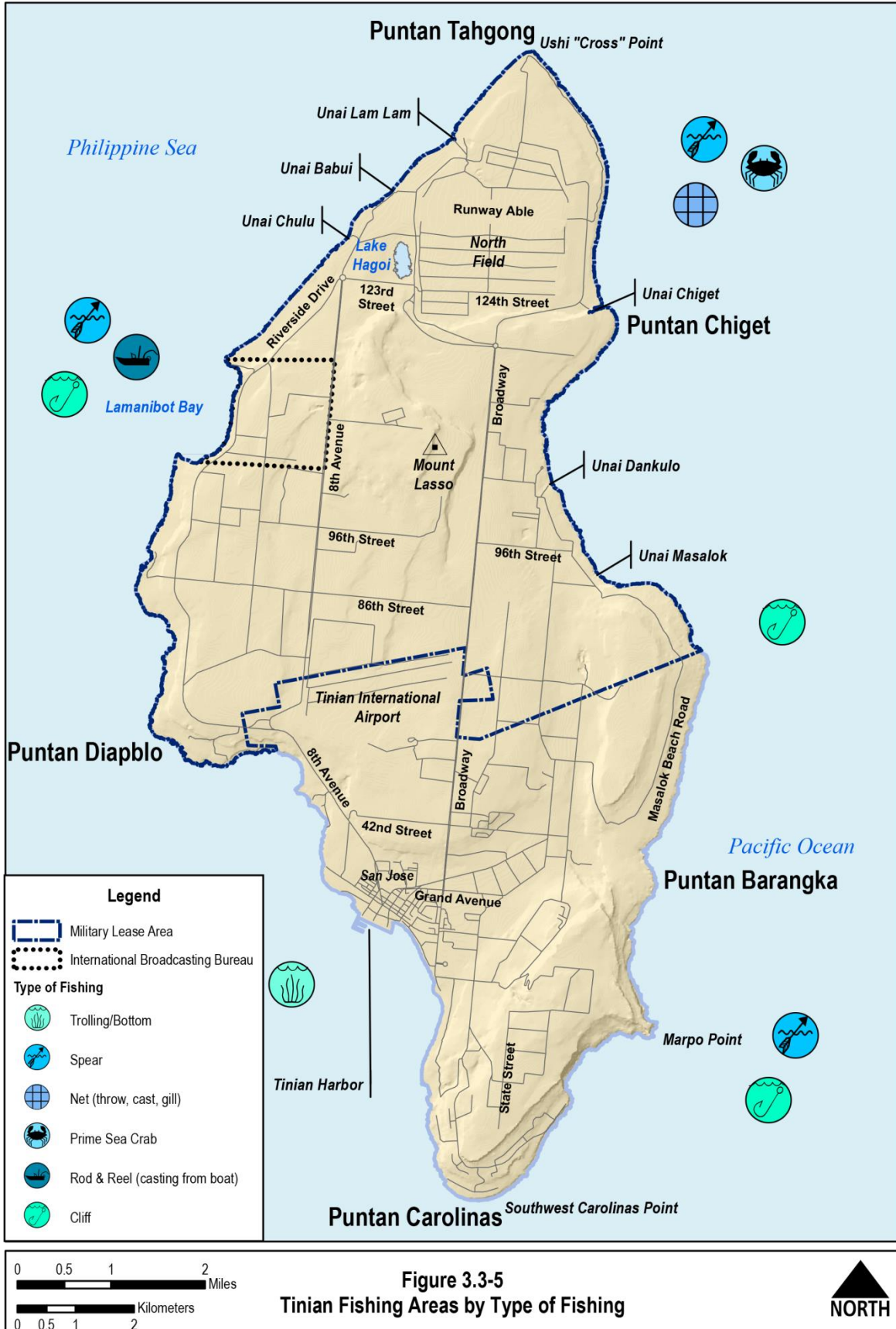
34 As noted above, as of 2011, the fleet of fishing boats on Tinian was between 15 and 20 with the majority  
35 of those boats less than 25 feet in length (National Oceanic and Atmospheric Administration 2012a).  
36 While the waters to the northwest of Tinian are used for fishing by the Saipan commercial fishing fleet,  
37 there has been no indication that there is a commercial fishing industry based out of Tinian. According to  
38 the Tinian Department of Land and Natural Resources and the Western Pacific Fishery Management  
39 Council, fishing boats on Tinian are not used for commercial fishing; when fish are sold it is to cover the  
40 expenditures of fishing excursions (Western Pacific Fishery Management Council, personal  
41 communication, February 2014).

1 Table 3.3-26 and Figure 3.3-5 identifies fishing areas around Tinian and the type of fishing that takes  
 2 place at each area. The water is notably calmer on the western side of Tinian, which makes the western  
 3 side more accommodating to boats than the eastern side. Types of fishing that require boats are almost  
 4 exclusively limited to the western side of the island. According to the Tinian Department of Land and  
 5 Natural Resources, waters on the eastern side are rougher than the west side and, for the most part, only  
 6 good for land-based cliff-fishing (Tinian Department of Land and Natural Resources, personal  
 7 communication, February 2014).

**Table 3.3-26. Tinian Fishing Areas and Type of Fishing**

<i>Location</i>	<i>From</i>	<i>To</i>	<i>Type of Fishing</i>
Northwest	Puntan Tahgong	Puntan Diapblo	Prime spearfishing Rod & reel (casting from boat) Cliff fishing
Southwest	Puntan Diapblo	Puntan Carolinas	Trolling Bottom fishing
Southeast	Puntan Carolinas	Puntan Baranga	Spearfishing Cliff fishing
East	Puntan Baranga	Puntan Chiget	Cliff fishing
Northeast	Puntan Chiget	Puntan Tahgong	Prime sea crab Throw net Cast net Gill net Spearfishing

8 *Source:* Tinian Department of Land and Natural Resources, personal communication, January 2014.



1 3.3.7.2 Aquaculture

2 In 2009, the CNMI Department of Commerce held an economic summit and identified aquaculture as one  
 3 of the four new pillars for the CNMI economy. Aquaculture products in the CNMI have been primarily  
 4 tilapia and shrimp. Tilapia is the highest ranked marine commodity by sales in the CNMI (NMC-CREES  
 5 2011).

6 Aquaculture in the CNMI began in the mid-1990s with the development of tilapia aquaponics and tilapia  
 7 farming on small commercial farms (NMC-CREES 2011). In the early 2000s, giant clams were grown in  
 8 Saipan’s lagoon and white-legged shrimp were grown commercially in land-based re-circulating systems  
 9 (NMC-CREES 2011). During the late 2000s, Ass’s ear abalone rearing trials took place on Tinian,  
 10 research trials began on rabbitfish, mullets, and Asian sea bass, and Saipan Aquaculture began  
 11 commercial export of shrimp to Asia (NMC-CREES 2011).

12 As of 2007, there were five farms producing fish and/or other aquaculture products in the CNMI. There  
 13 was one aquaculture farm on Tinian, two on Saipan, and two on Rota (Table 3.3-27). Between 2002 and  
 14 2007, the market value of fish and other aquaculture products grew from \$6,150 to \$62,725.

**Table 3.3-27. Market Value of Fish and Other Aquaculture Products Sold in the CNMI, by Municipality, 2002 and 2007**

Agricultural Product	CNMI		Saipan		Tinian		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Farms	5	5	1	2	1	1	3	2
Sales	\$6,150	\$62,725	D	D	D	D	D	D

15 Legend: CNMI = Commonwealth of the Northern Mariana Islands

16 Note: “D” denotes data withheld to avoid disclosing data on individual farms.

17 Source: U.S. Department of Agriculture 2009.

18 Aquaculture remains land-based with primary products of tilapia and shrimp. Production in 2009 was  
 19 estimated at 10 metric tons with a value of \$56,000. Fish are sold live or fresh, for a price of \$11 to \$13  
 20 per pound (\$5 to \$6 per kilogram) (NMC-CREES 2011). As of 2011, there were eight tilapia farmers in  
 21 the CNMI (five on Saipan, two on Rota, and one on Tinian). A local source with expertise in aquaculture  
 22 indicated that the two farms on Rota were government sponsored demonstration farms, four of the five  
 23 Saipan farms were for subsistence, and the continued operation of the farm on Tinian was uncertain since  
 24 the passing of its operator (Michael Ogo, personal communication, May 2014).

25 **3.3.8 Commonwealth of the Northern Mariana Islands Airports and Seaports**

26 CNMI airports and seaports are operated and maintained by the Commonwealth Ports Authority. The  
 27 Commonwealth Ports Authority was chartered as a public corporation in CNMI Public Law 2-48, which  
 28 went into effect on November 8, 1981. The Commonwealth Ports Authority was given responsibility for  
 29 operations, maintenance, and improvement of all airports and seaports within the CNMI. Both airports  
 30 and seaports currently exist on the islands of Saipan, Tinian, and Rota. As of September 30, 2012, the  
 31 Commonwealth Ports Authority had 122 employees on Saipan, 25 on Tinian, and 21 on Rota  
 32 (Commonwealth Ports Authority 2013a).

33 3.3.8.1 Airports

34 There are three major airports in the CNMI – Francisco C. Ada International Airport (Saipan), Tinian  
 35 International Airport, and Benjamin Taisacan Mangiona International Airport (Rota). Most airport  
 36 operations in the CNMI are air taxi operations, which are operations by aircraft that are designed to carry  
 37 60 or fewer passengers or carry up to 18,000 pounds of cargo – air taxi operations constituted 76% of

1 operations at Francisco C. Ada and 94% of operations at Tinian International. Tinian International only  
 2 had 58 air carrier operations, while Francisco C. Ada had 4,656, and Benjamin Taisacan Mangiona had  
 3 1,011. Military operations constituted 4.1% of operations at Benjamin Taisacan Mangiona, 1% of  
 4 operations at Tinian International, and 0.3% of operations at Francisco C. Ada (Federal Aviation  
 5 Administration 2014a, 2014b, 2014c).

6 Pagan has an airstrip but it is in poor condition, unattended, and the Federal Aviation Administration does  
 7 not maintain data on it. According to Arctic Circle Air management, they are the only airline that  
 8 sometimes uses the airstrip (Arctic Circle Air, personal communication, February 2014).

9 Table 3.3-28 shows data on passengers arriving CNMI airports from Fiscal Year 2005 to Fiscal Year  
 10 2012 and data on landing (cargo) weights from Fiscal Year 2008 to Fiscal Year 2012, by airport. In Fiscal  
 11 Year 2012, a total of 499,000 passengers arrived at CNMI airports, and 896,507,337 pounds of air cargo  
 12 landed at CNMI airports. Francisco C. Ada was the most active airport in the CNMI in terms of  
 13 passengers and cargo, accounting for about 90% of both.  
 14

**Table 3.3-28. Passenger and Cargo Data for CNMI Airports, Fiscal Year  
 2005 to Fiscal Year 2012**

<i>Fiscal Year</i>	<i>Arriving Passengers</i>	<i>Landing Weights</i>	<i>Fiscal Year</i>	<i>Arriving Passengers</i>	<i>Landing Weights</i>
<b>Francisco C. Ada (Saipan)</b>			<b>Tinian International</b>		
2005	583,363	N/A	2005	33,271	N/A
2006	511,720	N/A	2006	37,495	N/A
2007	470,013	N/A	2007	30,258	N/A
2008	460,437	714,481,700	2008	29,263	30,567,800
2009	425,982	737,391,020	2009	21,226	30,172,500
2010	422,542	712,173,491	2010	20,447	51,733,600
2011	388,030	685,246,274	2011	18,351	58,219,400
2012	472,920	777,238,017	2012	14,719	90,494,500
<b>Benjamin Taisacan Mangiona (Rota)</b>			<b>Total</b>		
2005	30,094	N/A	2005	646,728	N/A
2006	28,963	N/A	2006	578,178	N/A
2007	19,409	N/A	2007	519,680	N/A
2008	18,589	46,679,420	2008	508,289	791,728,920
2009	20,254	51,269,310	2009	467,462	818,832,830
2010	18,708	46,504,840	2010	461,697	810,411,931
2011	16,031	40,123,200	2011	422,412	783,588,874
2012	11,361	28,774,820	2012	499,000	896,507,337

15 *Legend:* N/A = Not Applicable.

16 *Source:* Commonwealth Ports Authority 2008, 2010, 2011, 2013a, 2013b.

17 3.3.8.2 Seaports

18 There are three seaports in the CNMI – the Port of Saipan, the Port of Tinian, and Rota West Harbor. The  
 19 ports are classified as small (Saipan) or very small (Tinian and Rota West) (Ports.com 2014). The Port of  
 20 Saipan has 2,600 linear feet of berthing space, a 22-acre container yard, dockside lighting, refrigerated  
 21 container outlets, and a seawater fire-fighting system (Commonwealth Ports Authority 2014). Recent  
 22 improvements to the Port of Saipan include a generator building and a 500 kilovolt-ampere backup  
 23 generator. Funding for these recent improvements was provided through a grant from the Department of  
 24 Homeland Security (Commonwealth Ports Authority 2014). Other improvements at the Port of Saipan  
 25 included renovations to the dockside, improvements to the Commonwealth Ports Authority seaport office  
 26 building, and replacement of lighting fixtures throughout the dock (Commonwealth Ports Authority



1 2014). Future improvements being considered are paving the access road leading to the main port and  
2 upgrading the security communication system and water rescue equipment (Commonwealth Ports  
3 Authority 2014).

4 Tinian Harbor is located on the southwest side of Tinian, adjacent to the village of San Jose. It was  
5 constructed by the U.S. Seabees during World War II (1944-45) to support military activities, and was  
6 originally designed to accommodate cargo vessels. The harbor is currently used for shipment of the  
7 island's fuel supply and other commodities such as food. Fuel is brought in by a tanker that makes regular  
8 deliveries on a monthly basis. The commercial fuel supplier for Tinian is Mobil Oil. The fuel tanker  
9 berths at the quay wall and fuel is piped to storage tanks located about 300 feet inland. For other  
10 commodities, a tug and barge are used to bring shipping containers over from Saipan. The barge only  
11 transits about once every other month as the accumulation of 7 to 8 containers worth of goods are  
12 required to make the transit worth undertaking. New fenders and bollards were recently installed and  
13 repairs have been made to the concrete cap (Commonwealth Ports Authority 2014).

14 Rota West Harbor has a secured port area with 16 22-foot boat slips. The Commonwealth Ports Authority  
15 notes that it has been difficult to fund maintenance, repairs and improvements at Rota West. The  
16 Commonwealth Ports Authority also notes that it is seeking funding to perform maintenance dredging as  
17 well as improvements to the dockside (Commonwealth Ports Authority 2014). As of February 17, 2014,  
18 Rota was under state of emergency due to a shortage of food and other commodities. The shortage was  
19 caused by the poor condition of the harbor leading to an inability of the port to receive shipments under  
20 certain weather conditions.

21 Table 3.3-29 shows the amount of cargo shipped into and out of each of the CNMI's seaports from Fiscal  
22 Year 2005 to Fiscal Year 2012. The amount of both inbound and outbound cargo declined significantly  
23 during the period. The decline in outbound cargo reflects the decline of the export generating garment  
24 manufacturing industry while the decline of inbound cargo reflects the decline of the CNMI economy and  
25 population in general, which demanded fewer imported goods later in the period compared to the  
26 beginning of the period.

**Table 3.3-29. Inbound and Outbound Cargo at CNMI Ports (in Revenue Tons),  
Fiscal Year 2005 to Fiscal Year 2012**

<i>Fiscal year</i>	<i>Inbound</i>	<i>Outbound</i>	<i>Total</i>	<i>Fiscal year</i>	<i>Inbound</i>	<i>Outbound</i>	<i>Total</i>
<b>Saipan</b>				<b>Tinian</b>			
2005	642,585	124,818	767,403	2005	29,818	2,141	31,959
2006	533,267	115,555	648,822	2006	28,584	3,101	31,685
2007	462,233	99,855	562,088	2007	23,174	2,373	25,547
2008	389,338	44,834	434,172	2008	33,790	3,448	37,238
2009	316,883	21,997	338,880	2009	15,797	736	16,533
2010	340,040	16,588	356,628	2010	11,978	2,926	14,904
2011	340,472	13,901	354,373	2011	14,220	1,237	15,457
2012	370,161	12,087	382,248	2012	19,669	1,088	20,757
<b>Rota</b>				<b>Total</b>			
2005	13,137	626	13,763	2005	685,540	127,585	813,125
2006	13,000	665	13,665	2006	574,851	119,321	694,172
2007	12,090	1,103	13,193	2007	497,497	103,331	600,828
2008	10,406	1,761	12,167	2008	433,534	50,043	483,577
2009	7,566	2,291	9,857	2009	340,246	25,024	365,270
2010	11,476	323	11,799	2010	363,494	19,837	383,331
2011	7,490	1,487	8,977	2011	362,182	16,625	378,807
2012	5,240	1,069	6,309	2012	395,070	14,244	409,314

Source: Commonwealth Ports Authority 2008, 2010, 2011, 2013a, 2013b.

### 1 3.3.9 Power and Water Utility Rates

#### 2 3.3.9.1 Power Utilities

3 The CNMI's electric system is owned by the Commonwealth Utilities Corporation, which is a public  
4 corporation that is part of the CNMI government. In 1975, the CNMI enacted legislation creating the  
5 Commonwealth Utilities Corporation but due to delays in implementation, the Commonwealth Utilities  
6 Corporation did not take over utilities operations until October 1987 (Commonwealth Utilities  
7 Corporation 2014a). The Commonwealth Utilities Corporation operates and maintains power generation  
8 and distribution services on Saipan and Rota. The power plant on Tinian is owned and operated through a  
9 power purchase agreement with a private power provider (National Renewable Energy Laboratory 2011).  
10 In the Special Representatives Agreement negotiated between the governments of the CNMI and the  
11 United States in July 1985, the CNMI government agreed that utility systems would operate on a full cost  
12 recovery basis. To date, however, the Commonwealth Utilities Corporation has yet to achieve full cost  
13 recovery (Commonwealth Utilities Corporation 2014a).

14 The CNMI has no local energy resources and all of its energy requirements are met using imported  
15 petroleum products, shipped in by tanker through harbors on Saipan, Tinian, and Rota. The CNMI does  
16 not refine petroleum and consequently refined diesel fuel, not oil, is imported. In 2010, the CNMI  
17 imported 23,302,062 gallons of diesel fuel at a cost of about \$60 million (National Renewable Energy  
18 Laboratory 2011). Electricity customers pay a fuel surcharge that varies with the world price of diesel  
19 fuel, this surcharge is known as the Levelized Energy Adjustment Clause rate. Recent Levelized Energy  
20 Adjustment Clause rates are presented in Table 3.3-30. In addition to Levelized Energy Adjustment  
21 Clause rates, utilities customers pay a monthly customer charge and a per kilowatt hour base rate; these  
22 are shown in Table 3.3-31.

**Table 3.3-30. Levelized Energy Adjustment Clause Rates Paid by Electric Utility Consumers, Per Kilowatt Hour, 2010 to 2014**

<i>Effective Dates</i>		<i>Levelized Energy Adjustment Clause Rate</i>
<i>Start</i>	<i>End</i>	
June 1, 2010	January 12, 2011	\$0.24446
January 13, 2011	April 15, 2011	\$0.28125
April 16, 2011	November 19, 2011	\$0.34426
November 20, 2011	January 27, 2012	\$0.30791
January 28, 2012	April 8, 2012	\$0.30550
April 9, 2012	June 4, 2012	\$0.32910
June 5, 2012	July 5, 2012	\$0.29569
July 6, 2012	August 2, 2012	\$0.26373
August 3, 2012	September 5, 2012	\$0.28168
September 6, 2012	January 6, 2013	\$0.31212
January 7, 2013	March 4, 2013	\$0.29751
March 5, 2013	December 31, 2013	\$0.31878
January 1, 2014	Current	\$0.30426

Source: Commonwealth Utilities Corporation 2014b.

**Table 3.3-31. Monthly Customer Charge and Base Rate by Customer Classification, January 2014**

<i>Customer Classification</i>	<i>Monthly Customer Charge</i>	<i>Base Rate (Per Kilowatt Hour)</i>
Residential (1 to 500 kilowatts per hour)	\$7.69	\$0.022
Residential (500 to 1,000 kilowatts per hour)		\$0.091
Residential Lifeline (1 to 500 kilowatts per hour)	\$6.51	\$0.019
Residential Lifeline (500 to 1,000 kilowatts per hour)		\$0.091
Commercial	\$10.53	\$0.118
Government	\$10.53	\$0.124

Source: Commonwealth Utilities Corporation 2014b.

2  
 3 The CNMI has three small electric grids, one on each populated island: Saipan, Tinian, and Rota.  
 4 Electricity is generated by diesel-fueled power plants; there are three on Saipan and one each on Tinian  
 5 and Rota. Generating capability is about 70 megawatts on Saipan, 20 megawatts on Tinian, and 4.5  
 6 megawatts on Rota. On Saipan, the commercial sector, including tourism-related activities, consumes  
 7 more than one-third of all power. Hotels use electricity for air conditioning, water heating, and water  
 8 purification. Most large hotels have generators and make electricity for their own use when grid reliability  
 9 is low or prices are high (Energy Information Administration 2014).The residential sector is the second  
 10 largest consumer, using about one-fourth of all power. The Commonwealth Utilities Corporation also  
 11 operates street lighting, drinking water, and wastewater disposal systems, which together consume about  
 12 one-twelfth of electricity generated on Saipan. On Tinian, about half of electricity is consumed by the  
 13 Tinian Dynasty and the International Broadcasting Bureau facility (Energy Information Administration  
 14 2014). The International Broadcasting Bureau facility consumes an average daily load of 0.75 megawatts  
 15 (Department of the Navy [DoN] 2014a). Additional power system information is provided in Table  
 16 3.3-32.

**Table 3.3-32. Power System Information**

	Saipan	Tinian	Rota
Installed Capacity	69.9 megawatts	20 megawatts	4.5 megawatts
Peak Load	45 megawatts	5.2 megawatts	2 megawatts
Base Load	39 megawatts	4.7 megawatts	1.5 megawatts
2015 Peak Load Forecast	52.2 megawatts	6 megawatts	2.3 megawatts
Customers (as of March 2011)	13,208	879	820

Source: National Renewable Energy Laboratory 2011.

3.3.9.2 Drinking Water

Current drinking water production on Tinian is approximately 1.15 (DoN 2014a) million gallons per day. Effective March 5, 2013 the volume rate per 1,000 gallons for residential and commercial customers was \$0.72 for the first 3,000 gallons with increasing rates for higher usage; for instance every 1,000 gallons above 60,001 had a rate of \$4.49 per 1,000 gallons (Commonwealth Utilities Corporation 2014c).

**3.3.10 Minerals**

3.3.10.1 Tinian

Mineral resources on CNMI lands are already economically extracted. Through ownership in FPA Pacific Corp., Hawaiian Rock has operated a quarry and ready mix concrete plant on Tinian since 1993.

3.3.10.2 Pagan

Mineral resources have been identified on Pagan and include basalt rock (primarily used as aggregate in concrete) and pozzolan in the form of volcanic glass and ash (pumice and pumicite), which are primarily used as additives for producing lower-cost light-weight cement. The 1978 Pagan Physical Development Master Plan (Office of Transition Studies and Planning 1978) noted that one possibility for economic development on Pagan might be the exploitation of the island’s basalt deposits. Basalt is sometimes used in construction as an aggregate where it is crushed or powdered and mixed into concrete. The Plan noted that investigation by the Government of Guam Department of Public Works suggested that although the basalt resource on Pagan was extensive, the cost of infrastructure improvements necessary to mine, process, and transport the basalt would make basalt mining too expensive for a mine to earn a profit. To make it feasible, “joint development funding including capital improvement program development funds from the Northern Mariana Islands Capital Improvement Program, Economic Development Authority Funds, Federal Aviation Administration, Airport Development Aid Program funds, and finally a long term contract for supplying basalt to Guam would appear to be necessary to make such a program successful” (Office of Transition Studies and Planning 1978).

Pozzolan on Pagan is the result of the 1981 eruption of Mount Pagan (CNMI Department of Public Lands 2007). A pozzolan is any substance that, if in small enough particles, will react chemically to form compounds that contain cement-like properties. The economic use of a pozzolan is to blend it with Portland cement to create blended cement; this is done because blended cement is less costly to produce and less expensive to end-users than pure Portland cement.

In 2007, a field program drilled samples from 32 sites on Pagan and conducted analysis of the pozzolan material that was extracted (CNMI Department of Public Lands 2007). The two primary results of the study were that there were 11.9 million metric tons of pozzolan on Pagan that could be extracted and that

1 the pozzolan on Pagan was good quality, suitable for industrial use (CNMI Department of Public Lands  
2 2007). Prior to that study there had been numerous estimates of the quantity of pozzolan that could be  
3 extracted. These include estimates by the U.S. Geological Survey of 71.4 million metric tons (presented  
4 in a 1984 paper) and 32.4 million metric tons (presented in a 2006 paper), by Azmar International Inc. of  
5 200 million metric tons, and by an unpublished report that stated that there were 100 million metric tons  
6 of pozzolan that could be extracted from Pagan (CNMI Department of Public Lands 2007). The studies  
7 conducted by the U.S. Geological Survey included methodologies and general academic support to their  
8 findings while the other two studies did not; however, an actual drilling program that could validate  
9 estimates was only conducted in association with the 2007 field program (CNMI Department of Public  
10 Lands 2007).

11 The price of pozzolan in 2012 was \$35 per metric ton (U.S. Geological Survey 2013a). A permit to mine  
12 pozzolan was provided to a private company in 2014 (De Guzman 2014).

### 13 **3.4 PUBLIC SERVICES**

14 The public services section presents information on agencies of the CNMI government that provide  
15 education, safety, and health services to the public. Data for this section were gathered from agency  
16 publications, websites, and through personal interviews conducted in early 2014. The data primarily relate  
17 to employment, populations serviced, and the condition of agency equipment and facilities. Information  
18 on social problems such as crime and health problems is also presented.

#### 19 **3.4.1 Public Education**

##### 20 3.4.1.1 Commonwealth of the Northern Mariana Islands

21 The CNMI Public School System, created in 1988, is a state education agency for preschool, elementary,  
22 and secondary education. It also includes the Early Intervention Program for infants up to 3 years old, and  
23 Head Start for children aged 3 to 4. Public education services are funded through a mixture of CNMI and  
24 federal funds. The CNMI Public School System is a sub-grantor of the Head Start program through the  
25 U.S. Department of Health and Human Services. During Fiscal Year 2011, the CNMI Public School  
26 System received \$58,374,747 in federal grants (Deloitte and Touche LLC 2013b).

27 Table 3.4-1 provides information on the total amount of grants provided to the CNMI from the U.S.  
28 Department of Education for Fiscal Year 2011. During Fiscal Year 2011, the U.S. Department of  
29 Education awarded the CNMI with over \$30 million in grants. The largest grant was the American  
30 Recovery and Reinvestment Act-State Fiscal Stabilization Fund – Education State Grants, Recovery Act  
31 (\$22,304,020). The second largest grant, and the only other grant worth more than \$1 million, was for the  
32 American Recovery and Reinvestment Act – Education Jobs Fund (\$5,793,370).

**Table 3.4-1. U.S. Department of Education Grants to the CNMI, Fiscal Year 2011**

<i>Name of Grant</i>	<i>Amount</i>
Rehabilitation Services – Vocational Rehabilitation Grants to States	\$982,436
Independent Living – State Grants	\$21,103
Rehabilitation Services – Services for Older Individuals Who are Blind	\$43,373
Supported Employment Services for Individuals with Significant Disabilities	\$34,854
Assistive Technology	\$126,323
Rehabilitation Training – State Vocational Rehabilitation Unit In-Service Training	\$36,261
American Recovery and Reinvestment Act Vocational Rehabilitation Grants to States	\$231,823
American Recovery and Reinvestment Act – State Grants	\$22,304,020
American Recovery and Reinvestment Act – Government Services	\$622,137
American Recovery and Reinvestment Act – Independent Living State Grants	\$22,523
American Recovery and Reinvestment Act – Education Jobs Fund	\$5,793,370
<b>TOTAL</b>	<b>\$30,218,223</b>

1 *Source:* Deloitte and Touche LLC 2013a.

2 According to recent data, the CNMI Public School System consists of 19 school campuses, with 12  
 3 elementary schools and 7 secondary schools (CNMI Public School System 2011).

4 Table 3.4-2 provides information on the total enrollment for CNMI elementary schools, secondary  
 5 schools, and Head Start. According to 2011-2012 school year data provided by the CNMI Public School  
 6 System, the enrollment for CNMI elementary schools was 5,412 students, and CNMI secondary schools  
 7 enrollment was 5,093 students. Class sizes in the elementary schools were relatively small with a student-  
 8 teacher ratio of 23. Class sizes for the secondary schools were slightly larger with a student-teacher ratio  
 9 of 28. The total number of Head Start staff was 28 and the total amount of children enrolled was 462;  
 10 thus, the ratio of children enrolled in Head Start to staff was 17:1 (CNMI Public School System, personal  
 11 communication, February 2014). While no national standard of student-teacher ratio exists, the general  
 12 belief is that smaller ratios result in better educational outcomes (National Education Association 2012).  
 13 In comparison with the CNMI, the national average in school year 2011 to 2012 was only slightly better,  
 14 16.0:1, and the CNMI ratio was better than highest ratio in the 50 states, California, which had a ratio of  
 15 25.6 (National Education Association 2012).

**Table 3.4-2. CNMI Public School System Enrollment Summary**

	<i>Student Enrollment</i>	<i>Teachers</i>	<i>Student to Teacher Ratio</i>
Elementary Schools	5,412	233	23:1
Secondary Schools	5,093	179	28:1
<b>Total Enrollment</b>	<b>10,505</b>	<b>412</b>	<b>25:1</b>
Head Start	462	28	17:1

16 *Note:* Student enrollment data are from school year 2011-2012.  
 17 Classroom teachers for special education, reading resources, computer,  
 18 and others are not reflected in this table.

19 *Source:* CNMI Public School System 2011.

1 Table 3.4-3 provides information on the CNMI student body ethnicity. The largest percentage of the  
 2 student body is Chamorro (38%), closely followed by Filipino (32%).

**Table 3.4-3. CNMI Public School System K-12th Grade Student Ethnicity,  
 School Year 2011 to 2012**

<i>Ethnic Group</i>	<i>Number of Students</i>	<i>% of Student Population</i>
Chamorro	3,943	38%
Filipino	3,369	32%
Carolinian	952	9%
Chuukese	511	5%
Palauan	414	4%
Korean	276	3%
Pohnpeian	224	2%
Chinese	242	2%
Chamorro/Carolinian	106	1%
Others	145	1%
Yapese	85	0.80%
Japanese	84	0.80%
Caucasian	72	0.70%
Other Pacific Islander	49	0.50%
Marshallese	33	0.30%

3 *Source:* CNMI Public School System 2011.

4 For school year 2011 to 2012, the CNMI Public School System had an overall graduation rate of 93%.  
 5 The highest graduation rate was on Tinian (100%), and the lowest was on Saipan at Kagman High School  
 6 (88%). Approximately 71% of those graduates planned to attend post-secondary school, approximately  
 7 15% planned to join the military, and approximately 6% planned to seek work/employment (8% did not  
 8 respond) (CNMI Public School System 2011).

9 Northern Marianas College is a land grant institution with a vision to serve as an engine for economic  
 10 growth and development, and social and economic vitality in the CNMI. Northern Marianas College has  
 11 approximately 1,200 students per semester, most of whom are full-time degree students. Additionally,  
 12 about 20,000 non-degree students in a given year attend through a variety of programs (Cooperative  
 13 Research, Extension and Education Service, workforce training programs, computer literacy, work  
 14 values/ethic, etc.). The college has 31 full-time and 22 adjunct professors that teach for course credit and  
 15 there are many more who support the college by teaching non-credit courses. The college has been on  
 16 accreditation sanction for 8 of the past 10 years but is working towards reaffirming its accreditation –  
 17 school administrators expect an increase in enrollment upon re-gaining accreditation.

18 The college has been successful at improving the skills of the CNMI workforce. The nursing school at the  
 19 college recently had an expansion, from being capped at providing 10 degrees per year to granting 30 per  
 20 year. Some students have gained experience working with U.S. federal agencies (the National Oceanic  
 21 and Atmospheric Administration), taking part in research cruises and participating in marine debris  
 22 cleanup efforts.

23 3.4.1.2 Tinian

24 There are two public schools on Tinian – Tinian Elementary (grades 1-6) and Tinian Junior/Senior High  
 25 Schools (grades 7-12). Both are located in the village of San Jose and are accredited by the Accrediting  
 26 Commission of Western Association of Schools and Colleges.

1 According to 2011 to 2012 school year data published by the CNMI Public School System, Tinian  
2 elementary had 14 teachers and 260 students (student to teacher ratio of 18.5:1), and Tinian Junior/Senior  
3 High School had 15 teachers and 229 students (student to teacher ratio of 15:1). The overall student to  
4 teacher ratio on Tinian during the 2011 to 2012 school year was 17:1 (489 students: 29 teachers) (CNMI  
5 Public School System 2011).

6 Representatives of the CNMI Public School System indicated that there has been a decline in number of  
7 students lately on Tinian and that this has led to excess classroom space. Overall, Tinian schools are using  
8 less of their capacity than during previous years (CNMI Public School System, personal communication,  
9 February 2014). The total of 489 students for the 2011 to 2012 school year is below the highest number of  
10 students that data show for Tinian, which was 615 students during the 2007 to 2008 school year (CNMI  
11 Public School System 2011).

12 3.4.1.3 Pagan

13 According to the CNMI Public School System, no education services exist on Pagan (CNMI Public  
14 School System, personal communication, February 2014).

15 **3.4.2 Public Safety**

16 3.4.2.1 Commonwealth of the Northern Mariana Islands

17 The CNMI Department of Public Safety provides public safety services (specifically, police, fire, and  
18 emergency medical services) to the people of the CNMI. The Department consists of four major  
19 divisions, including the Commonwealth State Police Division, the Fire Division, the Bureau of Motor  
20 Vehicles, and the Commissioner. According to the CNMI Department of Public Safety, in general, the  
21 Department’s capacity is adequate to meet the current needs (U.S. Department of the Air Force 2012;  
22 CNMI Fire Division, personal communication, February 2014). Public safety services are funded through  
23 a mixture of CNMI and federal funds.

24 Table 3.4-4 provides information on the name of the grants received and the associated funding amount  
25 for Fiscal Year 2011. The CNMI received over \$2 million in the form of grants from the U.S. Department  
26 of Justice (Deloitte and Touche LLC 2013a).

**Table 3.4-4. U.S. Department of Justice Grants to the CNMI, Fiscal Year 2011**

<i>Name of Grant</i>	<i>Amount</i>
Sexual Assault Services Formula Program	\$2,176
Juvenile Accountability Block Grants	\$33,391
Juvenile Justice and Delinquency Prevention-Allocation to States	\$84,036
Part E- Developing, Testing, and Demonstrating Promising New Programs	\$654
Title V-Delinquency Prevention Program	\$17,217
Crime Victim Assistance	\$273,765
Crime Victim Assistance/Discretionary Grants	\$115,163
Violence Against Women Formula Grants	\$662,745
American Recovery and Reinvestment Act-Partnership/Community Policing Grants	\$160,592
Enforcing Underage Drinking Laws Program	\$303,316
Edward Byrne Memorial Justice Assistance Grant Program	\$486,433
American Recovery and Reinvestment Act-Victim Assistance Formula Grant Program	\$75,513
American Recovery and Reinvestment Act-Recovery Act-Edward Byrne Memorial Justice Assistance Grant Program/Grants to States and Territories	\$399,877
<b>TOTAL</b>	<b>\$2,614,878</b>

27 *Source:* Deloitte and Touche LLC 2013a.



1 Commonwealth State Police Division

2 The Commonwealth State Police Division consists of Uniformed Services, Criminal Investigation Unit,  
3 and the Tactical Response Enforcement Team. There are five correctional facilities in the CNMI. There is  
4 a prison, detention facility, and youth facility located on Saipan, an immigration detention facility on  
5 Tinian, and a detention facility on Rota.

6 The Police Division indicated that it has 154 officers. Of these, 115 are on Saipan, with a ratio of one  
7 officer per 419 people (CNMI Police Division, personal communication, February 2014). According to  
8 the Police Divisions, facilities are in poor condition and need renovation but are large enough to  
9 accommodate current staffing levels. The Commonwealth State Police Division further indicated that it  
10 responds to 11,000 to 13,000 requests for assistance per year, to include both criminal and traffic  
11 complaints and that the most common crimes CNMI-wide are petty theft, breaking and entering, assault,  
12 and disturbing the peace (CNMI Police Division, personal communication, February 2014). Homicide is  
13 low, but human trafficking is a problem (CNMI Police Division, personal communication, February  
14 2014). In 2013 there were a total of 3,105 criminal offenses (including 1,129 burglaries/robberies/thefts,  
15 699 disturbances, 569 violent crimes, and 316 property crimes) (CNMI Department of Public Safety  
16 2013). Economic problems fueled by alcohol and drugs can be drivers of crime (CNMI Police Division,  
17 personal communication, February 2014).

18 *Uniformed Services*

19 Uniformed Services encompasses the Patrol Section, Traffic Section, and Boating Safety. The Patrol  
20 Section is the primary responding unit for all police assistance, and it operates 24 hours a day, 7 days a  
21 week. The officers in the Patrol Section conduct initial investigations, protect life, aid injured persons,  
22 and secure and protect crime scenes (CNMI Department of Public Safety 2013).

23 The mission of the Traffic Section is to reduce property damage, injuries, and deaths caused by traffic  
24 crashes. In addition, Traffic Section personnel work to identify problem corridors and solutions by  
25 analyzing traffic data and working with the Department of Public Works' Traffic Safety Division. The  
26 Traffic Section is divided into four units: Selective Traffic Law Enforcement, Driving Under the  
27 Influence/Traffic Enforcement, Traffic Investigation Unit, and the Motor Carrier Safety Assistance  
28 Program (CNMI Department of Public Safety 2013).

29 The Boating Safety Section is responsible for responding to any water-related incidents 24 hours a day, 7  
30 days a week. Water-related incidents could include drowning, missing divers/fisherman, boat accidents,  
31 capsized vessels, etc. Boating Safety personnel also conduct random swimming pool inspections at all  
32 hotels to ensure public safety. Boating Safety Officers are certified in Maritime Law Enforcement  
33 National Boating Safety Instructors, certified divers from the National Association of Underwater  
34 Instructors, and are certified under the U.S. Department of Homeland Security Emergency Management  
35 Institute (CNMI Department of Public Safety 2013).

36 *Criminal Investigation Unit*

37 The Criminal Investigation Unit works on the successful resolution of criminal cases assigned. The  
38 Criminal Investigation Unit also works with other law enforcement agencies in the investigation and  
39 apprehension of criminals, such as cases involving illegal drugs, violent crimes, public corruption,  
40 prostitution, etc.

1 *Tactical Response Enforcement Team*

2 The Tactical Response Enforcement Team is generally activated to respond to tactical situations that are  
3 determined to be high risk and/or require specialized training and equipment. The Tactical Response  
4 Enforcement Team is a collateral duty for all team members with each member serving full-time  
5 assignments in various positions in the department. Officers must go through an initial training phase with  
6 emphasis on building entries before becoming a member of the Tactical Response Enforcement Team.  
7 Members are expected to be proficient with firearms, and they are cross-trained in all team assignments  
8 (CNMI Department of Public Safety 2013).

9 Fire Division

10 The Fire Division provides emergency services including Emergency Medical Services, fire suppression,  
11 search and rescue, hazardous materials response, and wildland firefighting. The Fire Division consists of  
12 seven sections (CNMI Department of Public Safety 2013):

- 13 • Emergency services
- 14 • Fire Prevention and Arson Investigation
- 15 • Search and Rescue Unit
- 16 • Hazardous Materials Unit
- 17 • Forestry
- 18 • Emergency Medical Services
- 19 • Administration

20 The Fire Division indicated that it operates six fire stations on Saipan and recently obtained a fireboat  
21 through a U.S. Coast Guard port security grant (CNMI Fire Division, personal communication, February  
22 2014). The boat is used for port security and hazardous materials response, mainly at the Port of Saipan  
23 but can go to Tinian when necessary. The Fire Division operates this through a Memorandum of  
24 Understanding with the U.S. Coast Guard and the CNMI Police Division.

25 The Fire Division indicated that it responds to about 8,000 calls per year and that 75% of emergency  
26 medical service calls come from the south of Saipan (CNMI Fire Division, personal communication,  
27 February 2014). In 2013, the CNMI Department of Public Safety handled 4,604 Emergency Medical  
28 Services incidents and 3,521 fire-related incidents (CNMI Department of Public Safety 2013).

29 3.4.2.2 Tinian

30 According to the Tinian Department of Public Safety, as of February 2014, they were staffed by 17 police  
31 officers (a ratio of 6 officers for every 1,000 residents) and 11 firefighters (a ratio of 3.8 firefighters per  
32 1,000 residents). Condition of the Department's building was noted to be fair and able to accommodate  
33 personnel and operations (Tinian Department of Public Safety, personal communication, January 2014).  
34 Additionally, the Department indicated that it has a refurbished fire engine and ambulance, and that a  
35 boating safety facility will be operational sometime in 2014 (Tinian Department of Public Safety,  
36 personal communication, January 2014).

37 While Tinian police officers are often responsible for a variety of tasks (the same officer may be trained  
38 in boating safety and 911 call reception), Tinian's 6 officers per 1,000 residents greatly exceeds actual  
39 data from the U.S., which show a historical norm of less than 3 officers per 1,000 residents (Bureau of  
40 Justice Statistics 2003). Also, the ratio of 3.8 firefighters per 1,000 residents greatly exceeds the historical

1 U.S. ratio of about 1.7 (National Fire Protection Association 2013). Since ratios of both officer and  
2 firefighter per 1,000 residents on Tinian more than doubles U.S. ratios, Tinian public safety services are  
3 generally considered to have the capacity to meet the needs of the public.

4 In 2013 there were 86 criminal offenses recorded in San Jose; 30 thefts or burglaries, 15 incidences of  
5 disturbing the peace, and 15 assaults (CNMI Department of Public Safety 2013). It was noted that  
6 burglary is often drug-related and domestic violence is often alcohol-related and that these crimes are also  
7 related to weak economic conditions (CNMI Department of Public Safety, personal communication,  
8 February 2014).

9 The Commonwealth Ports Authority maintains firefighting capability at Tinian International Airport as a  
10 requirement for airport operations. This capability is available to the Tinian Department of Public Safety  
11 in the event of an emergency. According to the Commonwealth Ports Authority, Tinian International  
12 Airport has two fire-fighting vehicles (CNMI Fire Division, personal communication, February 2014).

### 13 3.4.2.3 Pagan

14 The CNMI Department of Public Safety indicated that it maintains no personnel or facilities on Pagan  
15 (CNMI Fire Division, personal communication, February 2014). According to multiple CNMI agencies,  
16 public safety in the Northern Islands is primarily managed through the Office for Homeland Security and  
17 Emergency Management (CNMI Homeland Security and Emergency Management, personal  
18 communication, February 2014; CNMI Fire Division, personal communication, February 2014).

## 19 **3.4.3 Public Health**

### 20 3.4.3.1 Commonwealth of the Northern Mariana Islands

21 The Commonwealth Healthcare Corporation is an autonomous public corporation of the CNMI  
22 government. It provides hospital, primary care, and public health services to Saipan, Tinian, and Rota. It  
23 operates the largest hospital in the CNMI – the Commonwealth Health Center, which, according to  
24 management has 86 beds, only 76 of which are functioning (the other 10 beds are used for various other  
25 purposes) (Commonwealth Health Center, personal communication, February 2014). The hospital is of  
26 sufficient size to accommodate existing staff and patients. It offers inpatient and outpatient  
27 medical/surgical services, emergency care, public health, mental health, dental services, hemodialysis,  
28 electrocardiography, ultrasound, radiology, and other ancillary and diagnostic services (U.S. Department  
29 of the Air Force 2012). As of 2014, there were 32 physicians employed at the health center  
30 (Commonwealth Health Center, personal communication, February 2014). In addition to the  
31 Commonwealth Health Center, there are private health, dental, and optical clinics on Saipan (U.S.  
32 Department of the Air Force 2012). Public health services are funded through a mixture of CNMI and  
33 federal funds.

34 The Commonwealth Health Center has approximately 60,000 outpatient visitors per year (Commonwealth  
35 Health Center, personal communication, February 2014). Common health problems in the CNMI are  
36 diabetes, high blood pressure, and hypertension (Commonwealth Health Center, personal communication,  
37 February 2014).

38 Table 3.4-5 shows grants from the U.S. Department of Health and Human Services for Fiscal Year 2011.  
39 The U.S. Department of Health and Human Services awarded over \$26 million in grants to the CNMI.  
40 Table 3.4-5 also provides information on the specific types of grants awarded and the associated amount.  
41 The Medical Assistance Program grant was the largest grant awarded (\$14,073,352), followed by the

- 1 Child Care and Development Block Grant (\$2,089,936), and the American Recovery and Reinvestment Act – Medical Assistance Program (\$1,215,308).
- 2

**Table 3.4-5. U.S. Department of Health and Human Services Grants to the CNMI, Fiscal Year 2011**

<i>Name of Grant</i>	<i>Amount</i>
Special Programs for the Aging - Title VII, Chapter 3, Programs for Prevention of Elder Abuse, Neglect, and Exploitation	\$(411)
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	\$5,524
Special Programs for the Aging - Title III, Part B - Grants for Supportive Services and Senior Centers	\$248,055
Special Programs for the Aging - Title III, Part C - Nutrition Services	\$320,005
National Family Caregiver Support, Title III, Part E	\$92,822
Nutrition Services Incentive Program	\$81,018
Public Health Emergency Preparedness	\$639,863
Advancing System Improvements to Support Targets for Healthy People 2010	\$64,679
Maternal and Child Health Federal Consolidated Programs	\$271,367
Project Grants and Cooperative Agreements for Tuberculosis Control Programs	\$136,334
Projects for Assistance in Transition from Homelessness	\$38,176
Family Planning - Services	\$231,511
Consolidated Health Centers (Community Health Centers, Migrant Health Centers, Health Care for the Homeless, Public Housing Primary Care, and School Based Health Centers)	\$36,283
Substance Abuse and Mental Health Services - Projects of Regional and National Significance	\$387,485
Universal Newborn Hearing Screening	\$201,627
Immunization Grants	\$443,246
Centers for Disease Control and Prevention - Investigations and Technical Assistance	746,602
Affordable Care Act Maternal, Infant, and Early Childhood Home Visiting Program	\$101,004
Strengthening Public Health Infrastructure for Improved Health Outcomes	\$25,656
Promoting Safe and Stable Families	\$140,108
Low-Income Home Energy Assistance	\$153,674
Community Services Block Grant	\$521,943
Child Care and Development Block Grant	\$2,089,936
Community-Based Child Abuse Prevention Grants	\$222,973
Developmental Disabilities Basic Support and Advocacy Grants	\$280,890
Developmental Disabilities Projects of National Significance	\$62,446
Children's Justice Grants to States	\$64,208
Stephanie Tubbs Jones Child Welfare Services Program	\$136,933
Social Services Block Grant	\$39,985
Child Abuse and Neglect State Grants	\$56,381
Family Violence Prevention and Services/Grants for Battered Women's Shelters - Grants to States and Indian Tribes	\$101,508
American Recovery and Reinvestment Act - Community Services Block Grant	\$157,196
American Recovery and Reinvestment Act - Immunization	\$28,858
American Recovery and Reinvestment Act - Child Care and Development Block Grant	\$735,831
American Recovery and Reinvestment Act - State Grants to Promote Health Information Technology	\$119,702
American Recovery and Reinvestment Act - Prevention and Wellness - State, Territories and Pacific Islands	\$29,118
Children's Health Insurance Program	\$861,233
Medical Assistance Program	\$14,073,352
American Recovery and Reinvestment Act - Medical Assistance Program	\$1,215,308
National Bioterrorism Hospital Preparedness Program	\$244,439
Rural Health Care Services Outreach, Rural Health Network Development and Small Health Care Provider Quality Improvement Program	\$75,774
Human Immunodeficiency Virus Care Formula Grants	\$47,255
Human Immunodeficiency Virus Prevention Activities - Health Department Based	\$69,722
Human Immunodeficiency Virus Demonstration, Research, Public and Professional	\$4,796

**Table 3.4-5. U.S. Department of Health and Human Services Grants to the CNMI, Fiscal Year 2011**

<i>Name of Grant</i>	<i>Amount</i>
Education Projects	
Epidemiologic Research Studies of Acquired Immunodeficiency Syndrome and Human Immunodeficiency Virus Infection in Selected Population Groups	\$73,978
Human Immunodeficiency Virus/Acquired Immunodeficiency Virus Syndrome Surveillance	\$3,366
Block Grants for Community Mental Health Services	\$83,546
Block Grants for Prevention and Treatment of Substance Abuse	\$396,384
Preventive Health Services - Sexually Transmitted Diseases Control Grants	\$94,107
Preventive Health and Health Services Block Grant	\$30,163
Maternal and Child Health Services Block Grant to the States	\$262,085
<b>TOTAL</b>	<b>\$26,657,530</b>

1 *Source:* Deloitte and Touche LLC 2013a.

2 3.4.3.2 Tinian

3 The Tinian Health Center is the island’s primary health care facility. Part of the Commonwealth  
 4 Healthcare Corporation, the Health Center facility was built in 1987; it currently has five holding beds. In  
 5 2013, the Health Center accommodated 8,000 outpatient visits and 1,600 urgent care visits, 20% of whom  
 6 could not pay for the services they received (Tinian Health Center, personal communication, January  
 7 2014).

8 Health Center staff indicated that the Health Center provides emergency services, laboratory, x-ray, and  
 9 public health and other services including physician supervised medicine dispensing and periodic  
 10 dentistry (Tinian Health Center, personal communication, January 2014).

11 Information provided by staff indicate that there is one full-time physician, one nurse practitioner, four  
 12 registered nurses, five licensed practical nurses, one nursing aide, and a dentist that visits periodically  
 13 (Tinian Health Center, personal communication, January 2014).

14 Health center equipment and facilities are being updated. According to staff, there is a brand new digital  
 15 x-ray machine, a brand new ultrasound with complete probes, an autoclave to treat bio-waste material,  
 16 and two new beds. Also, CNMI capital improvement funds are being spent to meet Americans with  
 17 Disabilities Act standards, upgrade restroom facilities, and construct a new building to house  
 18 administrative activities and the public health clinic, which currently occupy space that could be used for  
 19 treatment (Tinian Health Center, personal communication, January 2014).

20 Medical staff explained that non-communicable diseases such as diabetes and hypertension are a major  
 21 concern on Tinian, much like the rest of the CNMI (Tinian Health Center, personal communication,  
 22 January 2014).

23 Despite clearly apparent limitations necessitated by operational efficiencies in areas with small  
 24 populations such as Tinian (e.g., major emergency and specialty medical cannot be provided), health  
 25 center staff did not indicate that the facility was overburdened. Some concerns were expressed about  
 26 available space for treatment, but improvements are underway that should alleviate those concerns  
 27 (Tinian Health Center, personal communication, January 2014).

28 3.4.3.3 Pagan

29 Anecdotal reports indicate that there are no public health services currently provided on Pagan and,  
 30 according to the CNMI Department of Homeland Security and Emergency Management, emergency care  
 31 requires evacuation by plane or helicopter (CNMI Homeland Security and Emergency Management,  
 32 personal communication, February 2014).

## 1 **3.5 COMMUNITY AND SOCIAL TOPICS**

2 The community and social topics section presents information relating to community character and  
3 cohesion (defined in Appendix A) on Tinian and Pagan. Relevant discussion includes the value of  
4 community cohesion within the Chamorro culture, and the endeavors and activities (to include  
5 homesteading, subsistence agriculture, fishing and hunting) which contribute to the existing community  
6 character and cohesion of the region. Items of discussion were chosen based on scoping comments and  
7 due to their potential interaction with the proposed action.

### 8 **3.5.1 Commonwealth of the Northern Mariana Islands Overall**

#### 9 3.5.1.1 Homesteads

10 Article 805 of the Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political  
11 Union with the United States of America (Covenant) recognizes “the importance of the ownership of land  
12 for the culture and traditions of the people of the Northern Mariana Islands.” Article 11 Section 5 of the  
13 CNMI constitution sets aside some portions of CNMI public lands for a homestead program. In concept, a  
14 homestead program is a program where one gains ownership of an un-owned natural resource by  
15 performing an act of original appropriation. Appropriation could be enacted by putting an un-owned  
16 resource to active use (as with using it to produce a product), joining it with previously acquired property,  
17 or by marking it as owned (as with livestock branding or deeding ownership of land). Eligibility  
18 requirements to receive a homestead permit, set forth in Title 2 Section 4303 of the Commonwealth Code,  
19 provide that: an applicant must be of Northern Marianas descent and an applicant is eligible for a  
20 homestead permit on only one lot. Once a permit is granted, the recipient of the permit may begin to make  
21 improvements on the homestead lot. A deed of ownership of the homestead lot may be granted after a  
22 period of time if certain conditions are met, such as the existence of subdivision conditions consistent  
23 with modern planning standards (i.e., power and water utilities are present) on the lot, a home built on the  
24 lot, or a minimum \$10,000 investment made on the land.

#### 25 **3.5.2 Tinian**

26 The modern Tinian community is small and quiet, serviced by a few stores and restaurants, and one large  
27 hotel resort casino. Traditional activities often consist of visits to the beach or gathering together at  
28 barbecues. Residents also traditionally engage in agriculture, fishing, and hunting activities – primarily  
29 for subsistence food or as a supplement to income at times when income is low or none (Tinian Mayor's  
30 Office, personal communication, January 2014; Tinian Department of Labor, personal communication,  
31 January 2014; Tinian Department of Land and Natural Resources, personal communication, January  
32 2014).

33 The Chamorro concept of “inafa’maolek” is closely linked with the concept of community cohesion  
34 (defined in Appendix A). Inafa’maolek is a core Chamorro value that continues to be passed down to each  
35 new generation, and refers to the “interdependence within the kinship group,” literally translated as  
36 “making it good for each other” or “getting along” (Cunningham 1992). The concept holds that society is  
37 based on good relationships and mutual respect. Inafa’maolek is based on varying familial relationships,  
38 and reciprocal obligations between two people in any of these relationships. The relationships tend to be  
39 based on age, with the older person owing the younger person responsibility and the younger owing the  
40 older deference.

41 Inafa’maolek is the foundation for the Chamorro values of “respetu” (respect for elders and significant  
42 individuals, and the environment and society where the individual lives), “manginge” (an expression of

1 respetu), and “mamahlao” (shame, which holds Chamorro people to these values). These values are  
2 actualized and perpetuated through a shared understanding of obligation – “chenchule” (gifting or  
3 donation, which preserves and strengthens networks) (Lizama 2010), “che’lu” (sibling relationships) and  
4 “patgon” (the value of children and the responsibility of the collective to raise them) (Storie 2009). These  
5 values and obligations hold value that trump economics; they are applied to relationships not only within  
6 the human world but, between the human, spiritual, and natural worlds (Cunningham 1992).

### 7 3.5.2.1 Early History

8 The early history of Tinian provides insight into the social and cultural interaction that residents  
9 experienced, which provides the context to present-day community and social topics. Archaeological  
10 analysis indicates that human presence on Tinian began as early as 1500 Before Christ (B.C.) with the  
11 early settlers referred to as Chamorro (DoN 2104c). The first European contact with residents of Tinian  
12 occurred in 1601 when it was reported to Fray Juan Pobre de Zamora that a shipwreck survivor was living  
13 there (Farrell 2012). In 1638, a Spanish galleon shipwrecked off Agingan Point, just to the north of Tinian  
14 and a Chamorro noble named Taga rescued the crew. Taga is recorded as the first Chamorro Christian  
15 (Farrell 2012). The Spanish introduced cattle to the island and found that the food that the island produced  
16 was obtainable enough to help feed garrisons stationed on Guam. Visiting Tinian in 1742, the Englishman  
17 Commodore George Anson (Anson 1825) reported:

18 “There was plenty of good water, and an incredible number of cattle, hogs, and poultry, running  
19 wild, and all of them excellent in their kinds; that the woods afforded great plenty of lemons,  
20 limes, sweet and sour oranges, and cocoa-nuts, besides a fruit, peculiar to these islands, which  
21 served as bread; and that the Spaniards at Guam made use of the island as a store for supplying  
22 the garrison.”

23 In the late 1660s, the Spanish and Guam Chamorro unrest spread to the Northern Mariana Islands. By  
24 1700, Chamorro no longer lived on Tinian, due to death during conflict or forced exile to Guam by the  
25 Spanish, where they assimilated with the Guam Chamorro population (DoN 2014b).

26 Throughout the 1700s, the Spanish continued to keep Tinian uninhabited, periodically sending troops  
27 from Guam to Tinian for beef and other supplies. In the early 1800s, the Spanish let Carolinians settle on  
28 Saipan, with the condition that they deliver two shipments of salted meat from Tinian to Guam annually.  
29 A leper colony was established on Tinian around 1853 and in 1855 prisoners were sent there to slaughter  
30 cattle and plant crops. In 1869, the entire island of Tinian was leased to George Johnston to produce beef  
31 and other supplies for Guam and international markets; he brought approximately 230 Carolinians with  
32 him (Farrell 2012), the first recorded residence of Carolinians on Tinian (DoN 2014b). Carolinians  
33 continued to live on Tinian throughout the 1800s until the 1890s when drought and hardship forced them  
34 to relocate to Saipan (Farrell 2012). During this period, the Tinian population dwindled to a few dozen,  
35 mainly Carolinians and some Chamorro.

36 German ownership of the Northern Mariana Islands coincided with the re-habitation of Tinian (Farrell  
37 2012). At that time, the island supported an estimated 1,000 head of cattle, and numerous goats, pigs, and  
38 dogs. The German Administration leased Tinian to Tinian Gesellschaft, a company owned by two  
39 Germans and a Chamorro, and chartered to raise and export beef; the venture lasted until the Japanese  
40 took over the Northern Mariana Islands in 1914.

41 During the Japanese administration, Tinian was leased to a Japanese agricultural company and production  
42 on the island shifted from beef to sugarcane (Farrell 2012). To maximize the amount of sugarcane that  
43 could be produced, the Japanese clear-cut the entire island and almost eliminated the beef herd. As World

1 War II began to get closer to the Japanese homeland, the Japanese military made Tinian a strategic base.  
2 It moved the Chamorro population from Tinian to Rota and Saipan, leaving only a handful of Chamorro  
3 families.

#### 4 3.5.2.2 Cultural Traditions

5 Cultural traditions refer to practices that are not only traditional livelihood activities, but that fulfill a  
6 social and cultural function.

7 Each of the activities described in this section can be considered cultural traditions, as they result in the  
8 procurement of a product that can be used for “chenchule,” among other qualities of “cultural traditions.”  
9 Once referring to many acts of reciprocation, “chenchule” continues to be an indicator of community  
10 cohesion and is now often used to refer to the gift or act itself, and is most commonly experienced as gifts  
11 of food, labor or other contribution during the celebration of life milestones.

#### 12 Agriculture

##### 13 *Farming*

14 Archaeological evidence documents forest clearing and early inland expansion of agriculture by  
15 Chamorro on Tinian approximately Anno Domini (A.D.) 1155 (Dixon et al. 2011). Fritz (2001) describes  
16 the planting of coconuts, bananas, rice, and sweet potatoes in Chamorro culture.

17 Present-day farming activities provide an opportunity for Chamorro on Tinian to connect to traditional  
18 ways of knowing. For example, farmers still consult the ancient Chamorro calendar to determine their  
19 farming activities because the calendar includes historic knowledge pertaining to seasons and economic  
20 pursuits. The 10<sup>th</sup> moon, or Fanggualo’, is known as “planting time” (Salas and Tolentino 2014).

21 Farms or ranches also have cultural significance to the Chamorro. “Lanchos” refer to “Chamorro farms,  
22 ranches, gardens or family property in the halomtano (jungle) and along beaches” (Bevacqua 2014).  
23 These areas of land emerged partly as an attempt to resist Spanish colonization and were places of refuge  
24 and safety during turbulent historical times. Thus, today these places are not only considered places where  
25 crops are grown, but act as gathering places for families (Bevacqua 2014).

26 Tinian Health Center staff indicated that while Tinian is traditionally an agricultural community, it has  
27 become less so over the past several years; the trend has moved away from residents producing their food  
28 locally and has moved towards their purchasing processed groceries from stores (Tinian Health Center,  
29 personal communication, January 2014).

##### 30 *Ranching*

31 Cattle ranching has been interwoven into the history of Tinian since cattle were first introduced by the  
32 Spanish in the 16<sup>th</sup> century (NMC-CREES 2013). After the Spanish-Chamorro War, feral cattle roamed  
33 across Tinian for more than a hundred years. When Tinian was transferred from Spanish to German  
34 control, the Germans preserved the herd for food and its monetary value. The Japanese administration  
35 later oversaw a decrease in the size of the herd as sugarcane fields took over the Tinian landscape. After  
36 World War II, much of Tinian was leased to Ken Jones, a businessman who expanded the herd to include  
37 7,000 beef cows and 1,000 milk cows; during this time the Tinian herd was the primary source of beef  
38 and milk products consumed by residents of Tinian, Saipan, Guam, and other nearby islands. The modern  
39 herd provides local residents with fresh beef for consumption and traditional cultural events (NMC-  
40 CREES 2013).



1 *Gathering*

2 Fritz (2001) documents gathering of shellfish along the reef edge by Chamorro women and children, as  
3 well as the gathering of breadfruit and wild yams. Prior to Western contact, women were tasked with  
4 gathering food in the jungle (Salas and Tolentino 2014) and medicinal herbs were gathered by traditional  
5 healers (Lizama 2010), practices that continue in the present day.

6 According to multiple Tinian government agencies, families gather yams and hot peppers as a cultural  
7 tradition. Gathering activities are often something that mothers and daughters do together (Tinian  
8 Department of Land and Natural Resources, personal communication, January 2014; Tinian Mayor's  
9 Office, personal communication, January 2014). Food served during fiestas for the patron saints during  
10 the month of May (San Jose and San Isidro) must include dishes made of wild yams and breadfruit (DoN  
11 2014b).

12 The hot pepper is also the basis for the island's largest community event – the Pika (hot pepper) Festival.  
13 The Pika Festival has been ongoing for more than 10 years and features song and dance performances,  
14 including performances by school groups, and events such as a crab race, hot pepper eating contest, and a  
15 pika burger eating contest (Camacho 2014). The usage of festivals to bring communities together through  
16 pageantry and celebration, for the purposes of cultural awareness and continuation is common throughout  
17 the Pacific (Vaka'uta 2011, Matsuda 2012).

18 Fishing

19 Fritz (2001) explains that fishing has historically been a main food source for the Chamorro people. Prior  
20 to Western contact, nets were the primary fishing tool. Pole-and-line fishing within protected reefs  
21 occurred from outrigger canoes. Crabbing and fishing with torches during low tide was also done, and  
22 turtles were caught by hand.

23 On April 19, 1999, the National Marine Fisheries Service approved the identification of the CNMI as a  
24 fishing community. The legal concept of a fishing community means “a community which is substantially  
25 dependent or substantially engaged in, the harvest or processing of fishery resources to meet social and  
26 economic needs” (National Oceanic and Atmospheric Administration 2012a).

27 Unai Chulu, Unai Dankulo, and Puntan Masalok are traditional Chamorro fishing areas on Tinian. These  
28 areas are locations for Chamorro today to continue to practice and preserve their traditional fishing  
29 practices, and continued study of these areas contribute to understanding the re-settlement of the island by  
30 the Chamorro in the 20<sup>th</sup> century (DoN 2014b). One oral history informant shared that the location Unai  
31 Chulu was most popular for *chenchulu* (dragnet) fishing and that the location was actually named after  
32 this type of fishing (DoN 2014b). Other locations are also noted in a DoN cultural resource study for the  
33 particular type of traditional fishing that they are best known for (DoN 2014b).

34 Oral history interviews reflect the widespread practice of fishing around the island; fishing was an all-day  
35 family affair on the weekends that built relationships and allowed transfer of cultural knowledge (DoN  
36 2014b). According to multiple Tinian government agencies, fishing on Tinian is passed down from father  
37 to son (Tinian Department of Land and Natural Resources, personal communication, January 2014;  
38 Tinian Mayor's Office, personal communication, January 2014).

39 Throughout the Pacific, including the CNMI, fishing is understood to be of primary importance in cultural  
40 and social solidarity (community cohesion). Non-commercial, customary, exchange of fish (*chenchule*) is  
41 not part of a barter system and occurs without negotiations. Severance (2010) describes the ability of  
42 *chenchule* to strengthen social networks in the fishing context: “Fish are a desired and expected

1 contribution at the annual village fiestas, baptisms and confirmations, weddings and other special  
2 ceremonies. Fishing trips are often triggered by cultural and ceremonial needs. A well-known fisheries  
3 economist on Guam who understands customary exchange distributes almost all of his catch to his wife's  
4 clan members and others. The giving enhances his reputation as a fisherman, but gives no measurable or  
5 immediate economic return."

#### 6 Hunting

7 Fritz (2001) notes that wild pigs, fruit bats, wild ducks, coconut crabs, jungle fowl, and other birds were  
8 hunted by early Chamorro. The Tinian Department of Land and Natural Resources indicated that hunted  
9 wildlife included turtle doves, coconut crabs, sea crabs, as well as feral goats and chickens (Tinian  
10 Department of Land and Natural Resources, personal communication, January 2014).

11 Oral histories recorded in 2008 and 2014 indicate that hunting is a regular pastime on Tinian (DoN  
12 2014b). According to Tinian government agencies, hunting is a cultural and traditional activity that is  
13 passed down from father to son (Tinian Department of Land and Natural Resources, personal  
14 communication, January 2014; Tinian Mayor's Office, personal communication, January 2014).

#### 15 3.5.2.3 Subsistence Activities

16 Agriculture, gathering, hunting, fishing, and grazing activities, when mainly conducted for a person's or  
17 family's own use and needs, and not primarily for commercial purposes, are considered subsistence  
18 activities (U.S. Census Bureau 2014). The written records (descriptions and drawings) of foreign visitors,  
19 meant to detail and document the use of the island and alterations to the landscape that accompany them,  
20 indicate that historic Tinian Chamorro subsistence activities included farming, hunting and gathering  
21 (DoN 2014b).

22 The Military Lease Area has been identified as one area used for subsistence hunting, and the gathering of  
23 wild foods and medicinal plants (DoN 2014b; Tinian Department of Land and Natural Resources,  
24 personal communication, January 2014; Tinian Mayor's Office, personal communication, January 2014;  
25 CNMI Department of Public Lands, personal communication, February 2014). These activities can also  
26 be performed on other areas on the island.

27 The 2000 Census identified 145 Tinian residents over the age of 16 that participated in subsistence  
28 activities. Of these 145 people, 104 were elsewhere employed (part-time), and 41 were not in the labor  
29 force (U.S. Census Bureau 2000). The 2010 Census identified 103 Tinian residents over the age of 16 that  
30 participated in subsistence activities during the week that the Census was taken (U.S. Census Bureau  
31 2010a). Of these 103 people, 91 were elsewhere employed (part-time), 4 were unemployed, and 8 were  
32 not in the labor force.

#### 33 Subsistence Agriculture

##### 34 *Farming*

35 Historically, growing food has been a form of subsistence for the Chamorro on Tinian (DoN 2014b).  
36 According to Tinian and CNMI government agencies, subsistence farming continues to occur on Tinian.  
37 The CNMI Department of Community and Cultural Affairs indicated that agricultural products grown in  
38 the Military Lease Area include taro, sweet potatoes, and melons (CNMI Department of Community and  
39 Cultural Affairs, personal communication, February 2014). Other agricultural products gathered in the  
40 Military Lease Area include yams and hot peppers (Tinian Department of Labor, personal  
41 communication, January 2014). There are other locations where these agricultural products can be grown  
42 on the island.

1 *Ranching*

2 Raising cattle for personal, non-commercial, consumption occurs in the Military Lease Area. Tinian beef  
3 cannot presently be sold commercially because the island's slaughtering facilities do not meet U.S.  
4 federal standards (U.S. Government Printing Office 2011). According to numerous sources on Tinian,  
5 Tinian beef has become a part of the island's traditions and provides locals with a very fresh source of  
6 protein; it is eaten by ranchers and their families, given to friends, and served at community gatherings  
7 (Duponcheel 2013; Tinian Cattlemen's Association, personal communication, January 2014; Tinian  
8 Mayor's Office, personal communication, January 2014).

9 *Gathering*

10 Wild yams and breadfruit have been important in the Chamorro traditional diet and the Chamorro on  
11 Tinian continue to gather these food items in the present day (DoN 2014b). As indicated above, Fritz  
12 (2001) documents gathering of shellfish along the reef edge by Chamorro women and children, as well as  
13 the gathering of breadfruit and wild yams occurring pre-Western contact. During this period, women were  
14 also tasked with gathering food in the jungle and medicinal herbs were gathered by traditional healers  
15 (Salas and Tolentino 2014). These activities continue into the present.

16 Hot peppers and yams are gathered on Tinian. While hot peppers have more of a commercial purpose  
17 than a subsistence purpose, Tinian government agency sources indicated that yams are consumed by  
18 gatherers and their families (Tinian Department of Labor, personal communication, January 2014; Tinian  
19 Department of Land and Natural Resources, personal communication, January 2014).

20 Subsistence Fishing

21 Fishing is a primary subsistence pursuit on Tinian (DoN 2014b). As stated above, Fritz (2001) notes that  
22 fishing was a main source of food for Chamorros both pre- and following Western contact. During this  
23 time, nets were the primary fishing tool, pole-and-line fishing within protected reefs occurred from  
24 outrigger canoes, crabbing and fishing with torches during low tide was also done, and turtles were caught  
25 by hand.

26 According to the Tinian Department of Land and Natural Resources and the Western Pacific Fishery  
27 Management Council, Tinian fishermen do not sell fish to earn a profit, they fish to obtain food for them  
28 and their family (Tinian Department of Land and Natural Resources, personal communication, January  
29 2014; Western Pacific Fishery Management Council personal communication, February 2014). Oral  
30 history interviews indicated that fish caught during a weekend outing were typically consumed by the  
31 family and the remainder salted for preservation or shared with neighbors (DoN 2014b). The frequency  
32 and value of subsistence fishing on Tinian is not known due to lack of data, but data for Saipan indicate  
33 that 90% of catch was consumed by fishermen, family, and friends, while about 8% of catch was sold.

34 Subsistence Hunting

35 As noted above, Fritz (2001) explains that wild pigs, fruit bats, wild ducks, coconut crabs, jungle fowl  
36 and other birds were hunted by early Chamorro. Oral history informants remember hunting for fruit bat  
37 (now rare and illegal to hunt), wild pig, deer, and goat, and coconut crab (DoN 2014b). Governmental and  
38 non-governmental organizations also indicate that hunting on Tinian is a subsistence activity taking place  
39 for noncommercial purposes (Tinian Department of Land and Natural Resources, personal  
40 communication, January 2014; Tinian Mayor's Office, personal communication, January 2014; Northern  
41 Marianas College Research, Education, and Extension Service, personal communication, February 2014).

1 According to multiple Tinian government agencies, the entire island could be considered a hunting  
2 ground, but the majority of hunting resources are located in the northern two-thirds of the island in the  
3 Military Lease Area. This is in part because hunting in areas in the south of Tinian are limited due to laws  
4 against firing weapons in residential areas (Tinian Department of Land and Natural Resources, personal  
5 communication, January 2014; Tinian Mayor's Office, personal communication, January 2014). Agencies  
6 noted that the mid-west to east part of the island is prime coconut crab gathering area (but during their  
7 season they can be hunted anywhere), that a prime area for sea crabs is on the northeast coast and that the  
8 non-residential south-eastern portion of Tinian is also a good area for hunting coconut crabs (Tinian  
9 Department of Land and Natural Resources, personal communication, January 2014).

### 10 3.5.3 Pagan

#### 11 3.5.3.1 Early History

12 Like Tinian, the early history of Pagan provides insight into the social and cultural interaction that  
13 residents experienced which provides the context to present-day community and social topics. Spanish  
14 discovery of Pagan occurred in 1521 and ownership was claimed by Spain in 1565; the first  
15 internationally recognized ownership claim on the island. Infrequent contact occurred between Chamorro  
16 and the Spanish through 1668. Beginning in 1697, as a part of *reducción* (a Spanish resettlement policy),  
17 Pagan residents were forcefully relocated and held prisoner on Saipan. The captives made an escape back  
18 to Pagan but the Spanish recaptured the escapees and brought them back to Saipan, and later shipped  
19 them to Guam (DoN 2014c).

20 Pagan was resettled for the first time post-*reducción* in 1865 as 265 Carolinians were brought in from  
21 Pulusuk to produce copra for a fledgling agricultural concern named La Sociedad Agrícola de la  
22 Concepción; the operation was not profitable and ended in 1869. In 1888, Alfred Marche visited Pagan to  
23 collect specimens and scrutinize Pagan's *latte* ruins (Russell 1998). While the Spanish Period lasted  
24 through 1898, by the time of Marche's visit, the only inhabitants of Pagan were a few Carolinian  
25 agricultural laborers (Russell 1998) remaining from the speculative agricultural operation. In 1899,  
26 Germany purchased the Northern Mariana Islands from Spain.

27 The first census of Pagan's population was taken by the Germans. The Germans counted 23 Chamorro  
28 and 52 Carolinians, all copra laborers (DoN 2014c). The privately held Pagan Company was established  
29 amongst German and Japanese interests, and the company provided regular transportation between Saipan  
30 and the coconut plantation that it developed on Pagan (Aldan 2013, Russell 1998). The German Period  
31 ended in 1914 when as part of the World War I conflict, Japan seized Germany's holdings in Micronesia;  
32 Japan's international ownership of the Northern Mariana Islands was recognized in 1919 in conjunction  
33 with the Treaty of Versailles (Russell 1998).

34 The Japanese Period on Pagan lasted from 1914 through 1944. By 1920, there were approximately 90 to  
35 150 residents of Pagan (Aldan 2013). In the 1930s, after Pagan was put under Japanese military authority,  
36 the population grew further (Russell 1998). The Japanese built a vibrant economy based on natural  
37 resources (agriculture and marine resources), several villages, a concrete dock, a tide gauging station, a  
38 rope making factory, and a weather observatory (Russell 1998). As of 1940, the population had grown to  
39 700 residents. In 1944, World War II reached the CNMI and the Japanese began to fortify the Islands.  
40 Pagan was the only Northern Island that the Japanese had provided with military infrastructure and  
41 personnel. There was a paved runway, troop barracks, and storage bunkers on Pagan. Supply dumps, air-  
42 raid shelters, and gun positions were also set up in tunnels dug into ridges overlooking key areas (Russell

1 1998). Japanese military personnel on Pagan included 1,908 Army and 331 Navy personnel (Russell  
2 1998).

3 During the early stages of the Marianas campaign, Pagan’s airfield was bombed and strafed by American  
4 aircraft but Japanese forces held the island until after the war was declared over. Pagan was surrendered  
5 to the Japanese on September 2, 1945. In the weeks that followed, all Chamorro and Carolinian civilians  
6 residing in the Northern Islands were relocated to Saipan (Russell 1998).

7 Pagan was uninhabited immediately after the war. In 1947, several Chamorro and Carolinians returned to  
8 harvest copra, and engage in a subsistence style of living (farming, fishing, and hunting) and by 1954, 90  
9 residents were recorded (DoN 2014c). Fifty-four Pagan residents were evacuated to Saipan after the  
10 eruption of Mount Pagan in 1981. This number was lower than the full population of Pagan because of  
11 the temporary absence of children who were away attending high school on Saipan (Pagan’s school only  
12 accommodated grades one to seven) (Athens 2009).

### 13 3.5.3.2 Ancestral Ties

14 Pagan is now restricted from permanent residency/resettlement due to the high public safety risk caused  
15 by the volcano; however, a few of the former residents have returned for brief to extended stays with  
16 support from the Pagan Mayor’s office in Saipan (DoN 2014c). About 100 families claim personal or  
17 ancestral ties to the island (Pagan Economic Development Conference, personal communication,  
18 February 2014; Mariana Resource Conservation and Development Council, personal communication,  
19 January 2014).

20 Archaeological and oral history research has indicated that the Chamorro and Carolinian communities are  
21 considered the traditional peoples of Pagan, with up to six specific sites eligible for consideration as  
22 traditional cultural properties existing on the island (DoN 2014c). While these communities’ residence on  
23 Pagan has been intermittent, the irregularity has been a result of outside forces: either occupation or  
24 management by another peoples or nations, or natural disaster (the 1981 eruption of Mount Pagan which  
25 forced evacuation of the island). Many people that grew up on Pagan currently live on Saipan or  
26 elsewhere because of the 1981 evacuation, and others have ancestors that lived there or are buried there  
27 (Pagan Economic Development Conference, personal communication, February 2014; Mariana Resource  
28 Conservation and Development Council, personal communication, January 2014).

29 Analysis of oral history interviews conducted in 2009 and 2014 detail the character and cohesion of the  
30 Chamorro and Carolinian communities of Pagan, and confirm that the communities carried out traditional  
31 practices on Pagan that are rooted in their history (DoN 2014c). The study shows that historically the  
32 Chamorro and Carolinian communities were culturally distinct and continue to have differing cultural  
33 values; however sharing the same island with the Chamorro led to the Carolinians adapting the same type  
34 of subsistence activities that were first undertaken by Chamorro. Pagan was able to provide all the natural  
35 resources that were needed for the Chamorro and Carolinian populations to sustain themselves – everyone  
36 relied on subsistence living (gathering, hunting and fishing); farming was also important. Pagan produce  
37 was considered a superior product within the Marianas and farming was important not only for daily  
38 living but also for income through export to Saipan and Guam. These activities, rooted in the history of  
39 the Chamorro and Carolinians, are associated with specific locations around the island. Informants  
40 expressed the importance of practicing these cultural activities in order to maintain the continuity of their  
41 cultural identity (DoN 2014c).

1 Additionally, the study showed that the island holds cultural importance to former residents; DoN oral  
2 history interviews indicate the island is “home” and provides a venue for former residents to practice their  
3 culture and pass this on to the next generation (DoN 2014c).

4 Finally, the study (DoN 2014c) confirmed that there exists a desire of former Pagan residents to return to  
5 the island, to live and practice their traditional practices as they were passed down to them from their  
6 parents, and to in turn pass them down to their children. Additional research has indicated that some  
7 people who have personal or ancestral ties to Pagan have a desire to settle there permanently, to live and  
8 die where their ancestors lived and died (Mariana Resource Conservation and Development Council,  
9 personal communication, January 2014), or to visit the sites of their former homes.

### 10 3.5.3.3 Homesteads

11 The Northern Islands Village and Agricultural Homesteading Act of 2008 was passed by the CNMI  
12 legislature to:

- 13 a) establish the Northern Islands Village and Agricultural Homesteading program for current or  
14 former residents of the Northern Islands or any qualified person interested in residing on the  
15 Northern Islands,
- 16 b) enable residents of the Northern Islands who hold a homestead permit to borrow money to build  
17 a safe and sanitary home,
- 18 c) initiate and promote economic development of the Northern Islands through long-term  
19 commercial leases and permanent settlements,
- 20 d) provide the Department of Public Lands sufficient authority and flexibility to administer the act,  
21 and,
- 22 e) allow the Department of Public Lands to review homestead claims on their merits.

23 Since the passage of the Northern Islands Village and Agricultural Homesteading Act of 2008, no  
24 Northern Islands homesteads have been permitted or deeded (a permit would allow home construction on  
25 a homestead lot while a deed would imply actual ownership of the homestead lot). CNMI House Bill  
26 18-109 was introduced and passed in 2013, simplifying the homestead permit process by waiving certain  
27 eligibility requirements.

28 The realities of approving homestead deeds on Pagan however are tenuous. Because physical and public  
29 services infrastructure would need to be developed on the distant island, homesteading on Pagan would be  
30 very costly to the CNMI government (CNMI Department of Public Lands, personal communication,  
31 February 2014). The Department of Public Lands indicates that while they may be able to provide  
32 homestead *permits*, they may not legally provide homestead *deeds* until the homestead lands have the  
33 infrastructure (i.e., water, electricity) necessary to enable safe and sanitary living (CNMI Department of  
34 Public Lands, personal communication, February 2014). CNMI government agencies indicate that they  
35 would be required to provide public services for any villages that would be developed on Pagan (CNMI  
36 Department of Public Lands, personal communication, February 2014; CNMI Public School System,  
37 personal communication, February 2014; CNMI Department of Public Safety, personal communication,  
38 February 2014; CNMI Department of Homeland Security and Emergency Management, personal  
39 communication, February 2014).

1 Those who wish to re-settle Pagan indicate that they do not require publicly-provided infrastructure, that  
2 they can live in housing utilizing sustainable techniques (such as solar power) that make large-scale  
3 public infrastructure unnecessary (Northern Island Mayor's Office, personal communication, February  
4 2014); however, development without public services may violate certain public safety and child  
5 protective statutes of the CNMI.

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**CHAPTER 4**  
**EXPECTED FUTURE CONDITIONS**

The expected future conditions presented in this chapter are consistent with a no-action alternative concept – they represent future conditions without the proposed action. Expected future conditions serve as a baseline for comparison when assessing the magnitude of potential impacts of the proposed action. Analyses used to establish this “expected future baseline” includes quantitative projections and binary assessments. When quantified, expected future baseline conditions are presented as a range of single data points; the range represents a spectrum of future economic growth scenarios (i.e., the low end of the range is based on a scenario that assumes weak economic growth in the future while the high end of the range is based on a scenario that assumes strong economic growth in the future) with no point along the range more likely to occur than any other. See Appendix A for information on the methodology and calculations that were used to develop the projections made in this chapter.

**4.1 POPULATION**

**4.1.1 Overall Trends**

4.1.1.1 Commonwealth of the Northern Mariana Islands Overall and Tinian

Table 4.1-1 shows the expected future baseline population for the CNMI overall and for Tinian; a range of projected values (low, medium, and high) that are based on average projected population from 2016 to 2025, is presented. The low end of the range for expected future baseline population is 52,174 for the CNMI overall and 2,890 for Tinian. The high end of the projection range indicates an expected future baseline population for the CNMI overall of 63,768 and 3,532 for Tinian.

**Table 4.1-1. Expected Future Baseline Population**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall <sup>1</sup>	52,174	57,971	63,768
Tinian	2,890	3,211	3,532

*Legend:* CNMI = Commonwealth of the Northern Mariana Islands

*Notes:* <sup>1</sup>Estimated based on CNMI Overall projections using a factor of: Tinian population = 5.5% of CNMI overall population. Ratio based on historic population levels.

*Source:* U.S. Census Bureau 2013.

The low end of the range for expected future baseline population indicates that CNMI and Tinian populations would be 3% lower than counted in the 2010 Census (see Table 3.2-1), while the medium and high portions of the range indicate that population is expected to increase to levels greater than in 2010 (by 7.6% and 18%, respectively).

4.1.1.2 Pagan

The expected future baseline indicates that there would be homesteaders on Pagan. These homesteaders are not expected to own land but would be working on homestead claims under permit from the CNMI Department of Public Lands. This population would represent an increase above the official current population of Pagan, which is zero. See Section 4.4.2 for more information.

1 **4.1.2 Demographics**

2 With regard to demographics, no noticeable trends or expected drastic changes upon which to base near-  
3 term projections were identified in research. As such, no projection was made and the existing conditions  
4 identified in Chapter 3 represent the expected future baseline.

5 **4.2 ECONOMIC CONDITIONS**

6 **4.2.1 Tourism**

7 Analysis results indicated clear major trends: total Japanese visits are declining and Chinese, Korean, and  
8 Russian visits are increasing. In recent years, the overall effect of this trend has been an increasing  
9 number of visitors. These trends were corroborated by interviews conducted in early 2014 (Tinian  
10 Dynasty, personal communication, January 2014; Marianas Visitors Authority, personal communication,  
11 February 2014; Hotel Association of the Northern Marianas, personal communication, February 2014;  
12 Saipan Chamber of Commerce, personal communication, February 2014).

13 4.2.1.1 Commonwealth of the Northern Mariana Islands

14 During the CNMI's prolonged economic contraction that began in 1997, the capacity of the CNMI visitor  
15 industry declined as hotels closed and foreign workers who were part of the visitor industry went home  
16 (Marianas Visitors Authority, personal communication, February 2014). The reduced capacity has  
17 brought about a shortage of hotel rooms on Saipan that, as of early 2014, was only truly problematic  
18 during peak times such as the Chinese Lunar New Year (Hotel Association of the Northern Marianas,  
19 personal communication, February 2014).

20 The shortage of hotel rooms is being addressed by the market: the Mango Resort (~140 rooms catering to  
21 Russian visitors) opened in early 2014, the Palms Hotel (~315 rooms) and Coral Ocean Point (~100  
22 rooms) are set to open in the summer of 2014 (Marianas Visitors Authority, personal communication,  
23 February 2014; Saipan Chamber of Commerce, personal communication, February 2014; Hotel  
24 Association of the Northern Marianas, personal communication, February 2014), and the CNMI  
25 Department of Public Lands selected a bidder to develop a resort project in north Saipan that will contain  
26 about 450 rooms (Saipan Chamber of Commerce, personal communication, February 2014). Also, as of  
27 early 2014, an additional hotel project in San Antonio is in the early stages of permitting. Additionally,  
28 the Palms Hotel is expected to be branded by the Sheraton (Eugenio 2014a), which could benefit overall  
29 CNMI tourism because large brands such as Sheraton conduct their own marketing campaigns that would  
30 be additive to current CNMI tourism marketing (Hotel Association of the Northern Marianas, personal  
31 communication, February 2014).

32 Growth in the number of visitors and number of hotel rooms is expected to create demand for  
33 construction workers and an additional 2,400 to 3,000 jobs in the visitor industry (CNMI Department of  
34 Labor, personal communication, January 2014). Because the supply of construction workers in the CNMI  
35 is small, meeting demand for construction workers for any large future projects in the CNMI would mean  
36 importing foreign construction workers (Marianas Visitors Authority, personal communication, February  
37 2014) and demand for the jobs in the visitor industry would likely need to be met in the same manner.  
38 This demand for foreign labor could be met under existing CNMI immigration rules. The strong potential  
39 for continued growth in the number of visitors from China and Korea indicates that continued growth in  
40 the CNMI economy should be expected to continue.

1 Table 4.2-1 shows the expected future baseline CNMI visitors from off-island and a breakdown of visitors  
 2 by country of origin; a range of projected values (low, medium, and high) is presented. The low end of the  
 3 range for expected future baseline CNMI visitors is 472,368. The middle of the range shows 557,011. The  
 4 high end of the projection range indicates an expected future baseline of 582,925 visitors to the CNMI.  
 5 The entire range of expected future baseline estimates indicates a larger number of annual visitors to the  
 6 CNMI than in 2013 (see Table 3.3-1). The low end of the expected future baseline range indicates 7.6%  
 7 more visits than in 2013, the medium indicates 27% more visits, and the high end of the range indicates  
 8 33% more visits.

**Table 4.2-1. Expected Future Baseline CNMI Visitors from Off-Island and Visitor Origin**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
<b>Total Visitors</b>	<b>472,368</b>	<b>557,011</b>	<b>582,925</b>

9 Table 4.2-2 shows the expected future baseline CNMI visitor expenditures. The low end of the range for  
 10 expected future baseline CNMI visitor expenditures is \$374 million. The middle of the range shows  
 11 \$445.5 million and the high end of the projection range indicates an expected future baseline of \$465.6  
 12 million.

**Table 4.2-2. Expected Future Baseline CNMI Visitor Expenditures (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
<b>Total</b>	<b>\$374.0</b>	<b>\$445.5</b>	<b>\$465.6</b>

13 The entire range of expected future baseline estimates indicates more visitor expenditures per year in the  
 14 CNMI than were made in 2012 (see Table 3.3-2). The low end of the expected future baseline range  
 15 indicates 25% more visitor expenditures than in 2012, the medium indicates 49% more visitor  
 16 expenditures, and the high end of the range indicates 56% more visitor expenditures.

17 4.2.1.2 Tinian

18 Even though Tinian tourism was on the upswing, according to Tinian Dynasty management, occupancy in  
 19 2013 was low – approximately 40% (Tinian Dynasty, personal communication, January 2014) – meaning  
 20 that many more visitors could be accommodated given existing capacity. Growth in Chinese visitors to  
 21 Tinian is expected to continue due to increasing market penetration that the Dynasty is gaining combined  
 22 with demographic changes in China that, over time, will lead greater numbers of families to take  
 23 vacations. In expectation of this increase, and to capture higher-end customers, the Tinian Dynasty is  
 24 renovating its fifth floor (Tinian Dynasty, personal communication, January 2014).

25 Table 4.2-3 shows the expected future baseline Tinian visitors from off-island and a breakdown of visitors  
 26 by country of origin; a range of projected values (low, medium, and high) is presented. The low end of the  
 27 range for expected future baseline Tinian visitors is 57,046. The middle of the range shows 81,494. The  
 28 high end of the projection range indicates an expected future baseline of 82,565 visitors to Tinian.

**Table 4.2-3. Expected Future Baseline Tinian Dynasty Visitors from Off-Island and Visitor Origin**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
<b>Visitors</b>	<b>57,046</b>	<b>81,494</b>	<b>82,565</b>

29 *Note:* The Tinian Dynasty provides accommodations to about 90% of  
 30 Tinian visitors overall. Considering only overnight visitors, the  
 31 Tinian Dynasty provides accommodations to more than 90% (up  
 32 to 99%).

33 The entire range of expected future baseline estimates indicates a larger number of annual visitors to  
 34 Tinian than in 2013 (see Table 3.3-3). The low end of the expected future baseline range indicates 4%

1 more visits than in 2013, the medium indicates 49% more visits, and the high end of the range indicates  
 2 51% more visits.

3 4.2.1.3 Pagan

4 The Silver Explorer, a cruise ship operated by Silversea Expeditions, stopped at Pagan on its way from  
 5 Otaru, Japan to Apra, Guam on September 28, 2014. The ship was scheduled to arrive on Pagan at 8:30  
 6 a.m. and depart at 2:00 p.m., for a stay of 5.5 hours (Silversea Expeditions 2014). The ship brought what  
 7 was estimated to be 132 visitors to the island (Todiño 2013). Prior to the visit, the Department of Public  
 8 Lands issued a permit to clean up and landscape a portion of Pagan’s accessible area (CNMI Department  
 9 of Public Lands 2014, personal communication, February 2014; Northern Islands Mayor’s Office,  
 10 personal communication, February 2014); this is the only permit issued with relevance to tourism on  
 11 Pagan.

12 The Marianas Visitors Authority indicated that it has a plan for tourism on Pagan but has not begun to  
 13 explore the possibility of implementing it; the organization indicated that any tourism development on  
 14 Pagan would be the product of private investment (Marianas Visitors Authority, personal communication,  
 15 February 2014). One private developer has created a vision for an eco-lodge on Pagan (Pagan Economic  
 16 Development Conference, personal communication, February 2014); however, neither permit applications  
 17 nor financial investments have been made to actualize the vision. Though tourism on Pagan may one day  
 18 be viable (Marianas Visitors Authority, personal communication, February 2014), substantial growth in  
 19 the number of visitors or tourism-related development is not expected compared to current conditions  
 20 (Section 3.3.1.3).

21 **4.2.2 Gross Domestic Product**

22 Table 4.2-4 shows the expected future baseline gross domestic product for the CNMI in year 2012  
 23 dollars; a range of projected values (low, medium, and high) is presented. The low end of the range for  
 24 expected future baseline gross domestic product is \$878 million. The middle of the range shows gross  
 25 domestic product of \$1,045 million. The high end of the projected range indicates baseline gross domestic  
 26 product of \$1,093 million.

**Table 4.2-4. Expected Future Baseline Gross Domestic Product (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall	\$878	\$1,045	\$1,093

Legend: CNMI = Commonwealth of the Northern Mariana Islands

28 The entire range of expected future baseline estimates of gross domestic product exceeds the 2012 Bureau  
 29 of Economic Analysis estimate of \$701 million (Table 3.3-5). The low end of the expected future baseline  
 30 indicates that average gross domestic product between the years 2016 and 2025 would exceed 2012 gross  
 31 domestic product by 25%, the middle of the range shows a 49% increase over the 2012 value, and the  
 32 high end of the range shows a 56% increase in value of gross domestic product from the current condition  
 33 to the expected future baseline.

34 **4.2.3 Employment and Income**

35 4.2.3.1 Employment

36 Table 4.2-5 shows the expected future baseline employment for the CNMI overall and for Tinian; a range  
 37 of projected values (low, medium, and high) is presented. The low end of the range for expected future  
 38 baseline employment is 26,906 for the CNMI overall and 1,899 for Tinian. The middle of the range  
 39 shows employment of 32,053 for the CNMI overall and 2,262 for Tinian. The high end of the projection

1 range indicates an expected future baseline employment for the CNMI overall of 33,498 and 2,378 for  
 2 Tinian.

**Table 4.2-5. Expected Future Baseline Employment<sup>1</sup>**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall	26,906	32,053	33,498
Tinian <sup>2</sup>	1,899	2,262	2,378

3 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

4 *Notes:* <sup>1</sup>“Employment” defined as the number of people employed.

5 <sup>2</sup>Estimated based on CNMI Overall projections using a  
 6 factor of: Tinian employment = 7.1% of CNMI overall  
 7 employment. Ratio based on 2010 employment.

8 The entire range of expected future baseline estimates of employment exceed the 2010 Census estimate of  
 9 24,826 in the CNMI overall and 1,752 on Tinian (Table 3.3-7). The low end of the expected future  
 10 baseline indicates that average employment between the years 2016 and 2025 would exceed 2010  
 11 employment by 8.4%, the middle of the range shows a 29% increase over the 2010 value, and the high  
 12 end of the range shows a 35% increase in employment from the current condition to the expected future  
 13 baseline.

14 **4.2.3.2 Income**

15 Table 4.2-6 shows the expected future baseline employee compensation for the CNMI overall and for  
 16 Tinian; a range of projected values (low, medium, and high) is presented. The low end of the range for  
 17 expected future baseline employee compensation is \$584 million for the CNMI overall and \$35.8 million  
 18 for Tinian. The middle of the range shows employment of \$696 million for the CNMI overall and \$42.6  
 19 million for Tinian. The high end of the projection range indicates baseline employee compensation for the  
 20 CNMI overall of \$727 million and \$44.6 million for Tinian.

**Table 4.2-6. Expected Future Baseline Employee Compensation (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall	\$584	\$696	\$727
Tinian <sup>1</sup>	\$35.8	\$42.6	\$44.6

21 *Legend:* CNMI = Commonwealth of the Northern Mariana Islands

22 *Note:* <sup>1</sup>Estimated based on CNMI Overall projections using a factor of: Tinian  
 23 employee compensation = 6.1 % of CNMI overall employee  
 24 compensation. Ratio based on 2010 aggregate wage and salary income.

25 The entire range of expected future baseline estimates of income exceed the 2012 Bureau of Economic  
 26 Analysis estimate of \$482 million in the CNMI overall (Table 3.3-9). The low end of the expected future  
 27 baseline indicates that average employee compensation between the years 2016 and 2025 would exceed  
 28 2012 employee compensation by 21%, the middle of the range shows a 44% increase over the 2010 value,  
 29 and the high end of the range shows a 51% increase in value of employee compensation from the current  
 30 condition to the expected future baseline.

31 **4.2.4 Government Finance**

32 **4.2.4.1 Commonwealth of the Northern Mariana Islands Government Revenues**

33 Table 4.2-7 shows the expected future baseline CNMI government revenues; a range of projected values  
 34 (low, medium, and high) is presented. The low end of the range for expected future baseline CNMI  
 35 government revenues is \$176 million. The middle of the range shows CNMI government revenues of  
 36 \$209 million. The high end of the projection range indicates baseline CNMI government revenues of  
 37 \$219 million.

**Table 4.2-7. Expected Future Baseline CNMI Government Revenues (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall	\$176	\$209	\$219

*Legend:* CNMI = Commonwealth of the Northern Mariana Islands

The entire range of expected future baseline estimates of CNMI government revenues exceeds the 2009 measure of \$154.7 million (Table 3.3-10). The low end of the expected future baseline indicates that average government revenue between the years 2016 and 2025 would exceed 2009 revenue by 13.8%, the middle of the range shows a 35% increase over the 2010 value, and the high end of the range shows a 42% increase in value of CNMI government revenues from the current condition to the expected future baseline.

**4.2.4.2 Commonwealth of the Northern Mariana Islands Government Expenditures**

Table 4.2-8 shows the expected future baseline CNMI government expenditures; a range of projected values (low, medium, and high) is presented. The low end of the range for expected future baseline CNMI government expenditures is \$180 million. The middle of the range shows CNMI government revenues of \$214 million. The high end of the projection range indicates baseline CNMI government revenues of \$224 million.

**Table 4.2-8. Expected Future Baseline CNMI Government Expenditures (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
CNMI Overall	\$180	\$214	\$224

*Legend:* CNMI = Commonwealth of the Northern Mariana Islands

The entire range of expected future baseline estimates of CNMI government expenditures exceeds the 2009 measure of \$168.1 million (Table 3.3-11). The low end of the expected future baseline indicates that average government expenditure between the years 2016 and 2025 would exceed 2009 revenue by 7%, the middle of the range shows a 27% increase over the 2009 value, and the high end of the range shows a 33% increase in value of CNMI government expenditures from the current condition to the expected future baseline.

**4.2.5 Housing**

Tinian

The West San Jose Village Homestead, located in northwest San Jose and south of the airport, broke ground on February 5, 2014 and 170 families received homestead permits to build homes. Five other homestead sites are expected to be developed on Tinian that would house an additional 345 families (Eugenio 2014b).

**4.2.6 Agriculture**

**4.2.6.1 Agricultural Products**

With regard to agricultural production, no noticeable trends or expected drastic changes upon which to base near-term projections were identified. As such, no projection was made and the existing conditions identified in Chapter 3 represent the expected future baseline.

1 4.2.6.2 Livestock

2 Table 4.2-9 shows the expected future baseline number and value of cattle on Tinian, with prices based on  
 3 per head of cattle prices presented in Section 3.3.6.2. The expected future baseline indicates a higher  
 4 number of cattle than current conditions. The low end of the range for expected future baseline cattle is  
 5 3,361 with a value of almost \$1.8 million. The middle of the range shows 3,547 cattle worth almost \$1.9  
 6 million and the high end of the projection range indicates 3,667 cattle worth just over \$1.9 million.

**Table 4.2-9. Expected Future Baseline Number and Value of Cattle, and Land Required for Grazing**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Number of Cattle	3,361	3,547	3,667
Value of Herd	\$1,764,547	\$1,861,853	\$1,924,847
Total Hectares Required (2.5 per hectare)	1,344	1,419	1,467
Total Hectares Required (4.2 per hectare)	800	844	873
<i>Range of Hectares Required</i>	<i>800</i>	<i>1,132</i>	<i>1,467</i>

7 Commensurate with the projections of increased herd size is the expectation that Tinian ranchers will  
 8 achieve greater efficiency through the improved techniques that NMC-CREES has been researching, and  
 9 reach the rate of about 1 head of cattle per acre (2.5 per hectare) that was expressed to be ideal by the  
 10 Tinian Cattlemen’s Association (Tinian Cattlemen’s Association, personal communication, January  
 11 2014). Given the projections of number of cattle on Tinian and a level of efficiency equal to 2.5 cattle per  
 12 hectare, the Tinian herd would require between 3,321 and 3,625 acres (1,344 and 1,467 hectares) for  
 13 grazing. Also, there is the potential that ranchers could exceed that efficiency. The Tinian Cattlemen’s  
 14 Association noted that some ranching operations in Australia have improved their efficiency by up to six  
 15 times by incorporating hedgerows of legumes that capitalize on vertical space (Tinian Cattlemen’s  
 16 Association, personal communication, January 2014). Tinian’s current efficiency is 1.4 cattle per hectare,  
 17 multiplying that by six would indicate an efficiency factor of 8.4 cattle per hectare. If Tinian ranchers are  
 18 able to employ vertical space to improve efficiency by three times (half of the potential improvement),  
 19 then 4.2 cattle per hectare could be expected. In that situation, the Tinian herd would need between 800  
 20 and 873 hectares (1,977 and 2,157 acres) for grazing.

21 Marianas Grazing and Livestock Management Academy analysis shows that the size of the herd would  
 22 need to be 2,500 for a U.S. Department of Agriculture-compliant slaughterhouse to run at breakeven  
 23 (Marianas Grazing and Livestock Management Academy 2011). The Tinian Cattlemen’s Association also  
 24 believes that a slaughtering facility running at a loss would be subsidized because a slaughterhouse would  
 25 benefit the health and finances of the public by adding to the fresh food supply (Tinian Cattlemen’s  
 26 Association, personal communication, January 2014). The approach to establishing a slaughterhouse has  
 27 been described in detail and would be implemented in two phases. Phase 1 would involve building a “kill  
 28 unit” where a rancher could bring a cow, and have it slaughtered and certified by the U.S. Department of  
 29 Agriculture to make it legal to sell. As of early 2014, there was a draft design for Phase 1 that was under  
 30 review by the CNMI Department of Public Works. Also, the Tinian Cattlemen’s Association indicated  
 31 that a request for proposals to construct the kill unit may be released by the end of 2014 (Tinian  
 32 Cattlemen’s Association, personal communication, January 2014). The plan has support from the Tinian  
 33 municipality and, according to the Tinian Mayor and Tinian Cattlemen’s Association, the support of the  
 34 CNMI legislature, and Tinian received an appropriation of about \$200,000 from the CNMI government to  
 35 fund Phase 1 (Tinian Mayor’s Office, personal communication, January 2014; Tinian Cattlemen’s  
 36 Association, personal communication, January 2014). The proposed sites are either near the farmers’  
 37 market or the agricultural station, which is an insemination facility. Phase 2 would add a processing  
 38 facility to the kill unit developed in Phase 1.

1 Given that it is projected that there will be more than 3,000 head of cattle on Tinian in the expected future  
2 baseline (exceeding the 2,500 threshold to make a slaughterhouse financially feasible), there is a clear  
3 plan and location for the slaughterhouse, and that there is government support and funding, it is expected  
4 that a U.S. Department of Agriculture-compliant slaughterhouse will be in operation on Tinian in the near  
5 future and as such is considered as part of the expected future baseline. It should be noted however, that  
6 commercial production is not permitted in the Military Lease Area and for a slaughterhouse to be feasible  
7 the lease back agreement would have to be amended.

#### 8 **4.2.7 Fishing and Aquaculture**

##### 9 4.2.7.1 Fishing

##### 10 Tinian

11 With regard to fishing on Tinian, no noticeable trends or expected drastic changes upon which to base  
12 near-term projections were identified in research. As such, no projection was made and the existing  
13 conditions identified in Chapter 3 represent the expected future baseline.

##### 14 4.2.7.2 Aquaculture

15 The development of open-ocean aquaculture in waters around Saipan, Tinian, and Pagan has been  
16 discussed as a potential economic development project. Some experts consider these waters amenable  
17 because deep water occurs close to shore and because there is sufficient current to remove fish refuse  
18 (NMC-CREES, personal communication, February 2014; Western Pacific Regional Fishery Management  
19 Council, personal communication, February 2014).

20 The profitability of a potential open-ocean aquaculture operation is unknown, but there is a market for the  
21 product in the CNMI and to an even greater extent on Guam. The viability of this market has been noticed  
22 by private industry, and although the lack of information on profitability may curb private interest, the  
23 Western Pacific Regional Fishery Management Council noted that there is potential government support  
24 (Western Pacific Regional Fishery Management Council, personal communication, February 2014).

25 The National Oceanic and Atmospheric Administration has a policy stating “aquaculture is an important  
26 component of National Oceanic and Atmospheric Administration’s efforts to... create employment and  
27 business opportunities in coastal communities, and enable the production of safe and sustainable seafood”  
28 (National Oceanic and Atmospheric Administration 2011). The policy names numerous federal agencies  
29 that are committed to supporting the development of new technologies, including open-ocean aquaculture.  
30 While no permits for open-ocean aquaculture within the CNMI have been requested as of early 2014, the  
31 CNMI Marine Conservation Plan, which was approved by the National Oceanic and Atmospheric  
32 Administration and funded through federal fines on illegal fishing in the area, supports an open-ocean  
33 aquaculture project (Western Pacific Regional Fishery Management Council, personal communication,  
34 February 2014). Furthermore, the U.S. Department of Agriculture-funded NMC-CREES also promotes  
35 the activity (CNMI Coastal Resources Management Program 2011).

36 Some initial planning efforts have been made, and the CNMI Section 309 Assessment and Strategy  
37 Report 2011-2015 lays out the following objective: “Adoption of procedures and policies to evaluate and  
38 facilitate the siting of public and private aquaculture facilities in the coastal zone, which will enable States  
39 to formulate, administer, and implement strategic plans for marine aquaculture” (CNMI Coastal  
40 Resources Management Program 2011).



1 Any open-ocean aquaculture operation would require a permit from the CNMI Division of Fish and  
 2 Wildlife. Since the Saipan Zoning Law of 2008, by omission, limits aquaculture to locations on land  
 3 (CNMI Coastal Resources Management Program 2011), open-ocean aquaculture is technically illegal in  
 4 Saipan’s waters. Permitting and zoning limitations may be easily overcome, because as of 2009, it is  
 5 CNMI government policy to encourage aquaculture development (CNMI Coastal Resources Management  
 6 Program 2011) and the National Oceanic and Atmospheric Administration is committed to a quick and  
 7 efficient permitting process (National Oceanic and Atmospheric Administration 2011).

8 Given the public- and private-sector interest, federal support and funding, and high demand for open-  
 9 ocean aquaculture products, it could be expected open-ocean aquaculture activities in the waters around  
 10 Saipan, Tinian, or Pagan would be expected to commence in the near future. The viability of aquaculture  
 11 activity in the waters around Tinian may be affected by political control of submerged lands. Due to its  
 12 isolation and lack of infrastructure, Pagan would be the least likely location of the three islands. A  
 13 representative of the NMC-CREES explained that the organization is contemplating a location on the  
 14 western side of Marpi (in northern Saipan) (Michael Ogo, personal communication, May 2014).

15 **4.2.8 Commonwealth of the Northern Mariana Islands Airports and Seaports**

16 4.2.8.1 Airports

17 Table 4.2-10 shows the expected future baseline arriving passengers for the CNMI overall; a range of  
 18 projected values (low, medium, and high) is presented. The low end of the range for expected future  
 19 baseline number of arriving passengers is 606,417. The middle of the range shows 715,080 arriving  
 20 passengers and the high end indicates baseline arrivals of 748,348.

**Table 4.2-10. Expected Future Baseline CNMI Arriving Passengers**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Arriving Passengers	606,417	715,080	748,348

21 The entire range of expected future baseline estimates of arriving passengers exceed the number of  
 22 passengers that arrived in the CNMI in 2012 (572,435, see Table 3.3-29). The low end of the expected  
 23 future baseline indicates 6% more arrivals than in 2012, the middle of the range shows a 25% increase  
 24 over the 2012 value, and the high end of the range shows a 31% increase over 2012 arrivals.

25 4.2.8.2 Seaports

26 Table 4.2-11 shows the expected future baseline inbound revenue tons for the CNMI overall; a range of  
 27 projected values (low, medium, and high) is presented. The low end of the range for expected future  
 28 baseline inbound revenue tons is 516,443. The middle of the range shows 615,225 inbound revenue tons  
 29 and the high end of the projection range indicates expected future baseline inbound revenue tons equaling  
 30 642,966.

**Table 4.2-11. Expected Future Baseline CNMI Inbound Revenue Tons**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Inbound	516,443	615,225	642,966

31 The entire range of expected future baseline estimates of inbound revenue tons exceed the number of  
 32 inbound revenue tons that arrived in the CNMI in 2012 (395,070, see Table 3.3-30). The low end of the  
 33 expected future baseline indicates 31% more inbound freight than in 2012, the middle of the range shows  
 34 a 56% increase over 2012, and the high end of the range shows a 63% increase over 2012 inbound  
 35 revenue tons.

1 **4.2.9 Power and Water Utility Rates**

2 With regard to utility rates, no noticeable trend or expected drastic change upon which to base near-term  
3 projections of utility rates was identified in research. As such, no projection was made and the rates  
4 identified in Chapter 3 represent the expected future baseline.

5 The expected future baseline of peak power demand on Tinian would be 5.6 megawatts (Naval Facilities  
6 Engineering Command Pacific 2014) by 2020.

7 **4.2.10 Minerals**

8 Tinian

9 With regard to minerals or mining on Tinian, no noticeable trends or expected drastic changes upon  
10 which to base near-term projections were identified in research. As such, no projection was made and the  
11 existing conditions identified in Chapter 3 represent the expected future baseline.

12 Pagan

13 The possibility of mining on Pagan has been discussed for several years. A permit to mine on Pagan was  
14 granted from 1995 to 2006, but mining activities never commenced and the permit was revoked. A permit  
15 to mine pozzolan was provided to a private company in 2014; however, neither a feasibility study nor a  
16 mine operations plan or reclamation plan has been filed. Since government funding has not been  
17 mentioned as a possibility, whether mining activities on Pagan should be expected to commence in the  
18 near future is a private sector issue that hinges on whether an acceptable rate of return can be expected  
19 from investing in such a mine. The information below provides data on this issue and a determination is  
20 made as to whether mining on Pagan is expected in the near future.

21 4.2.10.1 Pozzolan

22 The following describes the expected future conditions of the pozzolan market as it pertains to Pagan. No  
23 pozzolan mining activities on Pagan are expected in the near future because analysis shows that such  
24 activities would not be profitable.

25 Pozzolan Supply

26 National Aeronautics and Space Administration describes Mount Pagan as partially formed by low-  
27 density ash and pumice (National Aeronautics and Space Administration 2014). This material is best  
28 classified as “pumice or pumicite,” a commodity for which the U.S. Geological Survey maintains  
29 statistics and information. Pumice is an extrusive igneous volcanic rock formed through the cooling of  
30 air-pocketed lava, which results in a highly porous, low-density rock. Pumicite is defined as grains,  
31 flakes, threads, and/or shards of volcanic glass, synonymous with volcanic ash (U.S. Geological Survey  
32 2013a). Pumice and pumicite, when used as a pozzolan, are referred to as “pozzolana.”

33 The U.S. supply of pumice and pumicite is considered large (U.S. Geological Survey 2014a). More than  
34 25 million tons (22.7 metric tons) have been identified in the Western U.S. and it is estimated that more  
35 than a billion tons are present in the Western and Great Plains States (U.S. Geological Survey 2014a). In  
36 addition to large U.S. resources, large resources have been located on every continent (U.S. Geological  
37 Survey 2014a). In 2012, world production of pumice and pumicite for use as a pozzolan (pozzolana) was  
38 4.9 million tons (5.4 million metric tons) (U.S. Geological Survey 2013a).

39 Other natural pozzolans used in blended cement include aluminous clay and gypsum, which are also  
40 present in large quantities around the world (U.S. Geological Survey 2013b).

1 A number of artificial materials, most notably fly ash and blast furnace slag, are pozzolans that are  
2 increasingly being used to blend with Portland cement (U.S. Geological Survey 2013b). In China alone,  
3 160 million tons (176 million metric tons) of fly ash were produced as waste from coal-fired power plants  
4 in 2005 (Koukouzas et al. 2006). By 2030, fly ash production in China is expected to double (Koukouzas  
5 et al. 2006). As of 2008, China was reusing almost 70% of fly ash that was generated, with half of that  
6 being used to make blended cement (Cao et al. 2008). Annual world iron slag output in 2013 was on the  
7 order of 260 to 320 million tons (287 to 535 million metric tons), and steel slag was approximately 170 to  
8 250 million tons (187 and 276 million metric tons) (U.S. Geological Survey 2014b).

9 In summary, the world supply of pozzolan is massive. Common minerals make up the natural pozzolan  
10 supply, and new pozzolanic material is produced in great bulk every day as byproducts of industrial  
11 processes. The amount of pozzolana put into the market is small in comparison to other pozzolans such as  
12 clay, gypsum, slag, and fly ash.

### 13 Pozzolan Demand

14 The primary source of demand for pozzolans is the cement industry. Since pozzolans are more abundant  
15 and less expensive than pure Portland cement, cement producers blend pozzolans with Portland cement to  
16 lower production costs. In 2011, the U.S. produced 68.6 million tons of cement, which was less than 2%  
17 of world production (U.S. Geological Survey 2013b).

18 In 2011, 30,000 tons (33,000 metric tons) of pozzolana was used to produce blended cement in the U.S.  
19 Due to increased use of other pozzolans, this figure is down significantly from the early 2000s, when  
20 around 181,000 tons (200,000 metric tons) per year were being used. Use of pozzolana is substantially  
21 higher outside the United States as European construction styles use pozzolana to produce light-weight  
22 concrete walls, as opposed to the drywall used in the United States and China (U.S. Geological Survey  
23 2013a). Of the 5 million tons (4.9 million metric tons) of pozzolana produced in the world, 3.4 million  
24 tons (3.8 million metric tons) were produced in Italy or Greece.

25 In 2011, 5 tons (5.5 million metric tons) of aluminous clay, shale, and schist, and 3.3 million tons (3.6  
26 million metric tons) of gypsum, were used to make cement in the U.S (U.S. Geological Survey 2013b). In  
27 addition to pozzolans, ferrous materials are often used in U.S. blended cement; in 2011, 1.1 million tons  
28 (1.2 million metric tons) of iron ore, mill scale, and other ferrous materials were blended with Portland  
29 cement (U.S. Geological Survey 2013b).

30 In 2011, 2.3 million tons (2.5 million metric tons) of fly ash, 817,000 tons (900,000 metric tons) of other  
31 ashes, and 593,000 tons (654,000 metric tons) of slag were used in blended cement in the U.S. (U.S.  
32 Geological Survey 2013b).

33 About 9 million tons (9.9 million metric tons) of fly ash are used in European cement production annually  
34 (Cao et al. 2008). Based on 2006 Chinese fly ash production, and assuming 35% of fly ash is used for  
35 cement (derived from Cao et al. 2008), 56 million tons (62 million metric tons) of fly ash are used in the  
36 approximately two billion metric tons of cement produced in China annually (China's two billion metric  
37 tons was 55% of world production in 2011) (U.S. Geological Survey 2013b).

38 In summary, there is high demand for pozzolans, but data show that U.S. demand for pozzolana is low.  
39 U.S. cement manufacturers most often use clay and gypsum as natural pozzolans, and fly ash and slag as  
40 artificial pozzolans, in blended cement. These products each have lower prices than pozzolana. Pozzolana  
41 is still in heavy use in Europe, but that market is much too distant to be relevant to production on Pagan.  
42 Since China produces far more cement than any other nation in the world, all pozzolana produced on  
43 Pagan could easily be used in China, but only if it was provided at a low enough price.

1 Price

2 Table 4.2-12 shows U.S. price data for pozzolana from 2002 to 2012. During this period, prices ranged  
 3 from a low of \$17 per metric ton in 2007 to a high of \$44 per metric ton in 2011, and the average price  
 4 was approximately \$31. Compared to other minerals, the price of pozzolana relative to its weight is very  
 5 low. For example, a metric ton of gold is worth approximately \$45 million, a metric ton of copper is  
 6 worth approximately \$6,500, a metric ton of oil or potash (fertilizer) is worth approximately \$700, and a  
 7 metric ton of cement or coal is worth approximately \$90.

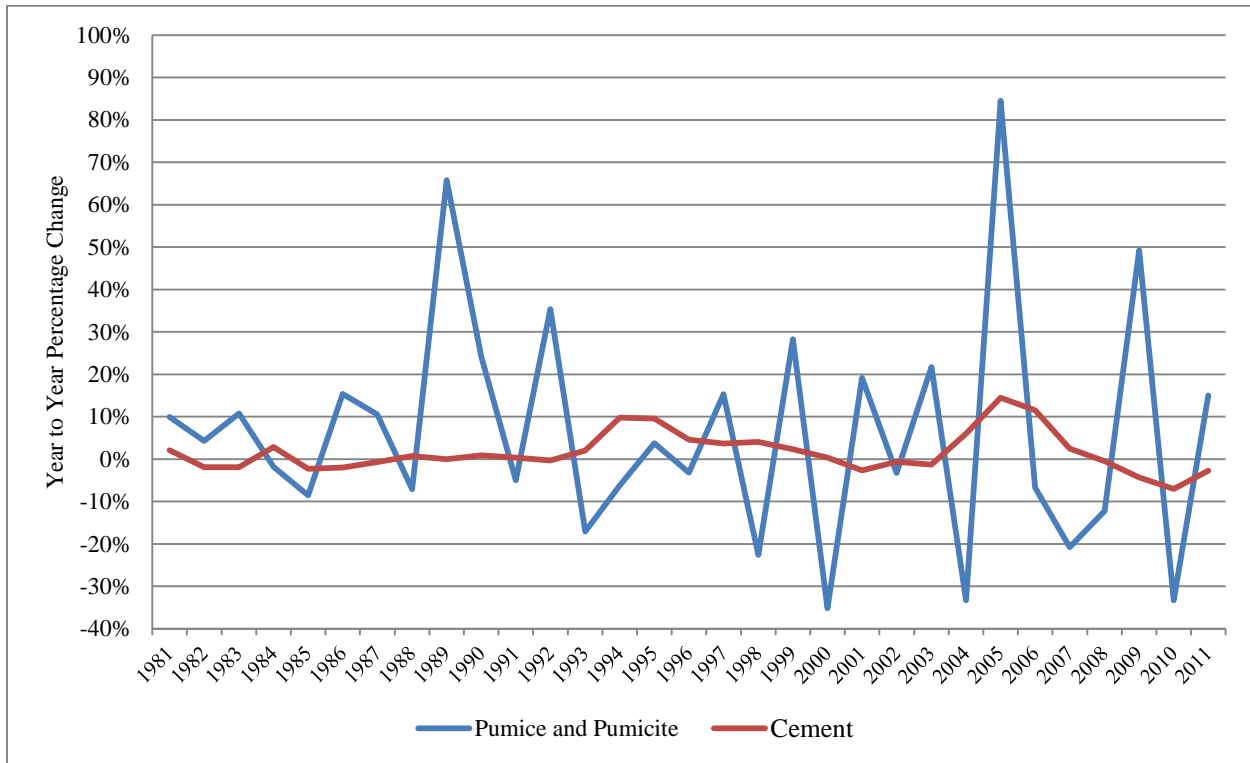
**Table 4.2-12. Unit Price (per metric ton) for Pozzolana, 2002 to 2012**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unit Price	\$38	\$27	\$43	\$21	\$28	\$17	\$27	\$30	\$29	\$44	\$35

8 *Note:* While the price of pozzolana generally fluctuates with the price of cement, because the primary use of pozzolana is as  
 9 a cheap substitute for cement to make concrete, the price of pozzolana will never exceed the price of cement.

10 *Source:* U.S. Geological Survey 2003, 2004, 2005b, 2006, 2007, 2008, 2009, 2010, 2011, 2012a, 2013a.

11 In addition to having a low price, pozzolana also has a fairly volatile price. Figure 4.2-1 shows the year-  
 12 to-year percentage change in the price of pozzolana compared to cement from 1981 to 2011. In general,  
 13 the year-to-year percentage price changes of pozzolana were more extreme than price changes in cement.  
 14 The price of pozzolana had extreme fluctuations: it increased over 60% from 1988 to 1989 and over 80%  
 15 from 2004 to 2005, and declined more than 30% from 1999 to 2000, 2003 to 2004, and 2009 to 2010. In  
 16 contrast, between 1981 and 2011, the price of cement never fluctuated more than 15%.



17 Source: U.S. Geological Survey 2012b, 2012c.

**Figure 4.2-1. Year to Year Percentage Price Change for Pumice and Pumicite,  
 and Cement, 1981 to 2011**

21 Prices of other natural pozzolans are typically lower than the price of pozzolana. From 2010 to 2013, the  
 22 price of clay, shale, and schist, used as a natural pozzolan, ranged from \$10-\$13 per metric ton (U.S.

1 Geological Survey 2014c), and the price of gypsum ranged from \$7 to \$8 (U.S. Geological Survey  
 2 2014d). Prices may not actually be paid by cement producers as they are often mining the materials to use  
 3 directly in cement mixtures (U.S. Geological Survey 2013c).

4 Slag prices between 2010 and 2013 were fairly constant at \$17 per metric ton (U.S. Geological Survey  
 5 2014b).

6 In summary, the price of pozzolana is high in comparison to other pozzolans; clay, gypsum, slag, and fly  
 7 ash have lower prices. Artificial pozzolans, which are still growing in terms of market share, are the waste  
 8 product of other industrial processes. Because they would otherwise be discarded, which would also entail  
 9 costs for waste removal and storage, the cost of bringing artificial pozzolans to market is very low relative  
 10 to natural pozzolans that must be mined. Because artificial pozzolans have a lower production price,  
 11 producers have the ability to undercut natural pozzolan producers and continue to increase market share.

12 Pozzolana Production Costs

13 All known U.S. pozzolana mine production was accomplished using open-pit mining methods (U.S.  
 14 Geological Survey 2014a). At an open-pit pozzolana mine, material is taken from the ground using  
 15 rippers, bulldozers, and front-end loaders. Crushing plants, and sometimes crushing mills, are used to  
 16 process the material into small enough particles for the material to exhibit pozzolanic qualities (U.S.  
 17 Geological Survey 2013a). Because pozzolana has a low unit price relative to its mass, in order for  
 18 revenues to cover costs, a pozzolana mine needs to be a high volume operation, processing many tons per  
 19 hour. In order to process a high volume of material, equipment needs to run at a high rate. Because of this,  
 20 pozzolana mines are very sensitive to electricity and fuel costs (U.S. Geological Survey 2014a).

21 Similarly, because pozzolana has a low price relative to its mass, takes a lot of space, and requires a lot of  
 22 fuel and weight capacity to move a unit of little value, transportation costs limit the distance pozzolana  
 23 can be shipped while remaining competitive with alternative materials (U.S. Geological Survey 2014a).  
 24 Similar to coal, for instance, essentially all of the material that is mined is shipped (compare to gold  
 25 where a ton of dirt is mined and after processing there are only a few grams of gold that need to be  
 26 transported) and transportation costs “account for a large share of the delivered price of coal” (World  
 27 Coal Association 2014). A charter quote for shipping break bulk material from Saipan to Pagan and back  
 28 and from Pagan to both Japan and China, using a tug and barge assumed to originate in Saipan, was  
 29 developed by Saipan Shipping Company and provided for this study (Saipan Shipping Company 2014).  
 30 As shown in Table 4.2-13, chartering a barge from Saipan to Pagan and back would cost a customer  
 31 \$158,857, if the barge were loaded to capacity (2,000 tons), the per ton price would be \$79. Other routes,  
 32 to Guam and Asian countries, would cost more: \$91 per ton if pozzolana were to be delivered to  
 33 customers in Guam, \$279 per ton sold to customers in Japan, and \$350 if delivered to customers in China.

**Table 4.2-13. Charter Hire Quotes for Break Bulk, As of April 2014**

<i>Route</i>	<i>Charter Hire Quote</i>	<i>Price Per Ton</i>
Saipan-Pagan-Saipan	\$158,857	\$79
Saipan-Pagan-Guam-Saipan	\$182,376	\$91
Saipan-Pagan-Japan-Saipan	\$558,680	\$279
Saipan-Pagan-China-Saipan	\$699,794	\$350

34 *Source:* Saipan Shipping Company 2014.

35 In summary, an open-pit pozzolana mine can operate at a low cost, but because such a large amount of  
 36 material needs to be processed, electricity and fuel costs are important. Since there is no electricity on

1 Pagan, a generator would be needed to keep a crushing plant operational. Most importantly, the cost of  
2 bringing the product to market from Pagan tends to exceed the price of the product.

3 Expectation

4 Pozzolana is a widely available substance that has a dwindling market due to the availability of low-cost  
5 substitutes. The geographic isolation of Pagan ensures fuel and shipping costs would be higher than those  
6 incurred by competitive producers. As such, competitors could likely provide pozzolan to end users for a  
7 price that is lower than the cost of bringing Pagan’s pozzolana to market. This scenario would leave any  
8 prospective pozzolana producer on Pagan without customers and sales needed to sustain operations.  
9 Therefore, no pozzolana mining activities on Pagan are expected in the near future. Moreover, as artificial  
10 pozzolans continue to gain market share and the supply of pozzolana on Pagan is naturally reduced due to  
11 erosion, any potential to develop a pozzolana mine on Pagan declines as time goes on.

12 **4.3 PUBLIC SERVICES**

13 **4.3.1 Public Education**

14 Table 4.3-1 shows the expected future baseline number of students on Tinian; a range of projected values  
15 (low, medium, and high) is presented. The low end of the range for students on Tinian is 451. The middle  
16 of the range shows the number of students on Tinian to be 501. The high end of the projection range  
17 indicates number of students on Tinian to be 551.

18 Because the low end of the range of population projections is lower than current levels (Table 4.3-1), the  
19 low end of the range of projected number of students indicates there would be fewer students in the  
20 expected future baseline than the current condition (of 489 students), the medium portion of the range  
21 indicates there would be about the same number of students, and the high portion of the range indicates  
22 that there would be 62 more students in the expected future baseline.

**Table 4.3-1. Expected Future Baseline Number of Students on Tinian**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Tinian Students	451	501	551

23 The current condition, identified in Section 3.4.1, is that Tinian schools have excess capacity. Under any  
24 portion of the estimated range for the expected future baseline number of students on Tinian, excess  
25 capacity would be expected to be maintained as the number of students in the expected future baseline  
26 would be below the maximum number of students enrolled in recent years, which was 615 students in  
27 2007 to 2008 school year.

28 **4.3.2 Public Safety**

29 With regard to public safety, no noticeable trends or expected drastic changes upon which to base near-  
30 term projections were identified in research. As such, no projection was made and the existing conditions  
31 identified in Chapter 3 represent the expected future baseline. Public safety providers would continue to  
32 have staffing to service population ratios that exceed U.S. averages and have the capacity to meet the  
33 needs of the Tinian population to the extent that they currently do.

34 **4.3.3 Public Health**

35 With regard to public health, no noticeable trends or expected drastic changes upon which to base near-  
36 term projections were identified in research. As such, no projection was made and the existing conditions  
37 identified in Chapter 3 represent the expected future baseline. Noting recent population declines and

1 facilities expansions, public health providers would be expected to continue to have the capacity to meet  
2 the needs of the Tinian population to the extent that they currently do.

### 3 **4.4 COMMUNITY AND SOCIAL TOPICS**

#### 4 **4.4.1 Tinian**

5 Prompted by the signing of the Covenant in 1976, the signing of the lease agreement in 1984, and later  
6 amendments to the lease agreements, the Tinian community expectations of the U.S. military expanding  
7 operations on the island and driving economic development have vacillated. When the plans associated  
8 with the 2010 Guam EIS did not include a permanent military presence on Tinian, there was  
9 disappointment and public sentiment shifted towards self-sufficiency (Tinian Health Center, personal  
10 communication, January 2014; Tinian Cattlemen’s Association, personal communication, January 2014).  
11 As an example of this shift, the Tinian Cattlemen’s Association was formed in reaction to the 2010 Guam  
12 EIS (Northern Marianas College Tinian, personal communication, January 2014); this organization now  
13 has intentions to re-establish a large cattle industry on Tinian. They have obtained local and federal  
14 government financial support to do so and younger residents are being taught both traditional and modern  
15 ways to capitalize on the viability of Tinian’s natural resources.

16 The agriculture industry has become one of the smallest industries on Tinian (see Table 3.3-7) and  
17 subsistence activity declined from 2000 to 2010 (U.S. Census Bureau 2000b, 2010a). Tinian residents are  
18 increasingly accessing their food as canned and processed foods (especially high in salt content)  
19 purchased in grocery stores rather than locally grown and produced items, which are more expensive or  
20 altogether unavailable (Commonwealth Health Center, personal communication, February 2014). All  
21 meat consumed in the CNMI is imported and frozen upon arrival, except for the small amount of  
22 subsistence ranching fresh meat that is used for fiestas and other celebrations (Wimberly 2011).

23 Non-communicable diseases have been identified as a health emergency in the U.S.-affiliated Pacific  
24 Islands, including CNMI. Non-communicable diseases include diabetes and its risk factors. Between 2003  
25 and 2005, leading causes of death in the CNMI were heart disease (39.5%), cancer (30.3%), stroke  
26 (27.4%), renal disease (22.2%), and sepsis (16.9%). Non-communicable disease-related conditions  
27 accounted for 56.2%, 55.2%, and 60.7% of all deaths in the CNMI, chronologically (Ichiho et al. 2013).  
28 According to the World Health Organization (2014) “common, preventable risk factors underlie most  
29 (non-communicable diseases). Most (non-communicable diseases) are the result of four particular  
30 behaviors (tobacco use, physical inactivity, unhealthy diet, and the harmful use of alcohol) that lead to  
31 four key metabolic/physiological changes (raised blood pressure, overweight/obesity, raised blood  
32 glucose and raised cholesterol.)” The increases in the number of cases of diabetes and hypertension seen  
33 on Tinian can be the result of a modernized lifestyle that lacks exercise and consumes a poor diet. A shift  
34 back to an agricultural community, where a large portion of the population works in the agricultural  
35 sector to produce locally-grown fresh food, could contribute to reversing this trend (Tinian Health Center,  
36 personal communication, January 2014, Commonwealth Health Center, personal communication,  
37 February 2014); however, the trend of store bought food becoming a larger portion of people’s diets is  
38 also expected to continue.

#### 39 **4.4.2 Pagan**

40 Historically, the Chamorro and Carolinian populations have experienced a pattern of settlement,  
41 relocation, and resettlement on Pagan. In addition, those who have lived on Pagan did so on what was  
42 considered public land (Pagan Economic Development Conference, personal communication, February

1 2014; CNMI Department of Public Lands, personal communication, February 2014; CNMI Department  
2 of Homeland Security and Emergency Management, personal communication, February 2014). The  
3 concept of homesteading on Pagan includes the potential for the issuance of a title to land or a future  
4 interest in the land. Such a transfer would be from the CNMI government to an individual.

5 In recent years, homesteading on Pagan has become an important political issue on which the CNMI  
6 Legislature and Department of Public Lands have had somewhat differing opinions (Eugenio 2014c,  
7 2014d). The Department of Public Lands states that it can provide homesteading permits once fair  
8 standards to determine eligibility for those permits have been developed (CNMI Department of Public  
9 Lands, personal communication, February 2014). To compel the Department of Public Lands to eliminate  
10 any issues (such as debating eligibility standards) that might delay the granting of homestead permits, the  
11 CNMI legislature passed the Northern Islands Village and Agricultural Homesteading Act of 2008 and  
12 House Bill 18-109 in 2014. The legislative acts were aimed at smoothing the process for applicants to  
13 receive homesteading permits.

14 However, even if former residents were able to obtain homesteading permits for Pagan, obtaining deeds  
15 for land on the island would be difficult. For deeds to be given out, 1) homestead lots would need to be  
16 attached to infrastructure (water, power, etc.), which would be costly to the CNMI government, and 2)  
17 some form of modern housing would need to be constructed by homesteaders (also extremely costly)  
18 (Eugenio 2014e). On Saipan, Tinian, and Rota, these problems of constructing homes and connecting  
19 them to utilities at a reasonable cost have delayed or prevented would-be homesteaders from being  
20 granted deeds (Eugenio 2014e; CNMI Department of Public Lands, personal communication, February  
21 2014). Given that difficulties in establishing homesteads have delayed the granting of homestead deeds in  
22 relatively urbanized and accessible places such as Saipan, it is not expected that homestead deeds will be  
23 granted for Pagan in the near future.

24 While it is not expected that homestead deeds will be granted in the near future, homestead permits that  
25 allow people to attempt to build on homestead land, could be granted. The granting of homesteading  
26 permits for Pagan would lead to an increase in the number of people on the island. Also, resettlement  
27 without permit or deed could continue regardless of government consent. As resettlement continues and  
28 as technologies improve into the future, the likelihood of establishing homesteads on Pagan increases.



## CHAPTER 5 IMPACTS OF THE PROPOSED ACTION

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This chapter presents potential impacts of the proposed action. Many of the potential impacts are quantified and presented in tables. Some tables present total impacts, which are the anticipated effects of the proposed action to include both construction and operations, which could occur at the same time. When quantified, impacts are typically presented as a range. The ranges were calculated using different factors. For construction impacts there would be an 8- to 10-year construction period, from 2016 to 2025, so the factors used to create the range was the number of years of construction. For operations impacts, a variety of different factors are used to establish ranges; for instance, the assumed percentage of jobs that would be taken by current Tinian residents is used to establish the range for new population to Tinian (i.e., if a high number of jobs are taken by Tinian residents, then a low number jobs would be taken by people from off-island). See Appendix A for information on the methodology and calculations that were used to develop the projections made in this chapter.

Because various action alternatives would each have similar island-wide or CNMI-wide effects, impact analysis is focused on the proposed action in general with alternative-specific analysis presented only when there is potential for noticeable differences between alternatives. The only topic that was identified as having potential for a noticeable difference between action alternatives was the topic of power utility rates (Section 5.2.9).

In summary, with the proposed action on Tinian, population would increase and economic impacts would be beneficial. The population change would increase demands on Tinian public services, but not to a level that would exceed capacity of public services agencies. Access restrictions on Tinian would reduce the opportunities for Tinian residents to participate in recreational and cultural activities such as fishing, hunting, and gathering, potentially altering the way some perceive their relationships with the land and affecting the interaction within social networks. With the proposed action on Pagan, access restrictions would limit potential future opportunities for some to work homestead permits. Access restrictions may also reduce opportunities for cultural and recreational visits to Pagan. The existing level of economic activity on Pagan, which is minimal, and expected future expansion, also anticipated to be minimal, of economic activity would likely be unaffected by the proposed action.

Impacts associated with the no-action alternative do not consider the effects of the proposed action, but rather a continuation of current training activities on Tinian and construction of four live-fire ranges on Tinian contained in the Record of Decision for the Guam and CNMI Military Relocation EIS. In general, the no-action alternative would have the same type of socioeconomic effects on Tinian as are discussed in this chapter, only of a smaller magnitude. There would be no impacts related to Pagan under the no-action alternative, as any proposed military training on Pagan is specific to the CJMT proposed action.

1 **5.1 POPULATION**

2 **5.1.1 Tinian**

3 5.1.1.1 Population Change

4 Construction

5 Construction of training ranges and support facilities on Tinian would occur for 8 to 10 years. While  
 6 Tinian residents would be eligible to work on project-related construction, because Tinian has a very  
 7 small construction workforce, the vast majority of construction workers would come from off-island and  
 8 temporarily add to the population. Table 5.1-1 shows Tinian’s baseline population, the population change  
 9 that is estimated to be associated with project-related construction, the estimated total population with the  
 10 proposed action, and the estimated range of population change as a percentage of baseline population.

11 Population associated with the proposed action would be anticipated to increase Tinian’s population by  
 12 between 477 and 596, on average, each year for an 8- to 10-year period. Including the baseline population  
 13 and the project-related population, Tinian’s population would be estimated to be between 3,367 and  
 14 4,128, which would be from 14% to 21% greater than the expected future baseline.

**Table 5.1-1. Impact of Construction Workers on Tinian Population, Annual Average during the 8 to 10 Years of Construction**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Population	2,890	3,211	3,532
Population Change – Construction Workers	438	493	548
Population Change – Construction Managers	18	21	23
Population Change – Construction Manager Dependents	21	23	26
<b>Total Population Change</b>	<b>477</b>	<b>537</b>	<b>596</b>
Population with the Proposed Action	3,367	3,747	4,128
Low Change and High Baseline	14%		
Medium Change and Medium Baseline	17%		
High Change and Low Baseline	21%		

15 Operations

16 *Base Operations Employment Population*

17 Training operations associated with the proposed action on Tinian would include a permanently stationed  
 18 base camp and 20 weeks of personnel training per year. Operations of the base camp and training ranges  
 19 would require permanent employment. Some of the new employees would likely be from Tinian and  
 20 some would likely be from off-island. Off-island employees and their dependents would add to Tinian’s  
 21 population. Table 5.1-2 shows Tinian’s baseline population, the estimated population change that would  
 22 be associated with operations-related employment, the total population with the proposed action, and  
 23 population change as a percentage of baseline population.

24 Operations workers and dependents associated with the proposed action are anticipated to increase  
 25 Tinian’s population by between 124 and 223 people. Including the baseline population and the project-  
 26 related population, Tinian’s total population would be estimated between 3,014 and 3,755, which would  
 27 be 4% and 8.4% higher than expected future baseline population levels.

**Table 5.1-2. Impact of Operations Workers on Tinian Population**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Population	2,890	3,211	3,532
Population Change - Operations Workers	57	72	87
Population Change - Operations Worker Dependents	86	120	155
<b>Total Population Change</b>	<b>143</b>	<b>192</b>	<b>242</b>
Population with the Proposed Action	2,947	3,283	3,619
Low Change and High Baseline	4.0%		
Medium Change and Medium Baseline	6.0%		
High Change and Low Baseline	8.4%		

Note: Of the total population increase, 19 are expected to be rotational population.

1

2 *Training Personnel*

3 Training operations on Tinian would take place 20 weeks per year. Personnel training on Tinian would  
 4 contribute to the transient population of the island (similar to tourism visitors). During most of the year  
 5 (32 weeks), there would be only a few personnel on-island for pre-training preparation and post-training  
 6 events. During training there could be a range of between 30 (for the smallest training operation planned)  
 7 and 2,200 (for the largest training operation planned) personnel on-island. Given the number of weeks of  
 8 training and the scope of the various training operations, on average, over the course of a year, 771  
 9 training personnel would be on Tinian.

10 Total Population Change

11 Population would be anticipated to increase on Tinian due to construction workers and to support  
 12 operations. Also, the transient population would increase due to training personnel. Table 5.1-3 shows  
 13 Tinian’s estimated baseline population, the estimated population change that would be associated with the  
 14 proposed action, the total population with the proposed action, population change as a percentage of  
 15 baseline population, and the range of potential impacts.

16 The proposed action would potentially increase Tinian’s population by between 620 and 838, resulting in  
 17 a total population between 3,510 and 4,370, which would be an 18% to 29% increase over expected future  
 18 baseline levels. After the construction period, when construction workers leave the island, population  
 19 increase associated with the proposed action is anticipated to be between about 124 and 223.

**Table 5.1-3. Total Impact on Tinian Population**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Population	2,890	3,211	3,532
Population Change - Construction <sup>1,2</sup>	477	537	596
Population Change – Operations <sup>2</sup>	143	192	242
<b>Total Population Change</b>	<b>620</b>	<b>729</b>	<b>838</b>
Population with the Proposed Action	3,510	3,940	4,370
Low Change and High Baseline	18%		
Medium Change and Medium Baseline	23%		
High Change and Low Baseline	29%		

Notes: <sup>1</sup> Annual average during the 8-10 years of construction.

<sup>2</sup> Includes dependents of construction managers and operations workers.

20  
 21

1 5.1.1.2 Demographic Change

2 Because the CNMI has a very limited construction workforce, it is likely that most construction workers  
 3 would be foreign workers. Foreign construction workers in the CNMI historically tend to be from the  
 4 Philippines, and to a lesser extent, other Southeast Asian countries (DoN 2010). The large increase in  
 5 primarily Asian construction workers could alter the demographics of Tinian, making the island more  
 6 Asian and less Pacific Islander for a period of 8 to 10 years.

7 The number of operations workers that would move to Tinian to take jobs associated with the proposed  
 8 action would likely be too low to meaningfully impact demographics.

9 Training personnel would be on Tinian only in a transient capacity and would cause no change to the  
 10 demographic characteristics of Tinian’s resident population.

11 **5.1.2 Pagan**

12 No consistent civilian construction worker population is anticipated to be on Pagan for extended periods  
 13 of time because most of the structures would be built by training personnel during exercises.

14 Under the proposed action, the U.S. federal government would acquire additional interest in land on  
 15 Pagan in order to conduct training associated with the proposed action. Given this additional interest in  
 16 land and extent of surface danger zones during training activities, homesteaders would be very restricted  
 17 in their ability to work to improve lots on Pagan, and as such, population would be lower than established  
 18 in the expected future baseline. Also, because there would be reduced access to certain beaches and large  
 19 portions of the island for 16 weeks per year due to less time available to visit, there may be a reduced  
 20 number of visitors to Pagan.

21 **5.2 ECONOMIC CONDITIONS**

22 **5.2.1 Tourism**

23 5.2.1.1 Tinian

24 Altered Flight Paths

25 During training operations, flights between Saipan and Tinian would likely take a slightly different and  
 26 longer path than they do at present (see EIS/OEIS Airspace section, Table 4.6-2). The longer route may  
 27 lead to an increase in the prices charged to customers; the higher prices may reduce estimated tourism  
 28 demand.

29 Table 5.2-1 shows the small potential reduction in visitors to Tinian and provides a range of potential  
 30 impacts in percentage terms. Compared to baseline levels, implementation of the proposed action is  
 31 anticipated to reduce the number of annual visitors to Tinian by between 0.08% and 0.22% from expected  
 32 future baseline levels.

**Table 5.2-1. Impact on Number of Tinian Visitors due to Altered Flight Paths, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Tinian Visitors	57,046	81,494	82,565
Change in Visitors	-68	-114	-123
Tinian Visitors with the Proposed Action	56,977	81,380	82,442
Low Change and High Baseline	-0.08%		
Medium Change and Medium Baseline	-0.14%		
High Change and Low Baseline	-0.22%		

1 Reduced Access

2 Reduced access to tourism sites on Tinian for 20 weeks per year may potentially reduce growth in tourist  
 3 visitors. As shown in Table 5.2-2, slowed visitor growth could lead to between 578 to 788 fewer annual  
 4 visitors to Tinian. As a percentage of the baseline, the reduction in visitors is estimated to be between  
 5 0.7% and 1.38% from expected future baseline levels.

**Table 5.2-2. Impact on Number of Tinian Visitors due to Reduced Access, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Tinian Visitors	57,046	81,494	82,565
Change in Visitors	-578	-683	-788
Tinian Visitors with the Proposed Action	56,467	80,810	81,776
Low Change and High Baseline	-0.70%		
Medium Change and Medium Baseline	-0.84%		
High Change and Low Baseline	-1.38%		

6 Total Impact on Number of Tinian Visitors

7 Changed flight paths and reduced access to tourism sites on Tinian could potentially combine to reduce  
 8 the number of tourism visitors to Tinian. As shown in Table 5.2-3, combining the two possible  
 9 consequences of the proposed action is estimated to reduce the total number of annual visitors to Tinian  
 10 by between 647 and 912, or 0.8% to 1.6%, from expected future baseline levels.

**Table 5.2-3. Total Impact on Number of Tinian Visitors, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Tinian Visitors	57,046	81,494	82,565
Change in Visitors - Flight Path	-68	-114	-123
Change in Visitors - Access	-578	-683	-788
<b>Total Change in Visitors</b>	<b>-647</b>	<b>-797</b>	<b>-912</b>
Tinian Visitors with the Proposed Action	56,399	80,697	81,653
Low Change and High Baseline	-0.8%		
Medium Change and Medium Baseline	-1.0%		
High Change and Low Baseline	-1.6%		

11 5.2.1.2 Pagan

12 With training associated with the proposed action occurring for 16 weeks of the year, small-scale  
 13 ecotourism that would be expected to occur without the proposed action could likely occur with the  
 14 proposed action. Eco-tourism visits would need to be scheduled so that they would not coincide with  
 15 training activities and some areas on the island could not be visited due to safety restrictions. Scheduling  
 16 would need to take place regardless of the whether the proposed action were occurring and many of the  
 17 areas that would be restricted would primarily be in the lava field, which would not be a great attraction  
 18 for eco-tourists compared to other areas of the island. Because the proposed action would not be  
 19 anticipated to limit the amount of eco-tourism on Pagan compared to the expected future baseline and  
 20 because access may be restricted to areas that are not particularly attractive to visitors, the proposed  
 21 action would not be anticipated to have an impact on eco-tourism on Pagan.

1 **5.2.2 Gross Domestic Product**

2 5.2.2.1 Construction Expenditures

3 Contribution to Gross Domestic Product

4 Construction expenditures associated with the proposed action are estimated to be \$492 million for work  
5 on Tinian over an 8- to 10-year period. An Office of Insular Affairs economic study (Office of Insular  
6 Affairs 2012a) estimates that for every dollar of construction expenditures in the CNMI, \$0.55 is added to  
7 gross domestic product. Based on that ratio, over an 8- to 10-year period, an estimated \$291.5 million  
8 would be added to CNMI gross domestic product. Average annual contributions to gross domestic  
9 product are shown in Table 5.2-4.

10 Construction Worker Expenditures on Tinian

11 While already included in the above estimate of contribution to gross domestic product, expenditures  
12 made by construction workers would contribute to the vitality of the Tinian economy. In total, annual  
13 construction worker spending on Tinian are estimated to range from \$3.7 million to \$4.6 million per year.

14 5.2.2.2 Operations Employment

15 Operations employment at the base camp and training ranges on Tinian would equal 95 jobs. An Office of  
16 Insular Affairs economic study (Office of Insular Affairs 2012a) estimates that for every job in the CNMI,  
17 there is \$35,335 gross domestic product. Based on that ratio, these 95 jobs would add \$3.4 million to  
18 CNMI gross domestic product, annually.

19 5.2.2.3 Local Operations Expenditures

20 It is anticipated that there would be some local base operations expenditures that would contribute to the  
21 Tinian and overall CNMI economies. Expenditures would include payments to the Commonwealth  
22 Utilities Corporation for utilities service, the purchase of fuel from local distributors, and other purchases.  
23 The extent of expenditures is not known at this time.

24 5.2.2.4 Tourism Visitor Expenditures

25 As shown in Section 5.2.1, compared to baseline levels, the number of tourism visitors to the CNMI  
26 would decline by between 647 and 912 visitors as a result of the proposed action. The reduction in  
27 visitors would reduce tourism visitor spending in the CNMI by between \$511,886 and \$728,325.  
28 According to an Office of Insular Affairs Study, \$2.35 is added to gross domestic product for every dollar  
29 in visitor expenditures. Therefore, the reduction in visitor spending by implementing the proposed action  
30 would lead to an annual reduction in CNMI gross domestic product of between \$1.2 million and \$1.7  
31 million (see Table 5.2-4).

32 5.2.2.5 Training Personnel Visitor Expenditures

33 Personnel on Tinian temporarily for training would have opportunities to go on liberty and spend time in  
34 town. Given the number of personnel, the amount of time spent in town, and the per diem reimbursement  
35 rate, military personnel spending on Tinian was estimated to be \$846,712 per year. The same expenditure  
36 to gross domestic product ratio that was used for tourism visitor expenditures (\$1 to \$2.35) was applied to  
37 military personnel expenditures on Tinian. The annual contribution to CNMI gross domestic product by  
38 military personnel spending on Tinian is shown in Table 5.2-4.

1 5.2.2.6 Total Impact on Commonwealth of the Northern Mariana Islands Gross Domestic Product

2 Table 5.2-4 shows the total change in CNMI gross domestic product as a result of the proposed action and  
 3 the contribution to that total change by the various factors discussed in Sections 5.3.2.1 through 5.3.2.4.  
 4 Additionally, expected future baseline gross domestic product, gross domestic product with the proposed  
 5 action, the change in gross domestic product as a percentage of the expected future baseline, and the  
 6 range of potential impacts are shown.

7 The gross domestic product of the CNMI would increase by between \$33 million and \$40 million as a  
 8 result of the proposed action. Most of the increase would be due to construction expenditures, which  
 9 would occur over an 8- to 10-year period. Including the effect of construction expenditures, gross  
 10 domestic product would increase by between 3% and 4.6% above baseline. Excluding construction  
 11 expenditures, gross domestic product would increase by between \$3.6 million and \$4.1 million per year, a  
 12 less than 0.5% increase over expected future baseline gross domestic product.

**Table 5.2-4. Total Impact on CNMI Gross Domestic Product, Annual (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Gross Domestic Product	\$878	\$1,045	\$1,093
Gross Domestic Product Change - Construction Expenditures <sup>1</sup>	\$29.0	\$32.7	\$36.3
Gross Domestic Product Change - Operations Employment	\$3.4	\$3.4	\$3.4
Gross Domestic Product Change – Training Personnel Expenditures	\$2.0	\$2.0	\$2.0
Gross Domestic Product Change - Tourism Expenditures	-\$1.2	-\$1.5	-\$1.7
<b>Total Change<sup>2</sup></b>	<b>\$33</b>	<b>\$37</b>	<b>\$40</b>
Gross Domestic Product with the Proposed Action	\$911	\$1,082	\$1,133
Low Change and High Baseline		3.0%	
Medium Change and Medium Baseline		3.5%	
High Change and Low Baseline		4.6%	

13 Note: <sup>1</sup>Annual averages during the 8 to 10 years of construction.

14 <sup>2</sup>Does not include potential local operations expenditures described in Section 5.2.2.3.

15 **5.2.3 Employment and Income**

16 5.2.3.1 Employment

17 Construction Employment

18 Over the course of an 8- to 10-year period, construction associated with the proposed action would  
 19 increase the number of jobs on Tinian. Table 5.2-5 shows expected future baseline employment, the  
 20 estimated increase in employment that would be associated with construction, total employment with the  
 21 proposed action, the percentage change in employment resulting from the proposed action, and the range  
 22 of potential impacts.

23 The number of construction jobs associated with the proposed action has the potential to increase Tinian’s  
 24 employment by between 456 and 571, annually, for an 8- to 10-year period. Including the expected future  
 25 baseline employment and the project-related employment, Tinian’s total employment would be estimated  
 26 between 2,355 and 2,949, which would be an increase of between 19% and 30% above expected future  
 27 baseline levels.

**Table 5.2-5. Impact of Construction on Tinian (Full-Time Equivalent<sup>1</sup>) Employment, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Employment	1,899	2,262	2,378
Employment Change <sup>2</sup>	456	513	571
Employment with the Proposed Action	2,355	2,775	2,949
<b>Percentage of Baseline Employment</b>			
Low Change and High Baseline	19%		
Medium Change and Medium Baseline	23%		
High Change and Low Baseline	30%		

Note: <sup>1</sup>Full-time equivalent, or 40 hours per week.

<sup>2</sup>Annual averages during the 8 to 10 years of construction.

**Operations Employment**

A permanent base camp and 20 weeks per year of training operations would be associated with the proposed action on Tinian. Planning data for the proposed action indicates that there would be 95 jobs on Tinian associated with base camp and training operations. Nineteen of these jobs would be for military personnel and/or government employees with specialized training and experience, the remaining 76 jobs require less technical skills. These 19 jobs would be staffed at all times by rotational staff and would thus add a total of 19 people to Tinian’s population. The remaining 76 jobs could potentially be filled by current Tinian residents and could therefore result in no additional population increase.

Table 5.2-6 shows Tinian’s baseline employment, the employment change that is anticipated to be associated with operations-related employment, the total employment with the proposed action, and employment change as a percentage expected future baseline employment. Operations workers associated with the proposed action would increase Tinian’s employment by 95 (the number of jobs expected to be associated with base camp and training operations). Including the expected future baseline employment and the project-related employment, Tinian’s employment is estimated to be between 1,994 and 2,473, between 4% and 5% more than expected future baseline employment.

**Table 5.2-6. Impact of Operations on Tinian (Full-Time Equivalent<sup>1</sup>) Employment, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Employment	1,899	2,262	2,378
Employment Change	95	95	95
Employment with the Proposed Action	1,994	2,357	2,473
<b>Percentage of Baseline Employment</b>			
Low Change and High Baseline	4.0%		
Medium Change and Medium Baseline	4.2%		
High Change and Low Baseline	5.0%		

Note: <sup>1</sup>Full-time equivalent, or 40 hours per week.

While it would be possible over time, it is not anticipated that current Tinian residents would immediately fill all 95 available jobs. For purposes of population analysis, estimates were made that between about 8 and 38 of the 76 jobs would be held by current Tinian residents. Other jobs may be taken by Saipan residents, other residents of the CNMI, or residents from other places.

**Total Impact on Employment**

Employment would increase on Tinian due to construction- and operations-related jobs. Table 5.2-7 shows Tinian’s baseline employment, the total employment change that would be associated with the proposed action, the total employment with the proposed action, the employment change as a percentage of baseline employment, and the range of potential impacts.

In total, the proposed action would increase Tinian’s employment by between 551 and 666. Including the baseline employment and the project-related employment, Tinian’s employment would be between 2,450



1 and 3,044 which would be between 23% and 35%. Most of the construction jobs would be expected to be  
 2 filled by foreign workers.

**Table 5.2-7. Total Impact on Tinian (Full-Time Equivalent<sup>1</sup>) Employment, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Employment	1,899	2,262	2,378
Employment Change – Construction <sup>2</sup>	456	513	571
Employment Change - Operations	95	95	95
<b>Employment Change - Total</b>	<b>551</b>	<b>608</b>	<b>666</b>
Employment with the Proposed Action	2,450	2,870	3,044
<b>Percentage Change</b>			
Low Change and High Baseline	23%		
Medium Change and Medium Baseline	27%		
High Change and Low Baseline	35%		

3 *Note:* <sup>1</sup>Full-time equivalent, or 40 hours per week.

4 <sup>2</sup>Annual averages during the 8 to 10 years of construction.

5 5.2.3.2 Income

6 Construction Income

7 Over the course of an 8- to 10-year period, construction associated with the proposed action would  
 8 increase the number of jobs on Tinian; the pay related to those jobs would increase the level of income.  
 9 Table 5.2-8 shows baseline income, the estimated increase in income that would be associated with  
 10 construction, total income with the proposed action, the percentage change in income resulting from the  
 11 proposed action, and the range of potential impacts.

12 Construction jobs associated with the proposed action would increase Tinian’s income by between \$5.9  
 13 million and \$7.4 million, on average, each year for an 8- to 10-year period. Including the baseline income  
 14 and the project-related income, Tinian’s total income would be between \$43.2 million and \$50.4 million,  
 15 an increase of 13% to 21% over expected future baseline income.

**Table 5.2-8. Impact of Construction on Tinian Income, Annual (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Income	\$35.8	\$42.6	\$44.6
Estimated Change in Income	\$5.9	\$6.6	\$7.4
Income with the Proposed Action	\$43.2	\$49.3	\$50.4
<b>Percentage Change</b>			
Low Change and High Baseline	13%		
Medium Change and Medium Baseline	16%		
High Change and Low Baseline	21%		

16 *Note:* <sup>1</sup>Annual averages during the 8 to 10 years of construction.

17 Operations Income

18 Training operations associated with the proposed action on Tinian include a permanently staffed base  
 19 camp and 20 weeks of personnel training per year. Operations of the base camp and training ranges would  
 20 require permanent employees that would earn income. Table 5.2-9 shows Tinian’s baseline income, the  
 21 income change that would be associated with operations-related income, the total income with the  
 22 proposed action, and income change as a percentage of baseline income.

23 Operations workers associated with the proposed action would increase Tinian’s total income by \$2.2  
 24 million. Including the baseline income and the project-related income, Tinian’s income would be between  
 25 \$38 million and \$46.7 million, an increase of 4.9% to 6.1% over expected future baseline income.

**Table 5.2-9. Impact of Operations on Tinian Income, Annual (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Income	\$35.8	\$42.6	\$44.6
Estimated Income Increase	\$2.2	\$2.2	\$2.2
Income with the Proposed Action	\$38.0	\$44.8	\$46.7
Low Change and High Baseline	4.9%		
Medium Change and Medium Baseline	5.1%		
High Change and Low Baseline	6.1%		

1 Operations-related income, while earned for work done on Tinian, would in part be earned by military  
 2 personnel or government employees who would live at the base camp while on Tinian during their  
 3 rotation. Income earned through these rotational jobs by non-residents would generate \$939,000 of the  
 4 \$2.2 million in income; the remaining \$1.24 million would be earned by Tinian residents.

5 Total Impact on Income

6 Income would increase on Tinian due to construction and operations-related employment. Table 5.2-10  
 7 shows Tinian’s baseline income, the total income change that would be associated with the proposed  
 8 action, the total income with the proposed action, the change in income as a percentage of baseline  
 9 income, and the range of potential impacts.

10 In total, the proposed action would increase Tinian’s income by between \$8.1 million and \$9.5 million.  
 11 Including the baseline income and the project-related income, Tinian’s income would be between \$43.9  
 12 million and \$54.1 million, which would be between 18% and 27% above expected future baseline  
 13 income.

**Table 5.2-10. Total Impact on Tinian Income, Annual (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Income	\$35.8	\$42.6	\$44.6
Income Change – Construction <sup>1</sup>	\$5.9	\$6.6	\$7.4
Income Change - Operations	\$2.2	\$2.2	\$2.2
<b>Total Income Change</b>	<b>\$8.1</b>	<b>\$8.8</b>	<b>\$9.5</b>
Income with the Proposed Action	\$43.9	\$51.4	\$54.1
Low Change and High Baseline	18%		
Medium Change and Medium Baseline	21%		
High Change and Low Baseline	27%		

14 Note: <sup>1</sup>Annual averages during the 8 to 10 years of construction.

15 **5.2.4 Government Revenues**

16 Economic Activity

17 Increased economic activity associated with the proposed action (see Section 5.3.2) would increase  
 18 taxable sales and income, thereby increasing revenues that would be collected by the CNMI government.  
 19 Table 5.2-11 shows the increase in government revenues to be between 3% and 4.5% above expected  
 20 future baseline levels.

**Table 5.2-11. Impact on CNMI Government Revenues, Annual (Millions of 2012 \$)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Government Revenues	\$176	\$209	\$219
Change in Government Revenues <sup>1</sup>	\$6.5	\$7.2	\$7.9
Government Revenues with the Proposed Action	\$182	\$216	\$226
Low Change and High Baseline	3.0%		
Medium Change and Medium Baseline	3.4%		
High Change and Low Baseline	4.5%		

Note: <sup>1</sup>Primarily due to construction expenditures during the 8 to 10 years of construction.

1

2 **Land Acquisition and/or Lease of Land**

3 In addition to government revenues generated by economic activity, there may also be direct payments  
 4 made by the U.S. federal government to the CNMI government in association with the land acquisition  
 5 and/or lease on Pagan and Tinian. Although it is unknown what the terms of the additional interest in land  
 6 would be, payment for additional interest in land would be anticipated to increase CNMI government  
 7 revenue over expected future baseline levels.

8 **5.2.5 Housing**

9 5.2.5.1 Construction Workforce Housing

10 Construction work on Tinian would last 8 to 10 years and would require several hundred workers at any  
 11 given time during that period. There are existing dwelling units associated with, and adjacent to the  
 12 Dynasty Hotel. It is understood that the dwelling units associated with the Dynasty would be available to  
 13 construction workers and could house up to 1,500 people, many more than would potentially be needed  
 14 for the high-end estimate of 571 construction workers. Given this apparent availability of existing  
 15 workforce housing, it is considered feasible that construction contractors would make this housing  
 16 available for their employees and that no new workforce housing would need to be constructed to  
 17 implement the proposed action.

18 It is assumed that this workforce housing would have individual facilities for laundry and food  
 19 preparation. Workers would spend money in the local economy for food and other daily support  
 20 requirements. Workers would also use the local medical clinic and be supported by local Tinian police,  
 21 fire, and other public services. It is estimated that a small portion (4%) of the workforce would bring  
 22 families and would not reside in workforce housing. The effect on housing of these workers is presented  
 23 below (Section 5.2.5.2).

24 5.2.5.2 Construction Manager Housing Demand

25 Construction managers are expected to find housing on the Tinian market and are not expected to live in  
 26 the workforce housing facility. Over the 8- to 10-year construction period, construction managers would  
 27 require an average of between 18 and 23 housing units at any given time (Table 5.2-12).

**Table 5.2-12. Construction Manager Housing Demand (for 8 to 10 years)**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Housing Units Demanded	18	21	23

28 5.2.5.3 Operations Employee Housing Demand

29 Operations employees that would come to Tinian from off-island would require housing on the Tinian  
 30 market. Based on one housing unit per operations employee that would be new to Tinian, approximately  
 31 57 to 87 housing units would be required (Table 5.2-13).

**Table 5.2-13. Operations Employee Housing Demand**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Housing Units Demanded	57	72	87

1 5.2.5.4 Total Impact on Tinian Housing Demand

2 In total, between 75 and 110 housing units would be required as a result of the proposed action during  
3 construction (Table 5.2-14). After construction is completed, there would be no housing demand from  
4 construction managers and the numbers shown in Table 5.2-13 would represent the total.

**Table 5.2-14. Total Impact on Tinian Housing Demand**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Housing Units Demanded	75	93	110

5 5.2.5.5 Tinian Housing Supply

6 The 2010 Census indicated 244 housing units were vacant on Tinian. Most of these units (123) were  
7 without description, categorized as “other vacant.” Of the remaining 121 vacant housing units, 101 were  
8 available for rent, 6 were rented but not occupied, 1 was for sale, 9 were for seasonal use, and 4 were for  
9 migrant workers. Depending on the condition of units that are available for rent, existing housing supply  
10 could meet additional demand. New homestead units on Tinian (Section 4.2.5) could open some units that  
11 are currently occupied as homesteaders vacate the homes they currently inhabit and the expectation of the  
12 proposed action could spur some limited private sector housing development.

13 **5.2.6 Agriculture**

14 5.2.6.1 Agricultural Products

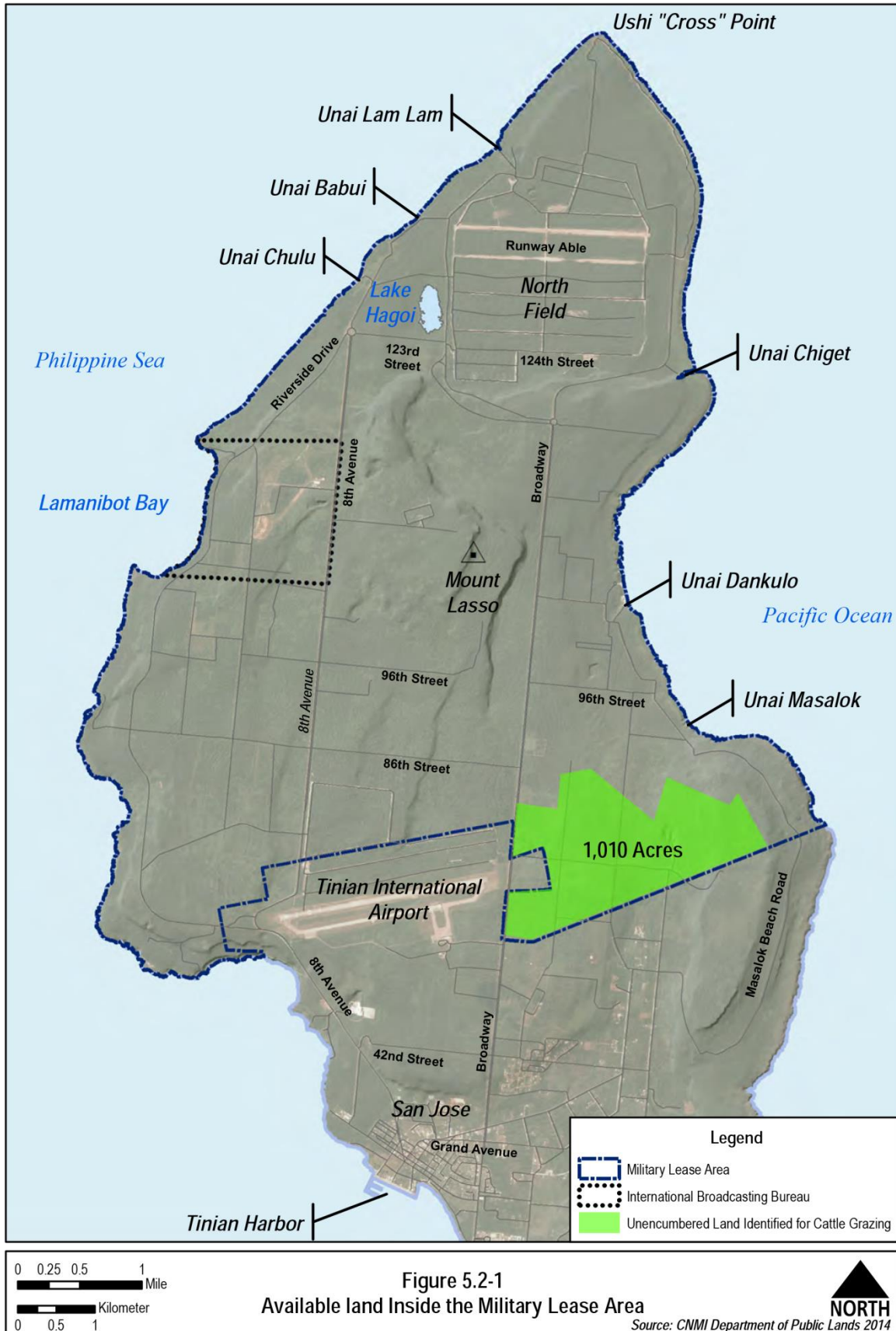
15 Commercial agricultural production is not permitted in the Military Lease Area. While some farms in the  
16 Military Lease Area likely do sell a portion of their production, it is assumed that the requirements of  
17 agricultural permits are abided by and farms located in the Military Lease Area sell less than half of the  
18 produce and use more than half for themselves, thus fitting the description of a subsistence operation. As  
19 such, while reductions to access in the Military Lease Area for agricultural purposes may reduce the  
20 amount of agricultural products sold on Tinian, no purely commercial agricultural operation would be  
21 affected.

1 5.2.6.2 Livestock

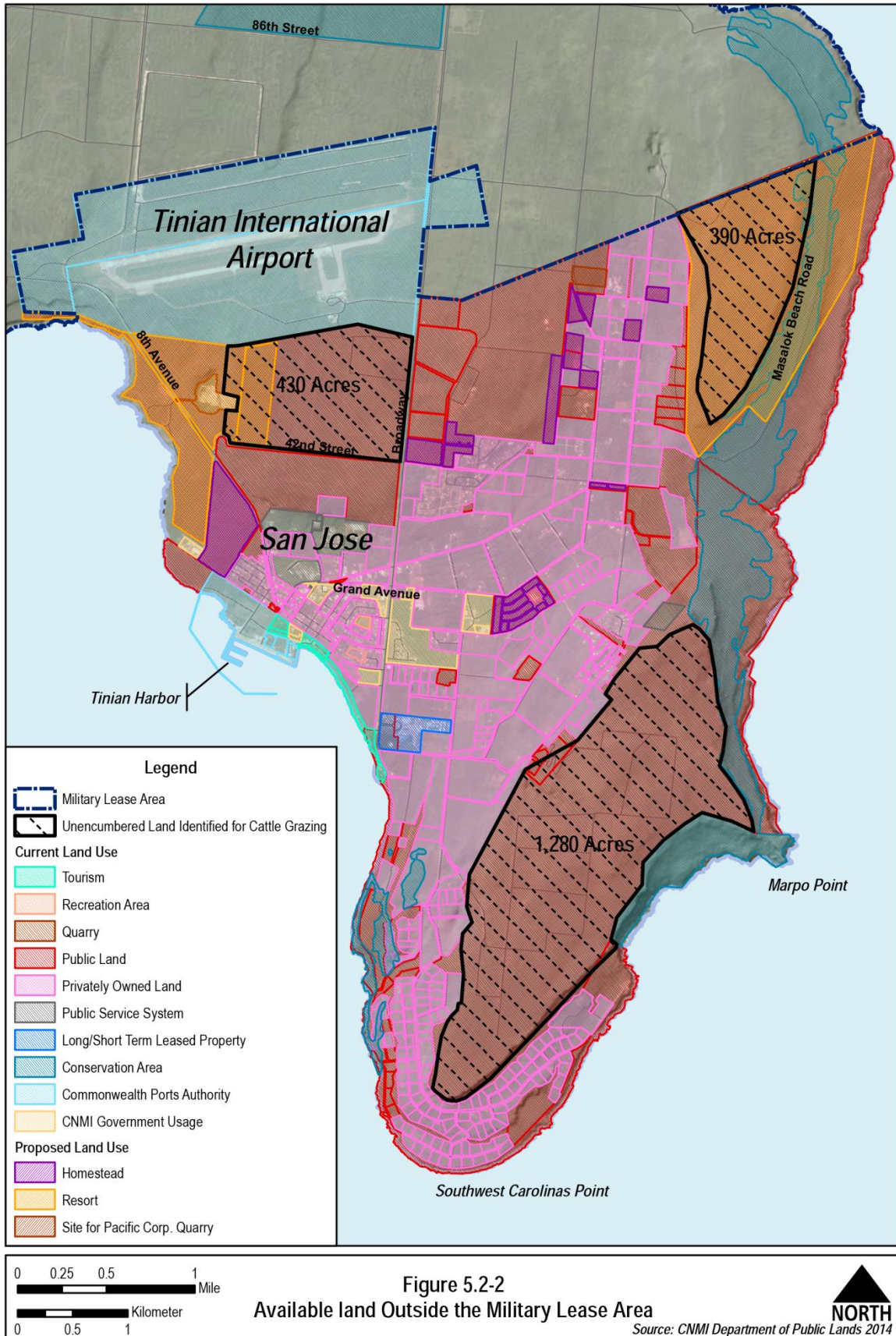
2 Under the proposed action, there would be approximately 1,010 acres (409 hectares) made available by  
3 the Department of Defense for cattle grazing within the Military Lease Area (Figure 5.2-1). The amount  
4 of land available during any given year may vary depending on the construction tempo and operational  
5 tempo of any given year. However, for purposes of this analysis, it is assumed that 1,010 acres (409  
6 hectares) of land east and south of the airport as shown in Figure 5.2-1 within the Military Lease Area  
7 would be available for grazing. Based on the estimates of current amount of land used for cattle grazing  
8 (1,010 acres [409 hectares]) and the stated ideal head of cattle per acre ratio (2.5 per acre), it is anticipated  
9 that this amount of grazing land would sustain the current level of grazing on Tinian. Additional public  
10 lands would be required to increase the herd to a commercially sustainable level.

11 Figure 5.2-2 identifies public land outside the Military Lease Area that is currently undeveloped, is not  
12 identified as a potential homestead location, and has vegetation and slope fitting for cattle; in this analysis  
13 the land is considered as unencumbered and available for cattle grazing. Some of the land has been  
14 proposed for use in resort development; however, no resort development is expected on Tinian in the near  
15 future (see Section 4.2.1.2). Land identified as available in Figure 5.2-2 totals 2,100 acres (850 hectares).  
16 The Department of Defense has no authority over the use of this land so it would be left to decision  
17 makers (public and private interests) in the CNMI to determine whether the land identified in Figure 5.2-2  
18 would be used for cattle grazing, for some other purpose, or would continue to not be used.

19 In total, land made available inside the Military Lease Area and land that could potentially be made  
20 available outside the Military Lease Area make up approximately 3,110 acres (1,259 hectares). Based on  
21 efficiency factors identified in Section 4.2.6.2, this land could sustain more cattle than estimated at the  
22 high end of the range of expected future number of cattle on Tinian. Land inside the Military Lease Area,  
23 offered for cattle grazing use by the Department of Defense, could likely sustain the existing Tinian herd  
24 (see Section 3.3.6.2), demonstrating that the Department of Defense has effectively mitigated any  
25 potential impact on cattle grazing.







1 **5.2.7 Fishing and Aquaculture**

2 5.2.7.1 Fishing

3 Tinian

4 Access to waters around the Military Lease Area would be restricted for portions of time during the 20  
 5 weeks out of the year that training would occur (see EIS/OEIS Figure 2.4-11). Most notable for fishing on  
 6 Tinian, access to waters on the northwestern side of Tinian, generally from Puntan Diapblo to Unai Lam  
 7 Lam (see Figure 3.3-5), extending out from shore by about 3 miles and from Unai Chiget to the southeast  
 8 corner of the Military Lease Area extending up to a mile from shore would be restricted.

9 Waters to the west are used for spear fishing, casting from boats, and cliff fishing (see Figure 3.3-5).  
 10 Casting from boats would be the activity most affected because other Tinian waters are not as safe or  
 11 viable – eastern waters are too rough and southwestern waters are used for transportation and do not  
 12 provide the quality of fishing that can be found further north on the western side. Waters on the eastern  
 13 side of Tinian are used mainly for cliff fishing (see Figure 3.3-5), which is a method more often employed  
 14 for subsistence fishing than commercial fishing. Although the potential impacts on commercial fishing  
 15 cannot be quantified due to lack of data, implementation of the proposed action would likely affect  
 16 commercial fishing in Tinian waters.

17 Based on information presented in Section 3.3.7.1, potential impacts related to subsistence fishing would  
 18 be greater than those related to commercial fishing. These potential impacts are covered in Section 5.5.1,  
 19 *Social and Community Topics*.

20 5.2.7.2 Aquaculture

21 Many areas throughout the CNMI could be used for either the land-based or ocean-based portions of an  
 22 aquaculture operation and would be unaffected by the proposed action. As such, if appropriate planning is  
 23 conducted, the proposed action would be compatible with, and would have no anticipated impact on,  
 24 open-ocean aquaculture.

25 **5.2.8 Commonwealth of the Northern Mariana Islands Airports and Seaports**

26 5.2.8.1 Airports

27 Table 5.2-15 shows that due to the decline in visitors compared to the expected future baseline, annual  
 28 airport arrivals have the potential to decline by between 830 and 1,171 (-0.1 and -0.2% decline from  
 29 expected future baseline levels). Results do not account for potential changes in arrivals related to  
 30 potential construction activity or base camp/training range operations. Taking these factors into account  
 31 would likely increase the number of arrivals associated with the proposed action.

**Table 5.2-15. Impact on Airport Arrivals from Reduction in Visitors, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Airport Arrivals	606,417	715,080	748,348
Change in Arrivals	-830	-1,023	-1,171
Airport Arrivals with the Proposed Action	605,587	714,057	747,177
Low Change and High Baseline	-0.1%		
Medium Change and Medium Baseline	-0.1%		
High Change and Low Baseline	-0.2%		



1 5.2.8.2 Seaports

2 Table 5.2-16 shows the annual change in inbound seaport freight measured in revenue tons and the  
 3 percentage increase that change would represent above the baseline. Compared to the baseline, inbound  
 4 revenue tons would increase by between 7.9% and 11.8% above baseline levels. Construction materials  
 5 would primarily be purchased from non-CNMI sources and would either be brought into the Port of  
 6 Saipan for transshipment to Tinian or Pagan, or shipped directly to those places (more likely the former,  
 7 in most cases).

**Table 5.2-16. Impact on Inbound Seaport Freight (Revenue Tons), Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Inbound Revenue Tons	516,443	615,225	642,966
Change in Inbound Revenue Tons <sup>1</sup>	50,573	55,761	61,076
Inbound Revenue Tons with the Proposed Action	567,016	670,985	704,041
Low Change and High Baseline	7.9%		
Medium Change and Medium Baseline	9.1%		
High Change and Low Baseline	11.8%		

8 *Note:* <sup>1</sup>Estimates are based on projected changes to gross domestic product. While project-related  
 9 increases in gross domestic product would primarily be the result of increased project-  
 10 related construction activity, which would last for 8 to 10 years, estimates are not based on  
 11 actual details of proposed construction projects or the amount of construction  
 12 materials/supplies that would need to be imported into the CNMI in order to complete  
 13 construction.

14 Additionally, improvements would be made to the Tinian seaport that would benefit the public; these  
 15 would include improvements to existing boat ramps.

16 There is also potential for the proposed action to affect the efficiency of shipping between Saipan and  
 17 Tinian. During certain times when training would take place, the most commonly used route between the  
 18 two islands would be restricted for safety purposes. The potential for an impact is low, however, since  
 19 very few cargo ships transship between Tinian and Saipan – just a few per month. The timetable for  
 20 restricted access to the shipping route would be made known to shippers, who could schedule around  
 21 restrictions.

22 **5.2.9 Power and Water Utility Rates**

23 5.2.9.1 Power Utility Rates

24 The Tinian power plant has an effective capacity of 16.25 megawatts. Baseline peak demand without the  
 25 proposed action would be 5.6 megawatts (Section 4.3.9); this includes demand from the International  
 26 Broadcasting Bureau.

27 Under Alternative 1, the base camp, RTA, a munitions storage area, a bulk storage fuel tank, and airport  
 28 improvements associated with the proposed action would add to Tinian’s power demand. In total, these  
 29 would add to baseline demand. Since there would be an increase in power demand and the Tinian Power  
 30 Plant would not require expansion, it is not anticipated that there would need to be an increase in power  
 31 utility rates charged to Tinian customers.

32 Under Alternatives 2 and 3, the International Broadcasting Bureau would no longer be operational at its  
 33 current location on Tinian. While it is not certain that the International Broadcasting Bureau would move  
 34 off of Tinian, it would be a possibility. If the International Broadcasting Bureau were not operational on  
 35 Tinian, average power demand on Tinian would be reduced by 0.75 megawatts. On net though, with  
 36 power demand increases related to the base camp, RTA, munitions storage area, bulk fuel storage, and

1 airport improvements, overall power demand would slightly increase and there would not be an  
 2 anticipated need for an increase in power utility rates for Tinian customers as Department of Defense  
 3 utility payments would replace payments that had been made by the International Broadcasting Bureau.

4 **5.2.9.2 Drinking Water Rates**

5 Additional water demand from construction workers would be about 60,000 gallons per day, an increase  
 6 of about 5% over current levels (DoN 2014a). This additional demand should not, in and of itself, drive a  
 7 rate increase..

8 **5.2.10 Minerals**

9 Because the cost of producing pozzolan on Pagan would exceed the market price, the expected future  
 10 baseline does not include a mining operation on Pagan (Section 4.2.10). Because it is not anticipated that  
 11 mining would be taking place on Pagan, it is not anticipated the proposed action would have any effect on  
 12 mining on Pagan.

13 **5.3 PUBLIC SERVICES**

14 **5.3.1 Public Education**

15 Some construction managers and operations workers would be expected to bring dependents to Tinian. A  
 16 portion of the dependents would likely be school-aged children who would attend school. Table 5.3-1  
 17 shows that the potential increase in number of students is estimated to be between 29 and 59 (an increase  
 18 of between 5.3% and 13% over baseline levels). If the number of teachers (29) does not increase, the  
 19 additional students would increase the student to teacher ratio to between 18 and 23 to 1.

**Table 5.3-1. Impact on Tinian Student Population, Annual**

	<i>Low</i>	<i>Medium</i>	<i>High</i>
Baseline Students	451	501	551
Change in Students	29	44	59
Students with the Proposed Action	480	544	609
Low Change and High Baseline	5.3%		
Medium Change and Medium Baseline	8.8%		
High Change and Low Baseline	13.0%		

20 The high estimate for number of students with the proposed action (609) is lower than the number of  
 21 students that attended Tinian schools during the 2007 to 2008 school year, which was 615. Since even the  
 22 highest estimates of expected future baseline students and increase in number of students associated with  
 23 the proposed action would put the student population below levels seen in the recent past, it is unlikely  
 24 that the proposed action would lead to Tinian schools exceeding existing capacity.

25 Since some of the new student population on Tinian would be transplanted from Saipan, the proposed  
 26 action may lead to a very slight reduction in the number of students on Saipan.

27 **5.3.2 Public Safety**

28 **5.3.2.1 Construction**

29 Because the number of crimes tends to increase as population increases, a small increase in the number of  
 30 crimes may be expected due to the presence of construction workers; however, the crime rate (crimes per  
 31 person) would not be expected to increase as Tinian police indicated that, historically, foreign  
 32 construction workers rarely cause problems (Tinian Department of Safety, personal communication,

1 January 2014). The expected future baseline indicates that Tinian public safety agencies (Police and Fire)  
2 have personnel to population ratios that are about twice U.S. national averages. Since Tinian population is  
3 estimated to increase by a maximum of 28%, public safety agencies on Tinian are not anticipated to  
4 exceed capacity as a result of the proposed action.

#### 5 5.3.2.2 Operations

6 The addition of the new population would decrease Tinian's police officer to population ratio by an  
7 estimated 3.5% and 8.7% compared to baseline levels, meaning there would be slightly fewer police per  
8 resident than without the proposed action.

9 It is anticipated that military training personnel would go in to town approximately once per week. The  
10 Tinian police would be active in communicating with military police to reduce and respond to potential  
11 disturbances. During times when a large number of personnel would be in town, the Tinian police would  
12 designate specific areas that they would be encouraged to remain within to reduce potential impacts on  
13 residential areas.

14 Tinian police may be affected by the proposed new safety zones that would stretch into the ocean from  
15 the shores of Tinian. Any boat traveling from Tinian to Saipan would be required to travel further away  
16 from land, where waters are rougher and are further removed from safety services. At present, the Tinian  
17 Police Department provides boating safety services for this route and as such, the department would bear  
18 the additional risk and cost of servicing the larger area during training. An interagency mutual aide  
19 agreement would be drafted that would accommodate emergency and official travel thru safety zones with  
20 proper coordination.

21 Although the military would supply their own firefighting equipment and personnel, the military would  
22 also continue their history of coordinating and cooperating with Tinian firefighters. Coordination  
23 primarily comes in the form of mutual aide agreements that can include sharing radio frequencies so that  
24 information can be shared in real time. In the case of an extreme emergency, Tinian firefighters would  
25 assist the military and the military firefighters would assist Tinian. This cooperation and coordination  
26 would likely increase security for both entities. A new fire-response facility is planned for the Military  
27 Lease Area.

### 28 **5.3.3 Public Health**

#### 29 5.3.3.1 Construction

30 Construction workers would increase the service population of the Tinian Health Center, but by far less  
31 than was seen during the construction of the Tinian Dynasty when an estimated 1,800 construction  
32 workers were on island. Since construction contractors would cover construction worker healthcare  
33 expenses, the percentage of people that pay for services would increase. Tinian Health Center revenues  
34 would increase due to the additional construction worker population, which should allow for the hiring of  
35 staff and purchasing of equipment and supplies to meet additional demands.

#### 36 5.3.3.2 Operations

37 Military personnel training on Tinian should have little to no impact on Tinian public health services  
38 because the base camp is anticipated to include medical and first aid capabilities. Serious medical  
39 emergencies would require personnel to be transported to Saipan or Guam for care.

1 **5.4 COMMUNITY AND SOCIAL TOPICS**

2 **5.4.1 Tinian**

3 The proposed action would require reduced access to the northern two-thirds of the island for 20 weeks  
4 per year. Potential impacts of this restriction include: decreased access to local fresh food, decreased  
5 income for those that participate in subsistence activities, decreased access to recreational and cultural  
6 activity areas, and potential conflict with incoming populations. These potential outcomes, which will be  
7 most impactful on the weekends, are detailed below, and then summarized in the context of community  
8 character and community cohesion.

9 5.4.1.1 Access to Food

10 Restrictions to the Military Lease Area due to the proposed action would decrease the amount of land on  
11 Tinian available for subsistence activities currently allowed and/or occurring on that land, to include  
12 subsistence agriculture, hunting, gathering, and fishing. Fishing areas would also be temporarily restricted  
13 during training and some of the areas that can now be used for gathering and hunting would be de-  
14 vegetated and access restricted completely. As a result, access to subsistence food sources for the people  
15 of Tinian would be reduced.

16 5.4.1.2 Income

17 Reducing access to wild food that can be gathered and sold (such as the gathering, processing and selling  
18 of hot pepper) will reduce the income earning potential of some residents. This activity provides a  
19 livelihood or supplements the income of some who are unable to secure employment (full or part-time)  
20 that pays wages.

21 Reducing access to subsistence food sources (including plant and animal) may also increase the daily cost  
22 of food for some households on Tinian. In economic terms, the elasticity of demand for food is very low  
23 meaning that as food costs increase, the amount of food demanded declines by only a small amount. With  
24 a lower supply of subsistence food sources, a household will be more dependent on store-bought food,  
25 which is subject to supply constraint (for instance, problems getting food into Rota West Harbor in 2014),  
26 and is often more expensive and less nutritious (Kakazu 2007). As Kakazu (2007) observes: “The primary  
27 role of a subsistence economy (in small island nations) is to reduce the increasingly heavy dependency on  
28 imported foods which has aggravated the balance of payments positions and adversely affected nutritional  
29 standards in these islands.”

30 As an example, if a family has a set amount of money to purchase food and other things (such as clothing,  
31 medicine, or gasoline) and the price of food goes up, the family will purchase the same amount of food,  
32 pay more for it, and have less money to spend on other things. This income effect can impact a family’s  
33 ability to spend on other necessities impacting health (such as medicine and doctor visits), safety (such as  
34 home maintenance/repair) (Viscusi 1994), as well as other quality of life purchases and a family’s ability  
35 to provide “chenchule” (described in Section 3.5.2).

36 5.4.1.3 Cultural Practice and Preservation

37 Many Pacific Islander populations value subsistence activities as an element of their traditional lifestyle  
38 that they wish to preserve and perpetuate (Kakazu 2007).

39 An oral history study conducted to determine traditional properties on Tinian identified Unai Chulu,  
40 Puntan Masalok, and Unai Dankulo as traditional cultural properties used to carry out traditional fishing

1 activities. These places, and all areas that are located in the Military Lease Area, were noted as places  
2 associated with economic activities and other cultural practices that the Chamorro consider significant to  
3 them (DoN 2014b).

4 The proposed action's impact on access to the Military Lease Area would decrease the amount of land on  
5 Tinian available for subsistence activities currently allowed and/or occurring on that land. Although the  
6 oral history study determined that the entire Military Lease Area should not be considered a traditional  
7 cultural property, restrictions to areas within the Military Lease Area that are culturally significant would  
8 still reduce the total amount of area on Tinian that residents would be able to access to practice the  
9 traditional skills linked with subsistence activities. This reduction in access may lead to less practice of  
10 these skills, deterioration of these skills, and ultimately affect Chamorro residents' ability to perpetuate an  
11 important element of their traditional lifestyle (Woodley 2009).

12 In addition, restrictions to land and sea where passing down traditional practices between generations  
13 occurs, affects the population's ability to perpetuate their traditions. Throughout the islands there is a  
14 strong correlation between how much an individual keeps or hangs onto traditional culture and how much  
15 one's family practices the activities related to that culture (Owen 2011). As has been discussed in Section  
16 3.5.2, many subsistence activities are known to be passed down through family generations through  
17 practice – the younger generations accompany older generations in the practice of that activity, as a  
18 family affair.

#### 19 5.4.1.4 Crowding of Recreation Areas

20 Tinian families go to beaches on weekends to fish and for barbeques. Access to certain beaches would be  
21 reduced at times during training. During these times, the number of beaches that families could visit  
22 would be reduced and the same number of families would visit a smaller number of beaches potentially  
23 leading to crowding. Crowding may increase with the presence of training personnel and foreign  
24 construction workers who are known to enjoy fishing.

#### 25 5.4.1.5 Conflict with New Population

26 New populations associated with the proposed action would have an intermittent presence in the  
27 community. These populations include construction workers who would primarily be Asian men (per  
28 historical precedent) and military training personnel who would primarily be young American men. These  
29 populations have not had a history of local conflict but they would likely not have a great knowledge of  
30 inafa'maolek or respetu, which may lead to conflict with the local population. Cultural awareness training  
31 is required for military personnel and can be required for construction workers; this training may reduce  
32 the likelihood of conflict.

#### 33 5.4.1.6 Tinian Community and Social Topics Summary

34 Decreased access to fresh locally grown food, decreased income for those that participate in subsistence  
35 activity, decreased access to recreational and cultural activity areas, and potential conflict with incoming  
36 populations can all impact community character and cohesion.

37 Community character on Tinian may change due to the proposed action. Community character is the  
38 distinctive identity of a particular place that results from the interaction of many factors that give it unique  
39 or special characteristics - built form, landscape, history, people, and activities within the place as a whole  
40 (American Planning Association 2011). The potential decrease in access to fresh locally grown food and  
41 recreational and cultural activity could change the nature of everyday activities for the population on  
42 Tinian, and accelerate the trend of Tinian moving away from an agricultural community practicing

1 subsistence activity to a more modern community lacking those skills. In addition, the access restrictions  
2 themselves could shift the relationship between the population and the areas/landscapes where restrictions  
3 would be imposed – whether the relationship was using the land for subsistence, income earning,  
4 practicing traditional skills, or any other place-based relationship.

5 Community cohesion on Tinian may also change due to the proposed action. Community or social  
6 cohesion measures the levels of “relationship between individuals, groups and organizations within a  
7 community” (Holdsworth 2009), a concept that is closely tied with the Chamorro concept of  
8 “inafa’maolek” (defined in Section 3.5.2). The potential decreases in access to resources in the Military  
9 Lease Area could reduce a person’s ability to provide “chenchule”, thus disrupting his/her ability to  
10 maintain and strengthen the social cohesion within their network. In addition, a potential decrease in the  
11 practice of cultural activity among the Chamorro community on Tinian could lessen the opportunities that  
12 the community could engage in activity together and build and maintain social cohesion. Finally, a lack of  
13 community cohesion occurs when there are “divisions between groups, individuals and systems” (Stone  
14 and Hughes 2002); such divisions could be possible if the current Tinian population were to come into  
15 conflict with incoming populations. The introduction of construction workers and military training  
16 personnel would increase the number of people present in the community that have no social ties to the  
17 community or commitments that bind them to the community. However, foreign workers regularly  
18 operate on Tinian and in the past have not been prone to conflict. Additionally, military personnel tend to  
19 be respected by the local population on Tinian and there is no history of conflict.

## 20 **5.4.2 Pagan**

21 The proposed action would require reduced access to parts of the island for 16 weeks per year and  
22 restricted access to other parts year-round. Potential impacts of these reductions in access include:  
23 decreased access to areas where recreational and cultural activities occur and a decreased likelihood that  
24 former Pagan residents or their descendants will be able to settle or homestead on the island. These  
25 potential outcomes are detailed below and then summarized in the context of community character and  
26 community cohesion.

### 27 5.4.2.1 Recreational Activity

28 There are visitors who stay on Pagan for days, weeks, months, or longer. Recently, the island has been  
29 used for fishing, hunting, and camping trips, and the island has some long-term visitors. The proposed  
30 action will mean that visitors that currently frequent Pagan for recreational activity would have generally  
31 reduced access to the island, may not be able to stay on Pagan for as long as they desire, visit certain parts  
32 of Pagan that they may like to see, or engage in the recreational activities that they currently engage in.

### 33 5.4.2.2 Cultural Activity

34 As noted in Section 3.5.3.2, the entire island of Pagan holds cultural importance to former residents (DoN  
35 2014c). Reduced access to the island will reduce the opportunity that those with ties to the island will  
36 have to engage in cultural activity there. This would affect their connection with the place they consider  
37 home and their historical and cultural roots, and affect their ability pass on that connection to their  
38 children.

### 39 5.4.2.3 Resettlement and Homesteading

40 As noted in Section 3.5.3.2, some former Pagan residents desire to return to the island and settle there  
41 permanently, to live and practice their traditional practices as they were passed down to them from their

1 parents, and to in turn pass them down to their children (DoN 2014c; Mariana Resource Conservation and  
2 Development Council, personal communication, January 2014; Northern Islands Mayor's Office,  
3 personal communication, February 2014).

4 The proposed action may limit the ability for island-wide permanent settlement on Pagan and thus limit or  
5 suspend any progress to resettle the island. This would lead to a continuation of the historical pattern of  
6 settlement and relocation.

7 As part of the proposed action, an interest in land on Pagan would be acquired through lease by the U.S.  
8 federal government, which would change the expected future baseline (without the proposed action) in  
9 which homestead permits would be issued allowing Northern Islanders to work homestead claims on  
10 Pagan. Some homestead permits which would otherwise have been granted would likely not be granted.

11 However, homestead *deeds* are not expected to be granted in the near future even without the proposed  
12 action. As such, it is anticipated that the proposed action would have no impact on the granting of  
13 homesteading deeds on Pagan in the near future.

#### 14 5.4.2.4 Pagan Community and Social Topics Summary

15 Decreased access to recreational and cultural activity, and decreased likelihood that former Pagan  
16 residents will be able to settle or homestead the island can impact community character and cohesion.

17 The community character of Pagan may change due to the proposed action. Community character is the  
18 distinctive identity of a particular place that results from the interaction of many factors that give it unique  
19 or special characteristics - built form, landscape, history, people, and activities within the place as a whole  
20 (American Planning Association 2011).

21 With the proposed action, some recreational and cultural activity that occurs on the island would be  
22 replaced by combined level training, and a portion of the island would be turned into a high hazard impact  
23 zone. This change would be distasteful to the Northern Islands community (Northern Islands Mayor's  
24 Office, personal communication, February 2014; Mariana Resource Conservation and Development  
25 Council, personal communication, January 2014). Concern about its negative effects was a major  
26 component of scoping comments gathered regarding the proposed action (DoN 2013), and a grassroots  
27 movement has emerged that is voicing concerns linked to the history of military use of islands in the  
28 Pacific region, for example, the Save Pagan Island petition on the website change.org (6,306 supporters as  
29 of this writing) (change.org 2014). This change in the character of activity that occurs on the island would  
30 affect the distinctive identity that Pagan holds among members of the Northern Islands community.  
31 Therefore, the place-based relationship that the Northern Islands community is able to have with its  
32 ancestral homeland of Pagan would be affected.

1 Community cohesion between those with ancestral ties to Pagan may also be impacted due to the  
2 proposed action. Community or social cohesion measures the levels of “relationship between individuals,  
3 groups and organizations within a community” (Holdsworth 2009). Oral history informants expressed the  
4 importance of practicing cultural activities in order to maintain the continuity of their cultural identity  
5 (DoN 2014c). Reduced opportunity to practice cultural activities on Pagan and settle the island would  
6 lessen the opportunity for Chamorro and Carolinian communities to pursue a common goal to settle or  
7 homestead the island, practice their common cultural identity together or pass cultural practice down to  
8 their children, thereby lessening their ability to build social cohesion within their networks.



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## **APPENDIX A**

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### ***Methodological Notes and Intermediate Calculations***

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## 1.0 METHODOLOGICAL NOTES AND INTERMEDIATE CALCULATIONS

This Appendix provides methodological notes and intermediate calculations that describe how the expected future conditions in the Commonwealth of the Northern Mariana Islands (CNMI) and the effects of the proposed action were estimated. For the most part, the information in this Appendix details how quantitative estimates were made. Additionally, some information in this Appendix describes how certain things (such as subsistence and commercial activity) were differentiated and how certain concepts (such as community character and community cohesion) were defined.

### 1.1 EXPECTED FUTURE CONDITIONS

Expected future conditions establish the “expected future baseline.” The expected future baseline does not take potential effects from the proposed action into consideration. To establish the expected future baseline, assumptions were made and two distinct types of analyses were conducted: quantitative projections (estimates of a future data based on study of present data) and binary assessments (assessments for which there are two possible outcomes). Various data were utilized for these analyses and for quantitative projections. Specifically, an approach similar to the Office of Insular Affairs study titled *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to Seven Insular Areas* (Office of Insular Affairs 2012) was used, whereby relationships between economic indicators are established to estimate changes in one economic indicator based on changes in another economic indicator.

#### 1.1.1 Population

##### 1.1.1.1 CNMI Overall

The population projection for the CNMI is published by the U.S. Census Bureau’s International Database (U.S. Census Bureau 2013). The average population in this projection, between 2016 and 2025, was used as the medium baseline. To establish the range of low and high projections, the medium baseline was reduced and increased by 10%, respectively (10% representing a standard margin of error).

##### 1.1.1.2 Tinian

Projections of Tinian population were estimated as a proportion of total CNMI population. As of 2010, 5.8% of the CNMI population lived on Tinian (U.S. Census Bureau 2010) and, on average, 5.5% of the CNMI population has lived on Tinian since 1958 (Pacific Web 2013). The projection of Tinian’s future population applies this long-term average and therefore estimates that 5.5% of the CNMI’s projected future population would live on Tinian.

##### 1.1.1.3 Pagan

The expected future population of Pagan is assessed qualitatively, relative to current population. The qualitative assessment indicates whether the population on Pagan would be more or less than current levels. Since there is no current population on Pagan, the result of the assessment is presented as the direction of a potential marginal change in population – either an increase or a decrease in population from current levels.

#### 1.1.2 Economic Conditions

Tourism spending has been the primary driver of the CNMI economy, accounting for much of the change measured in the CNMI’s gross domestic product in recent years (U.S. Bureau of Economic Analysis

1 2013). Because it is the key driver of the economy, projections of tourism expenditures are used to  
 2 establish projections for other economic variables.

3 1.1.2.1 Tourism

4 Commonwealth of the Northern Mariana Islands Visitors

5 *Growth Rates*

6 The Marianas Visitors Authority developed a projection of visitors to the CNMI, by place of origin, for  
 7 Fiscal Year 2014, a time period which spans from October 2013 through September 2014 (Marianas  
 8 Visitors Authority, personal communication, February 2014). This projection was modified slightly to  
 9 adjust it to calendar year (January through December) 2014. This adjusted Marianas Visitors Authority  
 10 projection was then used as the first projection year, also known as the “base projection.” Table A1 shows  
 11 the 2014 base projection.

12 Once the base projection was established, escalating factors (i.e., projected annual rates of change into the  
 13 future) were developed. To estimate the initial escalating factor (i.e., the rate of growth that was used to  
 14 move 2014 projections to 2015), two different factors were averaged – the 2006 to 2014 and the 2013 to  
 15 2014 annualized growth rates in number of tourism visitors, by place of origin. These two factors were  
 16 averaged for the purposes of capturing all 2006 to 2014 data while also giving additional weight to the  
 17 most recent data (the 2013 to 2014 projection). Table A1 shows the factors that were averaged and the  
 18 resulting initial escalating factors that were used to escalate 2014 Marianas Visitors Authority projections  
 19 to represent year 2015 projections.

**Table A1. Base Projection for Visitors by Country of Origin and Initial Escalating Factors**

<i>Visitor Country of Origin</i>	<i>2014 Base<sup>1</sup> Projection</i>	<i>2013-2014 Projected Growth</i>	<i>Annualized Growth Rate 2006-2014<sup>2</sup></i>	<i>Initial Escalating Factors<sup>3</sup></i>
Korea	171,585	3.0%	7.2%	5.1%
Japan	137,613	-4.7%	-8.3%	-6.5%
China/Hong Kong	121,071	0.0%	14.9%	7.4%
U.S. & Guam	21,585	15.0%	0.4%	7.7%
Russia <sup>2</sup>	15,231	27.2%	19.2%	23.2%
Other Areas	3,433	7.2%	-4.3%	1.4%
Philippines	1,506	29.2%	-11.8%	8.7%
Taiwan	344	97.6%	-3.5%	47.0%

20 Notes: <sup>1</sup>2014 projection is Marianas Visitors Authority Fiscal Year 2014 projection adjusted to  
 21 calendar year 2014.

22 <sup>2</sup>2009 to 2013 used for Russia to exclude very low values from 2006 to 2008. These data  
 23 created very large variation.

24 <sup>3</sup>The initial escalating factor is the average of 2013 to 2014 projected growth and the  
 25 annualized growth rate from 2006 to 2014. It was used to move 2014 projections to  
 26 2015.

27 Sources: CNMI Department of Commerce 2006, 2008, 2012, 2013.

28 The initial escalating factors established in Table A1 were adjusted for use as escalating factors for years  
 29 2016 to 2025 because, while the past growth rates are assumed to be indicative of future growth rates,  
 30 irregular variation (unpredictable, random, variation) is found in short-term trends, and applying a  
 31 constant rate of growth would lead to exponential and unrealistic growth known as “exponential curving,”  
 32 caused by compounding (Cho 2003). In other words, applying the same rate of change to numbers over  
 33 time eventually causes the number to increase much more quickly than the initial growth rate was  
 34 intended to represent. For instance, doubling \$100 every year for 10 years would result in over \$100,000.

1 Since tourism visits do not grow exponentially, the initial escalating factors were smoothed over time  
2 (i.e., their absolute values were reduced as projections moved further into the future) to prevent lending  
3 too much weight to the initial escalating factor. By smoothing the initial escalating factor over time, the  
4 association between the projection and the initial factor, and the trends it is based on, is reduced.

5 *Range of Projections – Low, Medium, and High*

6 Three separate sets of factors were established to represent three scenarios – a low growth scenario, a  
7 medium (i.e., trend) growth scenario, and a high growth scenario. The low growth scenario is more aptly  
8 referred to as a no growth scenario as zero growth in visitors from any country, after 2014, was assumed  
9 (Table A2). The medium (trend) growth scenario was developed by smoothing the initial escalating  
10 factors over time, staying consistent with current trends while limiting irregular variation and exponential  
11 curving (Table A3). The high growth scenario is the same as the medium growth scenario, except it  
12 assumes stability in the Japanese market as opposed to decline, which has been the trend (Table A4).

13 These low, medium (trend), and high growth rates by country of origin for 2014 through 2025 were then  
14 applied to the 2014 base visitation projection to determine the total number of visitors by origin in each  
15 year.

**Table A2. Projected Annual Growth Rates<sup>1</sup> in Number of CNMI Tourism Visitors by Place of Origin, Low Growth Scenario, 2014 to 2025**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Japan	-3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Korea	23%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
U.S. & Guam	-2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
China/Hong Kong	3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines	23%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia	21%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan	188%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Areas	-15%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

16 *Note:* <sup>1</sup>Rate of change from 2013 actual to 2014 Marianas Visitors Authority projection.

17 *Sources:* Marianas Visitors Authority 2013; Marianas Visitors Authority, personal communication, February 2014.

18

**Table A3. Projected Annual Growth Rates<sup>1</sup> in Number of CNMI Tourism Visitors by Place of Origin, Medium (Trend) Growth Scenario, 2014 to 2025**

	2014 <sup>1</sup>	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Japan	-3%	-5.5%	-3.7%	-3.7%	-2.7%	-2.7%	-2.2%	-2.2%	-1.8%	-1.8%	-1.4%	-1.4%
Korea	23%	16.1%	4.0%	2.3%	1.8%	1.5%	1.3%	1.2%	1.1%	1.1%	1.0%	0.9%
U.S. & Guam	-2%	-1.9%	-1.3%	-1.3%	-1.0%	-1.0%	-0.6%	-0.6%	-0.5%	-0.5%	-0.4%	-0.4%
China/Hong Kong	3%	9.4%	6.2%	6.2%	6.2%	4.7%	4.7%	4.7%	3.7%	3.7%	3.1%	3.1%
Philippines	23%	5.5%	3.6%	3.6%	2.7%	2.7%	2.2%	2.2%	1.8%	1.8%	1.4%	1.4%
Russia	21%	20.2%	5.1%	2.9%	2.2%	1.8%	1.7%	1.6%	1.4%	1.3%	1.3%	1.2%
Taiwan	188%	94.8%	13.5%	11.8%	10.5%	9.5%	8.6%	7.9%	7.3%	6.8%	6.3%	5.9%
Other Areas	-15%	-11.1%	-7.4%	-7.4%	-5.5%	-5.5%	-4.4%	-4.4%	-3.7%	-3.7%	-2.8%	-2.8%

19 *Note:* <sup>1</sup>Rate of change from 2013 actual to 2014 Marianas Visitors Authority projection.

20 *Sources:* Marianas Visitors Authority 2013; Marianas Visitors Authority, personal communication, February 2014.

**Table A4. Projected Annual Growth Rates<sup>1</sup> in Number of CNMI Tourism Visitors by Place of Origin, High Growth Scenario, 2014 to 2025**

	2014 <sup>1</sup>	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Japan	-3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Korea	23%	16.1%	4.0%	2.3%	1.8%	1.5%	1.3%	1.2%	1.1%	1.1%	1.0%	0.9%
U.S. & Guam	-2%	-1.9%	-1.3%	-1.3%	-1.0%	-1.0%	-0.6%	-0.6%	-0.5%	-0.5%	-0.4%	-0.4%
China/Hong Kong	3%	9.4%	6.2%	6.2%	6.2%	4.7%	4.7%	4.7%	3.7%	3.7%	3.1%	3.1%
Philippines	23%	5.5%	3.6%	3.6%	2.7%	2.7%	2.2%	2.2%	1.8%	1.8%	1.4%	1.4%
Russia	21%	20.2%	5.1%	2.9%	2.2%	1.8%	1.7%	1.6%	1.4%	1.3%	1.3%	1.2%
Taiwan	188%	94.8%	13.5%	11.8%	10.5%	9.5%	8.6%	7.9%	7.3%	6.8%	6.3%	5.9%
Other Areas	-15%	-11.1%	-7.4%	-7.4%	-5.5%	-5.5%	-4.4%	-4.4%	-3.7%	-3.7%	-2.8%	-2.8%

1 *Note:* <sup>1</sup>Rate of change from 2013 actual to 2014 Marianas Visitors Authority projection.

2 *Sources:* Marianas Visitors Authority 2013; Marianas Visitors Authority, personal communication, February 2014.

### 3 Tinian Visitors

4 Tinian visitor projections for all countries of origin except China were developed using a methodology  
5 similar to that described above for the CNMI. In order to maintain overall consistency between CNMI  
6 and Tinian visitor estimates, the number of future Tinian visitors from China was projected based on the  
7 number of Chinese visitors to the CNMI (described in the previous section) and the average proportion of  
8 Chinese visitors to the CNMI that visited Tinian in 2013 (38%). This is because, although the total  
9 number of Chinese visitors to the CNMI has increased, the percentage of overall Chinese visitors to the  
10 CNMI that visited Tinian has declined and most recent data are considered the most representative of  
11 conditions going forward and the most appropriate upon which to base projections. In 2006, 91% of  
12 Chinese visitors to the CNMI visited Tinian; this proportion fell to approximately 75% in 2007 through  
13 2009, and was 49%, 50%, 55%, and 38% from 2010 through 2013; this decline is considered structural as  
14 Saipan is targeting Chinese visitors more than in the past.

### 15 Visitor Expenditures

16 Place of origin-specific data on average nights per visit and average expenditures per night were applied  
17 to the CNMI visitor projections (discussed above) to project visitor expenditures by place of origin from  
18 2014 through 2025. Expenditures by country of origin were summed across years to yield projections for  
19 total on-island visitor expenditures.



1 The year-to-year rates of change in total on-island visitor expenditures are shown in Table A5. Because  
 2 tourism expenditures are the primary driver of the CNMI economy, these growth rates were applied as  
 3 escalating factors for projections of real gross domestic product, employment, income, government  
 4 finances, and port statistics.

**Table A5. Implied CNMI Annual Visitor Expenditure Growth Rates, 2014 to 2025**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual % Change in Visitor Expenditures - Low	8.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Annual % Change in Visitor Expenditures - Medium	8.3%	8.2%	2.6%	1.8%	1.9%	1.4%	1.5%	1.5%	1.3%	1.3%	1.2%	1.2%
Annual % Change in Visitor Expenditures - High	8.3%	9.8%	3.4%	2.6%	2.4%	1.9%	1.9%	1.9%	1.6%	1.6%	1.4%	1.4%

5 *Note:* <sup>1</sup>Percentages represent percentage change from previous year.

6 Due to lack of data on daily visitor spending on Tinian, visitor expenditures were not projected for Tinian.

7 1.1.2.2 Gross Domestic Product

8 The projection of real gross domestic product is based on the historical relationship between gross  
 9 domestic product and visitor expenditures. Visitor expenditures from the year 2012 were compared to  
 10 2012 gross domestic product (U.S. Bureau of Economic Analysis 2013) to establish a ratio. Visitor  
 11 expenditures for 2012 were estimated at \$298.7 million and gross domestic product was \$701 million,  
 12 establishing a ratio of \$2.35 in gross domestic product for every \$1 of visitor expenditures. This ratio  
 13 (\$2.35 to \$1) was applied to annual projections of visitor expenditures to yield the projections of gross  
 14 domestic product. Since the projection of visitor expenditures does not include a measure of price change  
 15 (all values are in 2012 dollars), the projection of gross domestic product is an estimate of ‘real’ gross  
 16 domestic product that excludes effects of inflation and deflation.

17 1.1.2.3 Employment and Income

18 Employment

19 The projection of CNMI employment is based on the relationship between real gross domestic product  
 20 and employment. Total employment for the years in which CNMI employment data was available – 2002,  
 21 2005, 2007, 2010, and 2011 – were compared to gross domestic product for corresponding years. The  
 22 result of the comparison is that, on average, there has been one job in the CNMI for every \$32,617 in  
 23 gross domestic product. This ratio was applied to projections of real gross domestic product to yield  
 24 projections of CNMI employment.

25 The projection of Tinian employment is based on the ratio of overall CNMI employment to Tinian  
 26 employment as published in the 2010 Census. Specifically, in the 2010 Census, Tinian employment was  
 27 7.1% of the total CNMI employment. The factor of 7.1% was applied to projections of overall CNMI  
 28 employment to yield the projection of Tinian employment.

1 Income

2 The projection of CNMI total income from employment is based on the relationship between real gross  
3 domestic product and total employee compensation (a component of gross domestic product published by  
4 the U.S. Bureau of Economic Analysis). Total employee compensation for the years 2002 to 2012 was  
5 compared to gross domestic product for corresponding years. The result of the comparison was that, on  
6 average, employee compensation in the CNMI makes up 66.5% (approximately two-thirds) of gross  
7 domestic product. This ratio (2:3) was applied to projections of real gross domestic product to yield  
8 projections of CNMI income.

9 The projection of Tinian total income from employment is based on the ratio of overall CNMI aggregate  
10 wage or salary income to Tinian aggregate wage or salary income. Aggregate wage or salary income is a  
11 measure that reports data similar to employee compensation but is reported by the U.S. Census Bureau at  
12 the island level of detail. Specifically, Tinian aggregate wage or salary income has historically been 6.1%  
13 of total CNMI aggregate wage or salary income. The factor of 6.1% was applied to projections of overall  
14 CNMI employee compensation to yield projections of Tinian employee compensation.

15 1.1.2.4 Government Revenues

16 The projection of CNMI government revenues is based on two associated relationships: (1) the  
17 relationship between gross domestic product and taxes on production and imports (a component of gross  
18 domestic product), and (2) the relationship between taxes on production and imports and CNMI  
19 government revenues. Taxes on production and imports (which consist of taxes chargeable to businesses)  
20 was compared to gross domestic product for the years 2005 to 2012; on average, over that period, taxes  
21 on production and imports made up 14% of gross domestic product. Taxes on production and imports was  
22 then compared to CNMI government revenues over the 2005 to 2009 period; on average, over that period,  
23 CNMI government revenues were 1.43 times higher than taxes on production and imports. The two  
24 comparison factors were multiplied together and the resulting factor indicated that CNMI government  
25 revenues were, on average, 20% of gross domestic product. The 20% factor was applied to projections of  
26 gross domestic product to yield projections of CNMI government revenues.

27 1.1.2.5 Livestock

28 The number and value of cattle on Tinian was projected as part of the expected future baseline. The  
29 projections are based on recent survey data and the goal of the Tinian Cattlemen's Association to expand  
30 the herd in coming years. Representatives of the Tinian Cattlemen's Association explained in personal  
31 interviews that their goal was to double or triple the size of the herd, above the number shown in recent  
32 counts (Northern Marianas College-Cooperative Research Extension and Education Service [NMC-  
33 CREES] 2013), within 5 years (Tinian Cattlemen's Association, personal communication, January 2014).

34 The projection assumes the midpoint of that goal: within 5 years of 2014 (i.e., 2019), the herd will have  
35 increased to 2.5 times its recently estimated size. The value of the herd is likewise projected to be 2.5  
36 times the recently estimated value (in real terms, keeping 2012 dollars constant) as of 2019.

37 To project herd size for earlier and later years (2016 to 2018 and 2020 to 2025), the annual growth rate  
38 that was implied in the 2.5 times herd size increase, from 2014 to 2019 (16%), was applied to the  
39 midpoint projected values.

40 To estimate the range for the projection – low and high ends of the range – the 16% midpoint growth rate  
41 was adjusted. For the low end of the range, the escalating factor for 2020 to 2025 was slightly reduced (to  
42 14%), and for the high end of the range, the factor was increased to 18% annualized.

1 Additionally, expectations regarding efficiency of land use (cattle per hectare) and total land needed for  
2 projected herd sizes are set. These are based on information collected in discussions with the Tinian  
3 Cattlemen's Association (Tinian Cattlemen's Association, personal communication, January 2014) and  
4 total hectares required in the future are estimated based on these efficiency factors and number of  
5 projected cattle.

6 Binary analysis is conducted to determine whether a beef slaughtering facility should be included in the  
7 expected future baseline. Primary data used to make the determination was gathered through personal  
8 interviews.

#### 9 1.1.2.6 Aquaculture

10 Binary analysis is conducted to determine whether open-ocean aquaculture in the CNMI should be  
11 included in the expected future baseline. Primary data used to make this determination include  
12 information obtained in personal interviews and information gathered from various government and non-  
13 governmental agency sources.

#### 14 1.1.2.7 Commonwealth of the Northern Mariana Islands Airports and Seaports

15 The projected change in airport arrivals is based on projected changes in total visitor arrivals. The number  
16 of arriving air passengers was compared to total visitor arrivals over the 2005 to 2012 period. The  
17 comparison showed that visitors comprise 78% of all arriving airport passengers. The (78%) comparison  
18 factor was applied to projection of visitor arrivals to yield projected airport arrivals.

19 The projections of inbound revenue tons (seaport freight) was based on the relationship between total  
20 revenue tons and gross domestic product. Total seaport freight was compared to gross domestic product  
21 over the 2005 to 2012 period. The comparison yielded a ratio of \$1,626 in gross domestic product for  
22 every revenue ton of seaport freight. The comparison ratio was applied to projections of gross domestic  
23 product to yield the projection of total revenue tons. The percentage breakdown between inbound freight  
24 from 2010 to 2012 was applied to the projection of total freight to yield the projection of inbound freight  
25 (inbound made up 95.7% of total freight over those years).

#### 26 1.1.2.8 Minerals

##### 27 Pagan

28 Binary analysis is conducted for potential minerals extraction on Pagan to determine whether mining  
29 operations should be expected in the near future. Numerous data sources were reviewed to make this  
30 determination; information from the U.S. Geological Survey and from the Saipan Shipping Company was  
31 most vital.

### 32 **1.1.3 Public Services**

#### 33 1.1.3.1 Public Education

34 The number of students on Tinian would be expected to change in accordance with overall population  
35 change. The percentage of students on Tinian relative to total population was calculated and expected  
36 future baseline population was multiplied by that percentage to establish the expected future baseline  
37 number of students. Adequacy of services in the expected future baseline is assumed to be consistent with  
38 adequacy of services established in the current conditions.

1 1.1.3.2 Public Health and Safety

2 The entire population of Tinian was assumed to be included in the service population for public health  
3 and public safety services. As such the expected future population is the expected future service  
4 populations. Adequacy of services in the expected future baseline is assumed to be consistent with  
5 adequacy of services established in the current conditions.

6 **1.1.4 Community and Social Topics**

7 Trends in ranching and food supply on Tinian are discussed as context for qualitative trends, i.e., broad  
8 information on future conditions for these topics is presented.

9 Recently, the topic of establishing homesteads on Pagan has been discussed. Any potential homestead  
10 permits or deeds would be granted by the CNMI Department of Public Lands. If homestead deeds are  
11 granted, it would be the first time that land on Pagan would be held privately. A binary assessment is  
12 conducted for the topic of homesteading on Pagan to determine whether or not the granting of homestead  
13 permits or deeds should be included in the expected future baseline.

14 **1.2 IMPACTS OF THE PROPOSED ACTION**

15 Since there is not a viable economic model that simulates inputs and outputs of regional economic activity  
16 for the CNMI as there are for many other locations (Office of Insular Affairs 2012), and data are limited  
17 due to lack of U.S. federal coverage in many statistical programs that are standard for states and counties,  
18 this study takes an approach similar to, and applies data from, the Office of Insular Affairs study titled  
19 *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to Seven Insular Areas* (Office  
20 of Insular Affairs 2012) whereby relationships between economic indicators are established to estimate  
21 changes in one economic indicator based on changes in another economic indicator.

22 **1.2.1 Population**

23 1.2.1.1 Tinian

24 Population impacts were determined based on changes in the number of people who would be on Tinian  
25 as a result of the proposed action; the change in the number of people was estimated to be primarily  
26 associated with changes in the number of jobs. Sources of new population that would be related to the  
27 proposed action include construction workers, operations workers, and training personnel, along with  
28 dependents of some construction workers and operational workers. A low, medium, and high population  
29 contribution from each of these sources was determined separately and then summed to calculate the total  
30 change to the population that would occur as a result of the proposed action. The estimates of the total  
31 change in population were divided by expected future baseline population estimates to quantify potential  
32 impacts, measured as a percentage change relative to expected future baseline levels. In addition to  
33 quantified population impacts, demographic impacts (potential noticeable changes in the ethnic makeup  
34 of Tinian) are also assessed.

35 Construction Worker Population

36 In the 2012 study titled *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to*  
37 *Seven Insular Areas* (Office of Insular Affairs 2012), the Office of Insular Affairs estimated that for every  
38 \$64,513 in construction expenditures in the CNMI, there is one construction job. Project-related  
39 construction expenditures on Tinian, currently planned to be \$491.9 million over an 8- to 10-year period,  
40 were divided by 64,513 to determine the number of construction jobs needed to complete project-related

1 construction on Tinian; this calculation indicated that 7,625 construction jobs would be needed. Averaged  
2 over an 8- to 10-year period, between 763 and 953 jobs per year would be needed to complete  
3 construction on Tinian.

4 However, this measure of jobs was not a good indication of the number of construction workers that  
5 would be needed for construction work on Tinian because the “jobs” measure includes all jobs including  
6 part-time and temporary work. In the construction industry, more than in many other industries, part-time  
7 and temporary work can skew statistics to appear as if more people are needed to complete construction  
8 work than actually are. Given that the vast majority of construction workers associated with the proposed  
9 action would be brought in on worker visas and housed in construction workforce housing behind the  
10 Tinian Dynasty, it is highly likely that work would be completed by full-time employees. As such, to  
11 estimate the number of construction workers that would be on Tinian, the estimate of jobs shown above  
12 was converted into full-time equivalency.

13 The conversion from all jobs to full-time equivalent jobs was made by establishing a ratio between the  
14 compensation per construction job estimate (\$7,732) developed in the Office of Insular Affairs study and  
15 average annual pay for construction occupations (\$12,917). The Office of Insular Affairs compensation  
16 per employee number was \$7,732 and the average annual pay number was \$12,917, implying a ratio of  
17 approximately 1.67. Dividing the total jobs estimate by 1.67 yielded an estimate of full-time jobs. The  
18 full-time jobs figure was then averaged over 10 years to establish the low population estimate. The  
19 estimate of jobs was then spread over 8 years to establish the high estimate of annual population. The  
20 average of the high and low estimated populations serves as the medium estimate. Because Tinian has  
21 such a small construction workforce, the conservative assumption was made that all construction workers  
22 would be from off island, and primarily be foreign workers. While it is likely that some small number of  
23 Tinian residents, and Saipan residents as well, would be employed doing construction work related to the  
24 proposed action, the maximal impact case was analyzed using the assumption of 100% foreign workers.

25 In order to provide further detail in the population estimate, the number of construction workers was  
26 broken down into construction managers and non-construction managers. Data from the *CNMI Prevailing  
27 Wage and Workforce Assessment Study* (CNMI Department of Commerce 2012) showed that construction  
28 managers made up 4% of construction workforce in 2011. The estimated number of construction workers  
29 action was multiplied by 4% to establish the number of construction managers. It was then assumed that  
30 some (half) would bring dependents to Tinian. The number of estimated construction managers was  
31 divided by 2 and then multiplied by 3.26, the average household size for the CNMI, in order to account  
32 for dependents that would also add to Tinian’s population.

33 It was furthermore assumed that construction managers would seek housing in the Tinian market; other  
34 construction workers are assumed to reside in construction workforce housing and thus not create  
35 additional demand for housing on Tinian.

### 36 Operations Worker Population

37 Planning data for the proposed action indicates that there would be 95 jobs on Tinian associated with base  
38 camp and training operations. Nineteen of these jobs would be for military personnel and/or government  
39 employees with specialized training and experience. These 19 jobs would be staffed at all times by  
40 rotational staff and would thus add a total of 19 people to Tinian’s population; since these are rotational  
41 jobs, no dependents are assumed to accompany these workers. The remaining 76 jobs could potentially be  
42 filled by current Tinian residents and could therefore result in no additional population increase.  
43 However, given the small size of the available Tinian labor pool (126 unemployed in 2010 according to  
44 U.S. Census Bureau 2010), it is likely that many, or most, of these jobs would be filled by new

1 population. The estimate of new population on Tinian associated with operations employment assumes  
2 that most of the jobs would be filled by people who do not currently reside on Tinian. A range of  
3 percentage of these jobs that would be taken by Tinian residents was developed using 10% as the low end  
4 of the range and 50% as the high end of the range, implying that between 50% (38 of the 76) and 90% (68  
5 of the 76) of these jobs would be taken by people who do not currently live on Tinian, thereby adding to  
6 Tinian's population. The number of jobs that would be taken by people who would add to population was  
7 multiplied by 3.26, the average household size for the CNMI, in order to account for operations worker  
8 dependents that would also add to Tinian's population.

#### 9 Training Personnel Population

10 Population change associated with training personnel on Tinian can be viewed in a variety of ways.  
11 Because training would take place for only 20 weeks of the year, training personnel population would be  
12 zero for the majority of the time. However, since there would be additional population at times, zero  
13 would not be an appropriate measure. During the 20 weeks of training, training personnel population  
14 would be variable with between 30 to 2,200 personnel participating in specified training operations. Also,  
15 the average, on a year-round basis, population of training personnel was calculated.

#### 16 1.2.1.2 Pagan

17 Changes in the population of Pagan, potentially associated with the proposed action, are assessed  
18 qualitatively. The qualitative assessment indicates whether the population on Pagan would be more or less  
19 than expected future baseline levels. Since no exact quantitative estimates of current or expected future  
20 population is conducted, the result of the assessment is presented as the direction of a potential marginal  
21 change in population – either an increase or a decrease in population from expected future baseline levels.

#### 22 **1.2.2 Economic Conditions**

23 Economic conditions assessed include tourism, gross domestic product, employment and income,  
24 government revenues, housing, agriculture, fishing and aquaculture, air and seaports, power utility rates,  
25 and minerals.

1 1.2.2.1 Tourism

2 Tinian

3 *Impacts Due to Altered Flight Paths*

4 To improve flight safety during training associated with the proposed action, flight patterns between  
5 Saipan and Tinian would be adjusted slightly (see EIS/OEIS Section 4.6). Because of the adjustment,  
6 flights would travel slightly further and consume slightly more fuel than prior to the proposed action.  
7 Because more fuel would be consumed, airlines would need to purchase more fuel and may need to raise  
8 prices to cover the additional cost. Higher prices for airline tickets could reduce demand for flights  
9 between Saipan and Tinian and thereby reduce the number of tourists that visit Tinian and the CNMI  
10 altogether. Effects are expected to be very small, but analysis of this possible scenario is presented in  
11 Table A6.

**Table A6. Reduced Tourism Demand Due to Adjusted Flight Pattern between Saipan and Tinian**

	<i>Distance Miles<sup>1</sup></i>	<i>Fuel (gallons)</i>	<i>\$/Gallon</i>	<i>Fuel Cost</i>
Before Proposed Action	25.66327	2.500	\$10	\$25.00
After Proposed Action, During Training	26.03107	2.536	\$10	\$25.36
Difference	0.367803	0.03583	\$0	<b>\$0.36</b>
				<i>Price and Demand Factors</i>
Customers Per Trip				2
Additional Charge per Customer While Training				\$0.18
Price per Person Before				\$69.00
Price per Person After				\$69.18
Price Increase % While Training				0.26%
Elasticity of Demand <sup>2</sup> (Low)				-1.2
Elasticity of Demand <sup>2</sup> (Med)				-1.4
Elasticity of Demand <sup>2</sup> (High)				-1.5
% of Year with Adjusted Flight Pattern				38.36%
Annual Demand Reduction (Low)				-0.12%
Annual Demand Reduction (Med)				-0.14%
Annual Demand Reduction (High)				-0.15%

12 Notes: <sup>1</sup>Distance in miles is an example best estimate; every flight would cover a different distance.  
13 <sup>2</sup>Elasticity of demand indicates the multiplicative ratio between percentage change in price and percentage change in  
14 demand (e.g., if elasticity of demand is -2 and there is a price increase of 1%, then demand will decrease by 2% (-2  
15 x 1% = -2%).  
16 Sources: For distances: BaseOps 2014; for fuel use and cost: Star Marianas Airline, personal communication, January 2014; for  
17 elasticity's: International Air Transport Association 2007.

18 Demand reduction figures were applied to baseline estimates of visitors to Tinian to determine the  
19 number of fewer visits to Tinian that would occur due to the altered flight paths.

20 *Impacts from Restricted Access to Areas on Tinian*

21 For 20 weeks of the year, access to sites that are visited by tourists would be restricted while training  
22 occurs. While areas that would be restricted are leased by the Department of the Navy (DoN), and the  
23 DoN is not required to grant access at any time, baseline conditions include the assumption that  
24 potentially restricted areas would continue to be available for use or visit by tourists. As such, access  
25 restrictions and other conditions associated with the proposed action (such as noise) would potentially  
26 decrease demand for tourism relative to expected future baseline conditions.

1 Low, high, and medium estimates for reduced demand for tourism that would result from reduced access  
2 were developed. The low estimate examined monthly visitor data (Tinian Dynasty Hotel and Casino,  
3 personal communication, January 2014) to identify the 5 months (20 weeks) of the year when Tinian had  
4 the fewest visitors to determine the minimum percentage of annual visitors that would be affected by  
5 access restrictions. The high estimate examined the 5 months of the year when Tinian experiences the  
6 highest visitor counts to determine the maximum percentage of annual visitors that would be affected by  
7 access restrictions. The medium estimate was an average of the low and high estimates. The least popular  
8 5 months (January, June, September, October, and November) accounted for 35% of Tinian visitors while  
9 the most popular 5 months of the year on Tinian (February, March, April, July, and August) accounted for  
10 48% of Tinian visitors.

11 Tourists visit Tinian for reasons other than to visit areas that would be restricted. Visitors come to Tinian  
12 for business, which would not be restricted by the proposed action. They come for nature and recreational  
13 activities including the use of beaches, snorkeling, and scuba diving, which can be done in areas that  
14 would not be restricted (see Figure 3.3-1 in this Socioeconomic Impact Assessment Study). Tourists also  
15 visit because the CNMI is the closest U.S. location to Asia making it an inexpensive travel destination  
16 relative to other U.S. locales; and because of Tinian's casino and/or Saipan's golf courses (Marianas  
17 Visitors Authority 2012). But while visitors may not come for the purposes of visiting areas that would be  
18 restricted, missing out on these attractions may leave some visitors underwhelmed with their Tinian  
19 experience. These visitors may not come back, may not tell friends about Tinian, or may tell friends not to  
20 go to Tinian. These underwhelmed visitors could cause a reduction in the growth in demand for tourism  
21 compared to the expected future baseline, where areas are not restricted.

22 To estimate the effect of this scenario, exit survey data for Chinese and Korean visitors (who represent  
23 nearly all Tinian visitors) to the CNMI was reviewed (Marianas Visitors Authority 2012). Data from the  
24 survey indicated that some visitors (41% of visitors from China and 23% of visitors from Korea) would  
25 like to see more "nature and scenic attractions." Because these respondents desire more nature and scenic  
26 attractions but would get fewer with implementation of the proposed action and associated access  
27 restrictions, these respondents were used as a proxy for the percentage of people who would be  
28 underwhelmed with their Tinian experience and would thus contribute to reduced growth in tourism  
29 demand compared to baseline levels.

30 The high and low estimates of potentially affected visitors (48% and 35%) were applied to China and  
31 Korea reduced growth proxies (41% and 23%) to adjust for the portion of the year that access restrictions  
32 would be in place. Applying these estimates yielded high estimates of 19.8% and 11.1% reduced growth  
33 and low estimates of 14.5% and 8.1% reduced growth for China and Korea, respectively. These factors  
34 were applied to visitor growth estimates for Tinian, which averaged 3,660 annually for China and 587  
35 annually for Korea, to yield the number of fewer visits from each country.

#### 36 Pagan

37 Expected future baseline tourism on Pagan is compared to estimated tourism with the proposed action to  
38 estimate effects. Since there is very little tourism activity on Pagan and no tourism data is available,  
39 effects are discussed qualitatively.

#### 40 1.2.2.2 Gross Domestic Product

41 The impact on the CNMI's gross domestic product was determined based on changes in expenditures and  
42 employment that would result from the proposed action. Factors that would change due to the proposed  
43 action and thus have a changed contribution to gross domestic product were analyzed, including tourism



1 visitor expenditures, construction expenditures, operations employment, and spending by military  
2 personnel while training on Tinian. The contribution of each of these factors to gross domestic product  
3 was determined separately and then summed to calculate total change to gross domestic product that  
4 would occur as a result of the proposed action.

5 Construction Expenditures

6 The proposed action would involve a large construction effort that would last from 8 to 10 years.  
7 Construction spending data, based on current planning assumptions, was used to estimate the impact that  
8 construction associated with the proposed action would be anticipated to have on the gross domestic  
9 product of the CNMI – total construction spending is planned to be an estimated \$530 million (\$492  
10 million for work on Tinian and \$38 million for work on Pagan). The Office of Insular Affairs estimated  
11 the contribution to gross domestic product of federal payments used for construction projects in the 2012  
12 study titled *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to Seven Insular*  
13 *Areas* (Office of Insular Affairs 2012). This study estimated that for every dollar of construction  
14 spending, \$0.55 was directly added to the gross domestic product. The ratio is less than one due to the fact  
15 that construction materials and supplies etc. are purchased outside of the CNMI and do not contribute to  
16 gross domestic product. The ratio of \$0.55 for every dollar in construction expenditures was applied to  
17 estimated project-related construction spending to determine the contribution to gross domestic product.

18 Operations Employment

19 Tinian base camp and training range employment would contribute to CNMI gross domestic product. It is  
20 anticipated that there would be an estimated 95 jobs associated with the base camp and training ranges on  
21 Tinian, 76 of which would be held by people living on Tinian full-time (the remaining 19 would be held  
22 by rotational military or government personnel). Even though most of the jobs are expected to be filled by  
23 new population, it is anticipated that all 76 jobs would be held by full-time Tinian residents and would be  
24 expected to contribute to gross domestic product. The Office of Insular Affairs estimated a contribution to  
25 gross domestic product of \$35,335 for every job (Office of Insular Affairs 2012). The 76 jobs were  
26 multiplied by \$35,335 to estimate the contribution that this employment would make to CNMI gross  
27 domestic product. Because 19 of the jobs would be held by individuals rotating on and off of Tinian,  
28 these 19 jobs were not included in the estimate of a contribution to an anticipated increase in gross  
29 domestic product.

30 Tourism Visitor Expenditures

31 A change in tourism visitor expenditures was estimated based on the potential change in visitors to the  
32 CNMI. The estimated change in number of visitors was multiplied by expected future baseline per visitor  
33 expenditures (estimated to be between \$792 and \$799) to estimate the total reduction in visitor  
34 expenditures that would occur as a result of the proposed action. The historic ratio of visitor expenditures  
35 to gross domestic product was calculated to be 2.35, so the reduction in visitor expenditures was  
36 multiplied by 2.35 to estimate the reduction in gross domestic product that would be due to a reduction in  
37 tourism visitors.

38 Military Personnel Visitor Expenditures

39 Military personnel that would train on Tinian are assumed to have 1 day per week off-duty. While off-  
40 duty, personnel would have the liberty to go into town. Any personnel that went into town would likely  
41 patronize Tinian restaurants and stores. The expenditures made at these establishments would contribute  
42 to the CNMI gross domestic product. Based on information presented in the Overview of the Proposed  
43 Action, it was estimated that over the course of 20 weeks of training, there would be an opportunity for

1 15,420 person-days to be spent in town. However, it is likely that not all opportunities would be taken and  
2 it was assumed that 85% (13,107 person-days) would be taken spent in town – the 85% factor was  
3 assumed as it corresponds to a reasonable scenario whereby not all personnel would visit town due to  
4 work obligations and personal reasons. The 13,170 person-days was multiplied by the Department of  
5 Defense 2012 per diem rate for Tinian of \$76, which includes meals and incidentals but not lodging  
6 (Defensetravel 2014), to determine projected spending by military personnel on Tinian. The same ratio of  
7 spending to gross domestic product that was used for tourism visitor expenditures, 2.35, was used to  
8 determine the contribution of military personnel spending to CNMI gross domestic product.

9 1.2.2.3 Employment and Income

10 Employment

11 *Construction Worker Employment*

12 See above in Section 1.2.1 for the approach to analysis estimating construction worker employment on  
13 Tinian.

14 *Operations Worker Employment*

15 As described above in Section 1.2.1, planning data indicates that there would be 95 jobs on Tinian  
16 associated with base camp and training operations on Tinian.

17 Income

18 *Construction Worker Income*

19 In the 2012 study titled *Economic Impacts Attributable to FY 2012 Federal Grants and Payments to*  
20 *Seven Insular Areas* (Office of Insular Affairs 2012), the Office of Insular Affairs estimated that for every  
21 construction job there is \$7,732 in construction employee compensation. It was estimated that the number  
22 of jobs to construct the Tinian RTA and necessary support facilities and infrastructure jobs would be  
23 10,535 over the 8- to 10-year period. The two figures (10,535 construction jobs and \$7,732 per  
24 construction job) were multiplied together to calculate construction worker income. Dividing the estimate  
25 of construction worker income by the number of full-time equivalent jobs yields an average annual salary  
26 of \$12,917, which was the average annual salary of construction workers in the CNMI in 2011.

27 *Operations Worker Income*

28 As mentioned previously, there would be 95 jobs on Tinian associated with base camp and training  
29 operations with 19 of these jobs held by military personnel and government employees who would be on  
30 Tinian on rotational basis. Income for these 19 jobs was based on the 2012 General Schedule table for  
31 other non-foreign areas (Office of Personnel Management 2012). Income from the other 76 jobs was  
32 estimated using CNMI income by occupation data (CNMI Department of Commerce 2012).

33 1.2.2.4 Government Revenues

34 Changes in CNMI government revenues that would potentially occur under the proposed action were  
35 estimated based on changes in gross domestic product. The historical ratio between gross domestic  
36 product and government revenues (20%), established in Section 1.1.2.4 was applied to the estimated  
37 change in gross domestic product to estimate the change in CNMI government revenues that would  
38 potentially occur under the proposed action.

1 1.2.2.5 Housing

2 Some population change is assumed to lead to a change in the demand for housing units on Tinian while  
3 some population is assumed to not increase demand for housing. Construction managers and their  
4 families and operations employees with their families were assumed to demand housing from the Tinian  
5 housing market. Construction workers (non-managers) were assumed to have housing arranged through  
6 construction contractors via a workforce housing agreement that would not include the use of housing on  
7 Tinian that is part of the current housing stock and would consist of currently unused housing that is  
8 located behind the Tinian Dynasty.

9 Housing analysis identifies the number of housing units that would be in demand as a result of the  
10 proposed action and identifies whether that demand would be able to be met by existing supply in the  
11 Tinian housing market.

12 Construction Workforce Housing

13 All non-manager construction workers are assumed to reside at contractor provided housing. It is  
14 anticipated that this housing would consist of some of the structures located behind the Tinian Dynasty.

15 Construction Manager Housing

16 Construction managers and their dependents that were not assumed to live in workforce housing would  
17 require housing elsewhere on Tinian. The number of construction managers was estimated by establishing  
18 a ratio of construction managers to total construction industry workers. The number of housing units that  
19 would be required by construction managers was estimated by assuming that each construction manager  
20 would require one housing unit.

21 Operations Employee Housing

22 New population associated with operations employment would require housing. Each operational worker  
23 was assumed to demand one housing unit. It is assumed that rotational employees would use the same  
24 units (i.e., upon rotation in, an employee uses the unit vacated by employee that rotated out).

25 Housing Supply

26 Additional housing unit demand that would result from the proposed action is compared to the number of  
27 vacant housing units on Tinian to determine if there is adequate housing supply to meet the demand.

28 1.2.2.6 Agriculture

29 Cattle Grazing

30 Analysis was conducted to determine the amount of land that would be available for cattle grazing on  
31 Tinian, both within and outside the Military Lease Area, under the proposed action. This amount of land  
32 is compared to the estimates of land required in the expected future baseline. Based on a comparison of  
33 available land and land required, results of analysis indicate whether or not there would be a deficit or  
34 surplus of land available for cattle grazing. Additional qualitative information is provided to lend context  
35 to the results.

1 1.2.2.7 Fishing and Aquaculture

2 Commercial Fishing

3 Marine areas that would potentially have access restricted were reviewed in comparison with areas that  
4 are used for commercial fishing to determine whether areas that are important to commercial fishing  
5 would be affected by the proposed action.

6 Aquaculture

7 Because there are no currently operating open-ocean aquaculture operations, data is not available to  
8 quantify any potential impacts. Based on parameters of the proposed action and requirements for open-  
9 ocean aquaculture, analysis determines whether the proposed action and open-ocean aquaculture activities  
10 are compatible or not.

11 1.2.2.8 Commonwealth of the Northern Mariana Islands Airports and Seaports

12 Airports

13 To determine the change in airport arrivals, the change in visitors was multiplied by 0.74 (the ratio  
14 previously established). Airport improvements associated with the proposed action that would benefit the  
15 public are also discussed.

16 Any potential impacts to commuter flights from proposed changes in special use airspace are addressed  
17 under tourism, in Section 5.3.1 of this Socioeconomic Impact Assessment Study.

18 Seaports

19 To estimate the change in total maritime freight (measured in revenue tons), the change in gross domestic  
20 product was divided by \$1,626 (the ratio previously established). The estimated change in total maritime  
21 freight was then multiplied by 0.957 (the historical portion of total freight made up by inbound freight,  
22 established previously) to calculate change in inbound maritime freight due to the proposed action.  
23 Seaport improvements associated with the proposed action that would benefit the public are also  
24 discussed.

25 Additionally, because shipping routes may have restrictions to maritime traffic from proposed danger  
26 zones, potential impacts related to shipping goods between Tinian and Saipan are analyzed qualitatively.

27 1.2.2.9 Power Utility Rates

28 Under some alternatives of the proposed action, in order to provide sufficient space for training  
29 operations, the International Broadcasting Bureau facility on Tinian would not continue operations on  
30 Tinian. The International Broadcasting Bureau facility is a heavy consumer of electricity that is produced  
31 on Tinian. Since the unit cost of producing energy tends to be similar regardless of quantity produced, the  
32 Commonwealth Utilities Corporation would likely have to maintain a similar amount of revenue, with or  
33 without the International Broadcasting Bureau, in order to maintain commercial operations on Tinian.

34 Analysis compared average electricity usage at the International Broadcasting Bureau facility to the  
35 potential average usage by new facilities that would be operational on Tinian under the proposed action in  
36 order to determine whether there would be a net change in power demand under a condition where the  
37 proposed action is implemented and the International Broadcasting Bureau is no longer operational on  
38 Tinian. Using information from utilities studies conducted in support of the Commonwealth of the  
39 Northern Mariana Islands Joint Military Training (CJMT) Environmental Impact Statement  
40 (EIS)/Overseas EIS (OEIS) and consulting the engineers that conducted those studies, an assessment was

1 made as to whether power demand would increase, decrease, or remain stable. Given that determination,  
2 an assessment was made as to whether there was reason to anticipate a change in power utility rates.

#### 3 1.2.2.10 Minerals

4 The footprint of the proposed action was reviewed to determine whether any mining operations that were  
5 included in the expected future baseline would be affected.

### 6 **1.2.3 Public Services**

7 Potential impacts on public services would primarily be related to changes in population, because  
8 increases in population tend to drive up the demand for public services as well as the level of effort  
9 required by public service agencies. In addition to impacts related to population change.

#### 10 1.2.3.1 Public Education

11 New population on Tinian was assumed to include workers and some dependents, including children. To  
12 estimate the number of children, half of the estimated number of construction managers and the expected  
13 number of new operations employees was multiplied by 1.26 to determine an estimated number of  
14 children associated with increased operations population (the 1.26 factor based on an average household  
15 size of 3.26) to include the employee, a spouse and 1.26 children). Then the estimated number of children  
16 was multiplied by a factor of 0.72 (the percentage of children in the CNMI in 2010 that were school aged)  
17 to determine the number of children that would be school-aged and thus become students on Tinian. This  
18 number was compared to the expected future baseline number of students to identify the impact on a  
19 percentage basis. The resulting change in the student-to-teacher ratio was also identified. Recent  
20 enrollment levels at Tinian schools was compared to estimated total enrollment with the proposed action  
21 to determine whether school capacity would be exceeded as a result of the proposed action.

#### 22 1.2.3.2 Public Safety

23 Various population groups are discussed as having potential impacts on police services. These  
24 populations include construction workers, operations employees, and military training personnel. Each of  
25 these groups would be expected to have some effect on police services, but those effects are qualified due  
26 to unique circumstances. For example, the military would provide military police while personnel are on  
27 liberty. Staffing to service population measures of the U.S, and Tinian were compared to determine  
28 whether population related to the proposed action would cause Tinian agencies to exceed capacity.

#### 29 1.2.3.3 Public Health

30 Additional populations are analyzed qualitatively as having varying levels of potential impacts as some  
31 populations would have health services provided for them and would not consume service from Tinian's  
32 public service agencies. Historical information on number of construction workers on Tinian was  
33 reviewed to gauge whether public health facilities would exceed capacity due to the proposed action.

### 34 **1.2.4 Community and Social Topics**

35 If analysis shows that the proposed action would have either a real or perceived negative effect on  
36 community character or cohesion, then the determination is made that the proposed action would have an  
37 impact on community character and/or cohesion. Anticipated effects on community character or cohesion  
38 are based on research and analysis of the community and social settings of Tinian and Pagan and the  
39 expected interaction of these settings with the proposed action. Community character and cohesion are  
40 defined as follows:

1 Community character is the distinctive identity of a particular place that results from the interaction of  
2 many factors that give it unique or special characteristics - built form, landscape, history, people, and  
3 activities within the place as a whole (American Planning Association 2011).

4 Community or social cohesion measures the levels of “relationship between individuals, groups and  
5 organizations within a community” (Holdsworth 2009, p.79). In a community with strong community  
6 cohesion, high levels of characteristics such as social ties, interdependence, trust, and reciprocity exist and  
7 bind people within that community together. A lack of community cohesion occurs when there are  
8 “divisions between groups, individuals and systems” (Stone and Hughes 2002).

#### 9 1.2.4.1 Tinian

10 Potential effects of the proposed action on Tinian are identified and discussed. They include effects that  
11 would be caused by access restrictions and the influx of new population associated with the proposed  
12 action. Effects identified are summarized in the context of effects on community character and  
13 community cohesion as defined above.

14 Some of the effects that are described relate to subsistence activities. The analysis uses the definition for  
15 subsistence activities provided by the U.S. Census Bureau: “A person is engaged in subsistence activities  
16 if he or she mainly produced goods for his or her own or family’s use and needs, such as  
17 growing/gathering food, fishing, cutting copra for home use, raising livestock, making handicrafts for  
18 home use, and other productive activities not primarily for commercial purposes” (U.S. Census Bureau  
19 2014). This definition implies that an activity is considered a subsistence activity even if some of the  
20 product is sold commercially, as long as most of the product is not sold.

#### 21 1.2.4.2 Pagan

22 This section analyzes the potential for community and social impacts related to Pagan. The Northern  
23 Islands community (consisting of those whose ancestors populated the islands north of Saipan) has  
24 recently been discussing a desire to resettle the island and, more specifically, to establish homestead lots  
25 that would be owned by members of the Northern Islands community.

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## **APPENDIX B**

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*January-February 2014 Site Visit Meeting Records*

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## **Arctic Circle Air**

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**Agency Name:** Arctic Circle Air

**Date:** February 1, 2014 at Arctic Circle Air Office; 12:30 p.m. to 1:10 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
J. A. "Andy" Nehring	Arctic Circle Air	General Manager	jan_jan999@yahoo.com	670-989-6669
Scott Glenn	TEC JV	Socioecon Team	scott.glenn@cardnotec.com	808-528-9582

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the services Arctic Circle Air provides. Do you provide both cargo and passenger services?

Arctic Circle Air provides regular and chartered passenger and cargo transportation between Saipan, Tinian, Rota, and Guam. Arctic Circle provides chartered passenger transportation to Pagan. They are the only airline with an airplane capable of landing on the airstrip on Pagan. Passengers to Pagan tend to be military or government, or people wanting to live on the island for a few days or weeks.

2. How large is your fleet of planes presently? Are there plans to increase or decrease the size of your fleet?

The fleet consists of twin-engine planes. Each engine burns about 30 gallons/hour, for a total of approximately 1 gallon/minute counting both engines. There are no plans to increase or decrease the fleet size.

3. What are the major factors that influence your costs structure? Which are most important?

Aside from labor, the cost of fuel and fleet maintenance are the major factors affecting cost structure.

4. What conditions or changing factors may lead to changes in your business plan or economic structure?

Increased fuel costs or alternative routes (if sufficiently different from the current route) would affect business viability. A route deviation of requiring a 3-mile distance would not affect the cost of operations because the twin-engine plane carries enough fuel for a round trip flight plus a buffer of 45 minutes worth of gas.

## **5. Open Topic**

All commercial travel crosses North Field, following the instrument landing system pathway. Any restrictions around the instrument landing system or over the channel between Tinian and Saipan would have a significant effect on air transportation.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. How many and what kind of planes are in the fleet?

Right now we have only one aircraft – a Britten Norman Turbo Islander BN-2T. Plans are to add one or two more in the next 6 months.

- b. How many annual passengers do you carry? How many of the passengers are tourists versus local residents?

80% of our flying is cargo flying between Saipan-Rota and Guam-Rota-Saipan.

Most passengers are locals who use to fly with Freedom Air, and about 20% of passengers are going to Rota Resort as tourists.



## **Commonwealth Health Center**

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**Agency Name:** Commonwealth Health Center

**Date:** February 6, 2014 at the Commonwealth Health Center; 9:00 a.m. to 10:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Esther Lizama-Muna	Commonwealth Health Center	Interim Chief Executive Officer	Esther.muna@dph.gov.mp	670-236-8756
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department, what are your goals and mission?

The Commonwealth Healthcare Corporation is a CNMI Government agency that provides Hospital, Primary Care, and Public Health services to the Islands of Saipan, Tinian, and Rota. Primary Care services are provided at associated clinics including the Tinian Health Center, the Kagman Community Center (a Federally Qualified Health Center), and the Rota Health Center. The Commonwealth Health Center is the only Medicare certified center in the CNMI.

2. What are your major sources of funding, the CNMI government? Federal money?

Funding is a mix of some federal money, money received from providing services, CNMI Capital Improvement Project money, and minimal other CNMI money (associated with employee tax rebates).

3. Where does money used to fund employees come from?

Fees for services. Most fees are paid through Medicare and Medicaid. Federal grants pay for public health services (such as tuberculosis tests).

4. Where does money used to fund facilities and equipment come from?

Some money comes from CNMI Capital Improvement Projects. Work on heating, ventilation, and air conditioning system improvements is pending, which will fix existing problems with

air conditioning. Also received Capital Improvement Project funding for new hospital beds. Capital Improvement Project money has also gone to the Tinian Health Center.

5. The Pacific Air Forces Divert Marianas Environmental Impact Statement reported that the Commonwealth Health Center had 27 physicians in 2012. Is that number about the same or has it changed?

That number is slightly lower than the current number. Current number is 32. There has been an increase in the past year or so. Specific data can be provided.

6. The Pacific Air Forces Divert Marianas Environmental Impact Statement reported that the Commonwealth Health Center had 4 physicians' assistants in 2012. Is that number about the same or has it changed?

That information can be provided.

7. How many full-time equivalent nurses were employed at the Commonwealth Health Center in fiscal year 2012?

That information can be provided.

8. How many full-time equivalent pharmacists were employed at the Commonwealth Health Center in fiscal year 2012?

Three, all of whom are on Saipan.

9. Are any employees temporary foreign workers? Is there concern about staffing as immigration rules are federalized?

About 25% of workers are foreign workers. These employees are mainly nurses. If CNMI-Only Transitional Worker Visa extensions do not happen, then the center would pretty much have to shut down due to lack of employees.

The Health Center does work with Northern Marianas College and hire those graduates from the nursing program. This helps with labor supply but is not enough to fill demand. Many of the Northern Marianas College nursing students are from off island and do not stay in the CNMI after they graduate, so they are not available to work at the Center.

10. The World Health Organization reports that the Health Center has more than 60,000 outpatient visits per year. Is this number about right for instance in fiscal year 2012?

That information can be provided.

11. According to a report by the World Health Organization, the Commonwealth Health Center has 86 beds, is this still true?

There are 86 beds but only 76 of them are functioning. The other 10 beds are used for other purposes. All of the hospital beds are on Saipan. "Beds" on Tinian and Rota are at clinics and do not meet the definition of hospital bed, these are for observation of patients.

12. What is the condition of the Commonwealth Health Center (e.g., can the current space accommodate existing staff and service population)?

Yes, space is adequate most of the time. Sometimes the Center is full and Emergency Room beds need to be put into use. The Center has recently strengthened discharge planning and is better able to get folks out in an effective way, this helps with capacity.

13. According to the Pacific Islands Report, in 2012 there was a lack of defibrillators in critical units of the hospital, deficiencies in supplies in the laboratory unit, a broken portable x-ray unit, and concerns over a malfunctioning CT scanner. Have these issues been corrected? Is the other equipment adequate for current operations?

The Center has recently bought equipment to meet those needs. Recently became Clinical Lab Improvement Administration certified.

14. Are there any improvements planned for the Commonwealth Health Center? If there are planned improvements, how far along are the plans?

Heating, Ventilation, and Air Conditioning. Replacing some beds, they are about \$5k each, total replacement expenses are expected to be about \$200k. Replacing nursing station, which is not currently suited for maintaining electronic health records. The station is too small, cramped by equipment, this will be \$10k. Need to replace telephone/call system, this will be very expensive.

15. Health problems in CNMI

Diabetes, high blood pressure, hypertension, anything caused by high salt intake. These are particularly problematic in Pacific because of high-salt canned foods and lack of exercise.

The Corporation would like to be more involved via education and support. Want to open an education facility. The dietician has gone from kitchen into clinic to teach better food prep for patients.

## **5. Open Topic**

Chief Executive Officer Lizama-Muna provided a copy of the former Chief Executive Officer's report.

There are a lot of uninsured people/patients. The Corporation opened a collection point to gather data on uninsured because Medicare reimburses if there is data on the patient and the visit (more than 1,000 visits per year are uninsured and Medicare will cover about 50% of those).

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Please provide employment data for the Commonwealth Healthcare Corporation-wide (i.e., number of doctors, nurses, etc.), by island if possible.

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**CNMI Department of Commerce**

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**Agency Name:** CNMI Department of Commerce

**Date:** February 7, 2014 at Department of Commerce Office; 1:30 p.m. to 3:00 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Sixto K. Igisomar	Department of Commerce	Secretary	Sec.igisomar@commerce.gov.mp	670-664-3077
Alfonis M. Sound	Department of Commerce	Special Assistant to the Secretary/Director for Statistic Division	Director.csd@commerce.gov.mp	670-664-3023
Brien Nicholas Jr.	Department of Commerce	Program Manager	cnmiratereview@commerce.gov.mp	
Frank Cabrera	Department of Commerce	Manager, Workers Comp Division	fcabrera@commerce.gov.mp	
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. General functions of Department of Commerce

Department of Commerce is mainly a regulatory agency that focusses on fair business practices.

Department of Commerce publishes various data products: Consumer Price Index (with assistance from Bureau of Economic Analysis) and Economic Indicator Reports which reports data collected from numerous CNMI entities.

Price level – The CNMI does have a high price level compared to other places in the U.S. The recent Consumer Price Index publication compares prices between Saipan, Rota, and Tinian. Price level comparisons with places outside the CNMI might be made using the Australia Bureau of Statistics International Comparison Program.

2. Economic Activity in the CNMI

Gross domestic product report provides good data.

2013 was a very good year and 2014 is shaping up to be good as well. Anecdotally, there is a lot of foot traffic and vehicle traffic; these are indicators of economic activity. Recent economic vitality has to do mostly with the tourism industry which has improved over the past few years. Hotel occupancy is around 80%, which is good, but as occupancy approaches 100% then visitors may be turned away, this could cap tourism growth.

The CNMI economy would benefit from increased diversity, i.e., the economy would be better off with supporting industries other than the tourism industry. Relying on the tourism industry alone leaves the CNMI economy too open to be affected by outside sources.

In 2009, the Department of Commerce published a Strategic Approach to Provide Support to Department of Defense on Guam: <http://commerce.gov.mp/wp-content/uploads/2010/08/FINAL-DRAFT-CNMI-6NOV2009.pdf>

The report outlines numerous ways that CNMI can benefit from military buildup in the Pacific.

The Procurement Technical Assistance Center trains companies to get contracts for Department of Defense work. Helps companies get special status, when applicable.

### 3. Economic Model

An economic model was supposed to be developed by federal agencies under Public Law 1229, but it has not been provided. The model developed in the CNMI is not complete (i.e., not ready for application in an economic impact study). Information on the model can be found here: <http://commerce.gov.mp/wp-content/uploads/2013/10/The-CNMI-Economic-Model-Public-Presentation.pptx>

## 5. Open Topic

Pagan residents want to go back to Pagan but this would be very expensive for the government and the government does not want to pay for this.

Call centers could be a source of new employment in the CNMI, but need certainty in labor situation before this can be done.

Any project that would require 1,000 workers could not be sustained with the local labor force.

## 6. Conclusion & Action Items

No additional follow-up information requested.

**Department of Community and Cultural Affairs**

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**Agency Name:** Department of Community and Cultural Affairs

**Date:** February 7, 2014 at the Department of Community and Cultural Affairs  
Secretary's Office; 8:00 a.m. to 9:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Angel Hocog	Commonwealth Council for Arts and Culture	Executive Director	angelshocog@marianasarts.org	670-322-9982/83
Vivian Sablan	Department of Community and Cultural Affairs, Division of Youth Services, Office of the Administrator	Administrator	vtsablan@gmail.com	670-664-2550/2551/2592
Julian Camacho	Department of Community and Cultural Affairs, Division of Youth Services Child Protection Unit	Unit Supervisor	fadang91@gmail.com	670-664-2565/2556
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your organization; what are your goals and mission?

The Department of Community and Cultural Affairs' mission is to oversee CNMI functions in the area of human and social services, historic and landmark

conservation and preservation, and activities to preserve Chamorro and Carolinian heritages and traditions.

The Office of the Secretary oversees the operation and administration of the Department's divisions in carrying out Department of Community and Cultural Affairs' duties as mandated by law. In this capacity, the Office provides funding and guidance to the divisions through its review and approval of fiscal, personnel, and operational plans for the Department.

Department of Community and Cultural Affairs accomplishes its mission through eight divisions. The Department of Community and Cultural Affairs Office of the Secretary oversees the operation and administration of the department, in addition to providing utility subsidies to low-income families, promoting energy conservation, licensing child care providers, and operating a weekly street market. The Office on Aging provides assistance to senior citizens and caregivers. The Chamorro Carolinian Language Policy Commission preserves and promotes indigenous languages. The Commonwealth Council for Arts and Culture facilitates meaningful and quality art programs. The Nutrition Assistance Program safeguards health and well-being by raising nutrition levels. The Division of Historic Preservation protects and develops historic and cultural properties. The Division of Youth Services promotes the well-being of children, youth, families, and the community as a whole.

Department of Community and Cultural Affairs is headquartered on Capitol Hill on Saipan. Satellite offices are also located on the islands of Rota and Tinian. Satellite offices are headed by resident directors appointed by the Mayors of Rota and Tinian, respectively.

2. What are some of your biggest social and cultural concerns on Tinian?

Access to immediate services, such as emergency shelter care for victims of child abuse and neglect and domestic violence:

- Lack of education on availability of services.
- Lack of recreational activities for the youth population.
- Low reporting rate on incidents of child abuse and neglect, juvenile delinquency, and other types of familial dysfunctions (may be attributed to small community, fear of reprisal/retaliation, shame, influence from family/community/authority figure, etc.).

3. How has the cattle industry played into the social and cultural history of Tinian?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to the cattle industry on Tinian.

4. Is there social and/or cultural significance associated with owning cattle (i.e., social status)?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to the cattle industry.

5. What role does the cattle/beef industry play in the community (e.g., in social gatherings or as gifts)?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to the cattle industry.

6. How would you characterize the size/strength of the cattle industry in a historical context? Why are things different now?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to the cattle industry.

7. What would a resurgence in the industry mean to social/cultural conditions on Tinian?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to the cattle industry.

8. Can you describe the cultural significance associated with agricultural production and gathering activities?

Department of Community and Cultural Affairs is not the appropriate department to provide comments in relation to agricultural production and gathering activities.

9. Do families on Tinian subsist off of food that they grow or gather? Is this a common situation? Is food that is grown/gathered traded for other items?

It is not uncommon to find families that subsist off of food they grow or gather, especially those who farm their lands.

If trading occurs, it may not be common practice as we don't hear of its occurrence. It is more likely that food grown/gathered are sold for means of purchasing other daily living necessities.

10. Can you describe the cultural significance associated with fish/fishing?

Fishing has always been an integral part of the culture. People lived off their catches and shared their catches with others. It was believed that a fisherman's first catch of the day should be shared with others to attract luck during fishing expeditions. Fishing promoted and strengthened connections with the family, the community, and nature. Our people, since the beginning of time, continue to hold a deep and lasting respect for the ocean as they recognize the vital role it plays in their livelihood.

Today, fishing brings food to the table and assists the economically disadvantaged with added income.

11. Can you describe the cultural significance associated plants used for cultural or medicinal purposes?

As with fishing, people recognize that nature brings with it things that could help them in certain ways.

Medicinal plants hold great value, especially for those that were taught and had experienced their healing properties. Using medicinal plants for healing was taught through the ages by our ancestors.

The indigenous people today, although inclined to seek medical attention, would not shun using herbal/medicinal plants to heal certain ailments. It is not unusual for a sick person to be receiving both medical and local healing practices (from trusted sources) to combat various types of diseases or ailments.

12. What would be the role of Department of Community and Cultural Affairs if there were homesteads on Pagan?

The services afforded to people on Saipan, Tinian, and Rota would be extended to Pagan, if appropriate.

**Open Topic**

The Pagan evacuees blended into the local community on Saipan and received services from Department of Community and Cultural Affairs like others. The people of Pagan are fighting for their land back.



The biggest crime-related issue involves alcohol and drugs. According to Department of Public Safety, in January of 2014, 90% of incidents involved minors consuming alcohol. If alcohol is more accessible, then the incidents of use would likely increase.

Although they might have stable jobs, people on Tinian who fish will continue to fish. Those who farm will continue to farm. These activities are woven into the fabric of their society which welcomes and appreciates the value of living off the land and the seas.

Any proposed action on the military's part should be studied well, taking into serious consideration how such action would impact the overall health, safety and well-being of a community and its people.

Military presence in our community may produce the following:

- greater appreciation of diverse cultures and ethnic groups.
- Intermarriages.
- boost in economic activities.
- greater risk of attacks from countries like North Korea.
- fear of victimization from military personnel.

There are always pros and cons to any action, including a military build-up activity. In this case, it is imperative that the focus remain on how a military build-up would impact the social and economic welfare of a community or society.

### Conclusion & Action Items

Additional Follow-up Information:

- a. What are the populations you provide on Tinian for Department of Community and Cultural Affairs services and programs?
- b. What are the age, ethnic, and geographic features of the service population?

<b>DIVISION</b>	<b>SERVICE POPULATION AGE</b>	<b>SERVICE POPULATION ETHNIC</b>	<b>SERVICE POPULATION GEOGRAPHIC</b>
Office on Aging	60 years and older	All Ethnicities	CNMI (Saipan, Rota and Tinian)
Chamorro and Carolinian Language Policy Commission	School Age Children and Adults	Chamorro and Carolinians	“”
Child Care Development Fund	Child Care: Children ages 0-13	All ethnicities , but with the following	“”

<b>DIVISION</b>	<b>SERVICE POPULATION AGE</b>	<b>SERVICE POPULATION ETHNIC</b>	<b>SERVICE POPULATION GEOGRAPHIC</b>
	Family, Friend and Neighbor Care Program: Adults	criteria (s):  Children served must be U.S. Citizens  Parents served must be from the low income working Families	
Child Care Licensing Program	Day Care Providers  Group Home Providers	All Ethnicities	“”
CNMI Council for Arts & Culture	All Ages	All Ethnicities	“”
Nutrition Assistance Program	All Ages	All Ethnicities, but with the following criteria (s):  Low income residents and families	“”
Division of Historic Preservation	Children/Adults	All Ethnicities	“”
Division of Youth Services	All Ages	All Ethnicities	“”
Low Income Housing and Energy Assistance Program	All Ages	All Ethnicities with the following criteria:  Low income families	“”

AMENDMENTS TO NOTES MADE AND SUBMITTED BY:

\_\_\_\_\_  
**Laura T. Ogumoro-SECRETARY, DCCA**

\_\_\_\_\_  
**Vivian T. Sablan- ADMINISTRATOR, DCCA/DYS**

## **CNMI Department of Labor**

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**Agency Name:** CNMI Department of Labor

**Date:** January 31, 2014 at the Department of Labor Conference Room; 12:50 p.m. to 2:00 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Edith DeLeon Guerrero	CNMI Department of Labor	Secretary	Edithdeleon.guerrero@gmail.com	670-664-3196 670-664-1708/57
James M. Ulloa	CNMI Department of Labor	Employment Services	julloalabor@gmail.com	670-322-0996
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the primary functions of your department?

Department of Labor was merged with the Workforce Investment Agency. It has six divisions and covers three islands (Saipan, Tinian, and Rota), overall supervisor authority for Workforce Investment Agency and federal programs; every division has a clear set of responsibilities.

The CNMI Workforce Investment Agency was merged under the CNMI Department of Labor. Executive Order 2013-17 was executed by Governor Eloy Inos that effectuated the merger October 1, 2013 or the beginning of fiscal year 2014. The CNMI Secretary of Labor has direct oversight of 6 labor divisions.

The Department of Labor provides employment services to individuals to include close monitoring of the employment website. As of today, all job postings must go on the website

(State Job Bank). This will help status-qualified participants be aware of job openings so that they have a chance to apply and get the jobs before foreign contract workers are brought in. Public Law 532 says foreign workers shall not supplant local workforce and requires a minimum of 30% of local workers.

2. The 2010 Census shows that there were 1,786 workers in the construction industry. Is that number about the same now or has it changed significantly?

Data provided (attached).

3. About what percentage of workers in the construction industry are non-resident (foreign) workers?

Data provided (attached).

4. The 2010 Census shows that the CNMI had an unemployment rate of 11%. At present, is the CNMI unemployment rate much different from 11%?

CNMI wants to be part of the American Community Survey so that annual data is collected. Currently no information to know the change from 2010, but likely that unemployment has decreased.

5. Are there any recent labor statistics available from (non-US Census) sources? Department of Commerce?

Data source was provided (attached).

6. The CNMI population declined by about 15,000 from 2000 to 2010. Why do you think there was a population decrease?

End of garment industry resulted in loss of 10,000 people; garment industry left because of Clinton's free trade law (North American Free Trade Agreement).

7. Do you expect the number of foreign workers in the CNMI to continue to decline?

It is uncertain. Foreign workers started coming to CNMI between 1980 and 1989. Foreign contract workers are set to leave the CNMI at year's end unless the U.S. Secretary of Labor grants an extension to the foreign worker permit program. Secretary Guerrero chairs the Governor's task force to get an extension. A decision has to be made 180 days before the expiration of the program.

For fiscal year 2012 to 2013, 12,826 contract worker visas were approved, but no job posts or titles are included; so it is difficult to focus on training if we do not know the details.

## 5. Open Topic

CNMI does not have unemployment benefits – employers cannot afford it so it is difficult to set up; because we do not have unemployment, we are not eligible to apply for certain federal grants aimed at unemployment.

It was noted that the Department of Defense contractors are required to post their Jobs for Veterans Act in the state job banks.

The tourism industry says they expect 2,400-3,000 jobs opening up. These are for hotels that are not open yet, like Coral Ocean Point and Plumeria (opened up and shut down). New jobs should be filled by local people, ideally.

CNMI does not get many federal benefits like Temporary Assistance for Needy Families, etc., because CNMI does not fit the specific language in the law, but Guam qualifies.

It is unknown how many people who get trained leave the island, but we are experiencing a brain drain. Now is the best time for our bright graduates to come home because jobs are coming home.

Poker fees collected on Saipan fund the Saipan Higher Education Financial Assistance scholarship to help Saipan students get more education.

Northern Marianas College has a satellite program on Tinian that helps people get jobs. It is waiting for its reaccreditation. We have to constantly think about not neglecting Rota and Tinian. We want to try to develop an apprenticeship program.

There will be a job fair on Saipan on November 22 and 23, 2014. Today there is a job fair on Rota. Last week Friday there was a job fair on Tinian that had 40 vendors show up looking for workers.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

Occupational Title (ONET)	JobZone	Total	% difference of Non-US to US qualified	Non-US	US	FAS	NA
<b>Total Occupations</b>		<b>26,245</b>	<b>55%</b>	<b>14,427</b>	<b>11,402</b>	<b>405</b>	<b>11</b>
Accountants and Auditors	4	625	80%	497	125	3	
Actors		1	100%	1			
Administrative Law Judges, Adjudicators, and Hearing Officers	5	1	0%		1		
Administrative Services Managers	3	92	30%	28	64		
Advertising and Promotions Managers	4	15	53%	8	7		
Advertising Sales Agents	3	12	67%	8	4		
Aerospace Engineering and Operations Technicians		1	100%	1			
Agents and Business Managers of Artists, Performers, and Athletes		5	0%		5		
Agricultural Engineers	4	2	50%	1	1		
Agricultural Workers, All Other		21	14%	3	18		
Air Traffic Controllers	3	20	5%	1	18	1	
Aircraft Cargo Handling Supervisors	2	1	0%		1		
Aircraft Mechanics and Service Technicians	3	34	82%	28	6		
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers		1	100%	1			
Airfield Operations Specialists		6	50%	3	3		
Airline Pilots, Copilots, and Flight Engineers	4	16	25%	4	12		
Ambulance Drivers and Attendants, Except Emergency Medical Technicians		18	0%		18		
Amusement and Recreation Attendants	1	87	57%	50	36	1	
Appraisers and Assessors of Real Estate	4	17	88%	15	2		
Architects, Except Landscape and Naval	5	4	75%	3	1		
Architectural and Civil Drafters	4	20	85%	17	3		
Architectural and Engineering Managers	5	18	83%	15	3		
Archivists	5	2	0%		2		
Art Directors	4	1	100%	1			
Art, Drama, and Music Teachers, Postsecondary	5	6	100%	6			



# Meeting

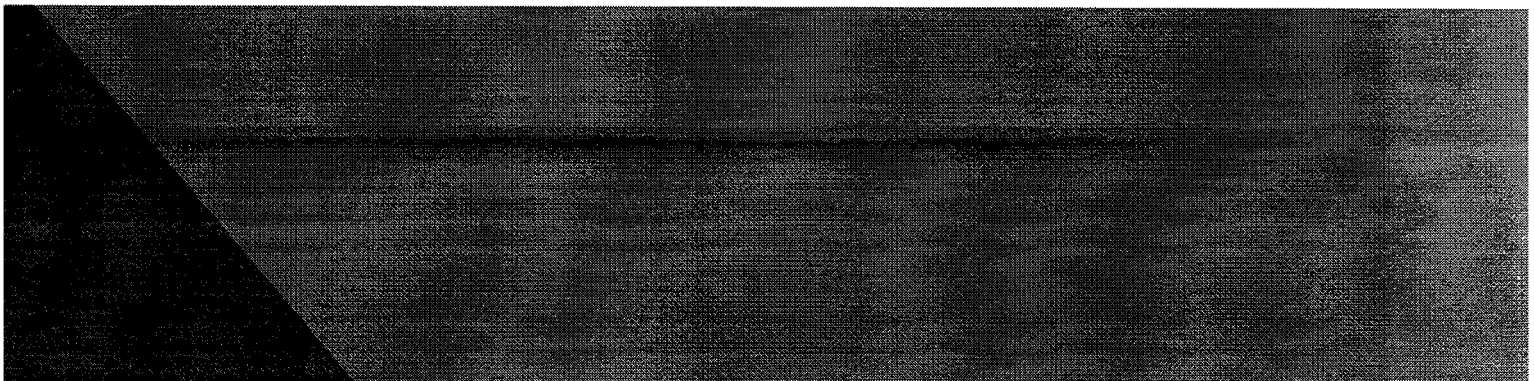
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## BUILDING A CNMI WORKFORCE ECOSYSTEM





# **SHRM 2013**

CNMI Workforce Readiness Plan and  
Immigration

A Period of Transition

Major Industry Group	Number of Employees
Public Administration	3,094
Accommodation and Food Services	1,965
Retail Trade	1,582
Educational Services	1,548
Administrative and Support Waste Management	1,018
Construction	850
Other Services (except Public Administration)	690
Transportation and Warehousing	613
Real Estate Rental and Leasing	519
Wholesale Trade	397
Manufacturing	382
Utilities	366
Arts, Entertainment, and Recreation	364
Professional, Scientific, and Technical Services	334
Information	264
Health Care and Social Assistance	226
Finance and Insurance	145
Agriculture, Forestry, Fishing and Hunting	45

Source: 2011 CNMI PWWAS Report

Total: 14,402

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**CNMI Foreign Workers**

As of 2006 and estimated needed to support businesses and CNMI economy	22,417
Repatriation as a result of garment closures	10,000
Current estimate with legal status as of October 15, 2009	13,000

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Source: Saipan Tribune, October 15, 2009

Number of Garment Factories in CNMI	34
Peak Revenue	\$80M
Revenue in 2008	\$13M
Number of Garment Workers repatriated upon closures	10,000

**From:** [Edith DeLeon Guerrero](#)  
**To:** [Glenn Scott J.](#)  
**Subject:** CNMI Unemployment Rate Information  
**Date:** Tuesday, January 28, 2014 8:37:43 PM

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<http://commerce.gov.mp/wp-content/uploads/2010/08/2005-HIES-Report-Final-Complete-02.pdf> or 8.3 % Unemployment Rate

2010 Census shows 11.2% CNMI Unemployment Rate

McPhee and Conway Report 25% Unemployment Rate  
[http://www.marianaslabor.net/news/economic\\_impact.pdf](http://www.marianaslabor.net/news/economic_impact.pdf)

### **Unemployment Rate by Island, CNMI 2005**

CNMI Total – 8.3 %

Saipan – 7.7 %

Tinian – 17.0 %

Rota – 10.0 %

Source: 2005 CNMI Household Income and Expenditures Survey

Edith DeLeon Guerrero

CNMI Secretary of Labor

## **CNMI Department of Public Lands**

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**Agency Name:** CNMI Department of Public Lands

**Date:** February 4, 2014 at the DPL Conference Room; 10:30 a.m.to 11:45 a.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Pedro Tenorio	Department of Public Lands	Secretary		670-234-3751
Peter Prestley	Department of Public Lands	Legal Counsel	pprestley@gmail.com	670-989-7673
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

**Grazing**

1. What is the current permitting process for agricultural permits in the Lease Back Area?

Department of Public Lands provided a blank application for an agricultural permit for the Lease Back Area (attached). In general, Department of Public Lands does not have much to do inside the Military Lease Area because the military paid for its use. The military just needs to follow the technical agreement.

Department of Public Lands issues permits on a one-year basis for agricultural activity, which includes ranching. The permits are for subsistence, commercial activity is not permitted. Some commercial activity likely occurs though. Generally, if there is commercial activity permitted, then it is a lease and there is an agreement where Department of Public Lands receives some of the revenue. However, no leases (i.e., commercial rights) are permitted inside the Military Lease Area. The Military Lease Area permit can be revoked at a moment's notice.

Department of Public Lands recently revoked a lease for public land outside the Military Lease Area on Tinian from a foreign investor because the investor was not performing to the lease agreement. After the revocation, the investor came back and promised the moon. Note that this lease was entered into as a single-source selection; the lessee was allowed to get lease before lining up investors.

2. Are there unpermitted agricultural activities in the Lease Back Area (i.e., cattle grazing on unpermitted lands)?

There should not be. If it is unpermitted, then it is not legal.

3. Is there other available land on Tinian (outside the Lease Back Area) that is not being used that is available for cattle grazing?

Cattle grazing on Tinian may be compatible with military training. Department of Public Lands has a process for ranchers to use public land. It has to assess the lots and check grass for suitability. The lots would likely be smaller than the current ones because of limited land available for grazing south of the Military Lease Area. Cattle grazing would mostly be in the south and east of the island.

Ranchers would need financial help to relocate such as for removing and replacing fences. Do they fall under a federal program for relocation assistance? All the ranchers want to be relocated if they cannot stay where they are. No one wants to have their permit terminated. It's very political because land also is supposed to be used for homesteading.

### **Pozzolan Mining**

1. What is the current situation regarding a pozzolan mining permit? And what process would need to be undertaken for someone to complete the permitting process?

Department of Public Lands issued a 20-year permit to J.G. Sablan Rock Quarry Inc. The permit allowed the mining of pozzolan and basalt. In 2006, Department of Public Lands terminated it because the terms of the permit were not being met. The termination is being challenged. The CNMI Legislature passed a law stating that the permit is still valid and that Department of Public Lands does not have the power to terminate it. Department of Public Lands maintains that the permit is invalid, with which both the CNMI Superior Court and Supreme Court have agreed. The permit is terminated but there is a motion pending to reconsider and a possible appeal, both of which are being stayed pending settlement talks. Sablan is working with the Senate President and meeting with the Governor to settle this. Permit renewal depends on the Governor and does not necessarily need additional studies.

Department of Public Lands would rather give a new permit rather than re-instate the old one. Sablan Rock Quarry wants to amend the permit by adding 10 years because there are already other related approvals, such as from Coastal Resources Management, for that permit. If the company has to reapply, then it has to get Coastal Resources Management approval again along with associated CNMI and federal approvals (e.g., Endangered Species Act study).

Most of proposed live-fire trainings are where the pozzolan deposits are located. The two activities do not appear compatible. Even homesteading on the southern end of the island would be difficult because the geography is not suitable for homes.

Sablan Rock Quarry Inc. thinks the mining operation would be straightforward and easy to set up. Mining would be concentrated on the west shore of the northern end. He proposes to scrape it, use a rock crusher, stockpile it, and put it on a boat to China.

2. Has there been an economic feasibility study to determine potential profitability?

Sablan Rock Quarry Inc. produced studies estimating the supply. Department of Public Lands last did a study in the 1990s. There are about five other studies all with different numbers (e.g., U.S. Geological Survey study, a Dr. Wilson, a group from Taiwan).

3. Has there been any indication to Department of Public Lands that pozzolan can be mined at a high enough operational profit margin to justify capital investment that would be required?

According to the studies submitted by Sablan and others, mining appears to be profitable.

4. Has Department of Public Lands attempted to estimate what the mining rights are worth?

There are estimates but they are confidential.

5. What are current market prices for pozzolan? Are there any sources for this information that you know of?

Department of Public Lands met with someone last week who said he could market it to cement factories at \$80 per ton.

### **Tourism**

1. Are there plans for new hotel development in the CNMI? If so, what stage of planning (i.e., have permits been requested or provided, have investments been made)? Is information on details available?

The Dynasty is looking to expand and its investors are looking to build another hotel with a golf course. The new hotel is being considered for the southeast peninsula. The Dynasty expansion would be on the public lands portion of the existing Dynasty area.

There is a joint-venture on Rota interested in leasing about 1,000 hectares for an abandoned hotel to put in a golf course, condos, and casino.

Department of Public Lands has advertised two lots on Saipan for resort tourism and is in negotiations with the bidders.

2. Are there plans for eco-tourism on Pagan? Or a Club Med style resort? If so, what stage of planning (i.e., have permits been requested or provided, have investments been made)?

There have been many proposed plans for Pagan. One proposal was to put hunting there. At one time, the Japanese wanted to buy the island. Now there is discussion about eco-tourism. Department of Public Lands issued a recent permit for Pagan to clean up a portion of the accessible area for an eco-tourism trip. It will provide for visitors roaming around the landing area southward to the isthmus.

There is no current hunting on Pagan, but there are wild pigs and cows that were left there by the evacuated residents. The land has a lot of dead animals. You have to keep your mouth closed and cover your head because the flies will try to get into your mouth and ears.

When Department of Public Lands considers permits on Pagan, it considers potential to generate income and it considers project feasibility. Pagan has value outside of economic development. We need to do an appraisal of Pagan, maybe do a valuation study of the intangibles.

### **Potential Resettlement of Pagan**

1. What is the current legal position of the CNMI regarding people residing on Pagan? Are there any permanent residents currently?

This is a big challenge and Department of Public Lands does not have a simple answer. The Legislature enacted homesteading laws for Pagan. There are resolutions compelling Department of Public Lands to set up homesteads for people to go back to Pagan. People want land to live there. The challenge is how to develop a fair standard so people who are eligible can apply for a homestead. Currently, there are no eligibility criteria. Who can say if someone applying for land is really from Pagan or just someone who wants land on Pagan? People may have been born on Pagan, but there was the volcano. As a condition for people relocating from Pagan to Saipan (because of the eruption), people were offered homestead lots and houses. I don't know if there was a written agreement that people had to give up their right to Pagan. The government's idea was to close off Pagan and not use it because it was too dangerous. The government has to evacuate people, which is too expensive. Establishing a homestead on Pagan was not talked about for a while, but now the new generation is talking about it.

The Legislature passed a law with a residency requirement to live there a certain number of years and then one can become eligible for a homestead.

The major problem is that there is no infrastructure and we have conflicting laws. Department of Public Lands cannot hand out homesteads until there is infrastructure, but there is no infrastructure. Eventually basic infrastructure will have to be put in if people are going to live there – schools, a clinic, a dock etc. But it is not easy to put those in unless there is a source of money. Right now we can't even develop decent homesteads on Saipan.

We can give Pagan homesteaders a permit, but we cannot deed the lot until they can show they are connected to water and electricity, but there is no water and electricity there. The Legislature is looking to waive those requirements. Homesteads on Saipan are in similar

situation and those homesteaders still have not received the deeds to the land. The Commonwealth Utilities Corporation is too busy to put in infrastructure to those Saipan lots, much less anything on Pagan.

2. Is the following statement (made in 1978) valid to this day?: “The entire island is public land and the Paganese have in a sense, been squatters on their own island”.

Prior to the eruption, there was no private land ownership on Pagan. There was no homestead, no lease. All of the Northern Islands are public land. The people of the CNMI own it collectively and Department of Public Lands administers it on behalf of the people; there is no title. Department of Public Lands has fiduciary duty to manage public lands for the benefit of Northern Mariana Islands descendants. This usually involves coming up with a land use plan to determine which land is suitable for leasing out. It provides homesteads if possible but also has a duty to generate income through issuing discretionary permits and leases.

As a citizen you can go there and do your own thing. It is a beautiful place full of natural amenities. People are living there now like Robinson Crusoe, but they don't gain right to the land.

3. Are there some who had freehold or homestead ownership status prior to the eruption of Mount Pagan?

If homesteads are issued, it would be the first time for homesteads on Pagan.

4. What are the goals of the Northern Islands Redevelopment and Re-settlement Program? Can you provide any information on the Program?

The Northern Islands Resettlement Program is a part of the government but not directly under Department of Public Lands. The Legislature feels no other outside plan should affect their constituents; no matter what the military or others want. They feel people should be able to go up there and do what they want with the island – live there, mine pozzolan, do eco-tourism...

Regardless of the history and land needs, the legislature feels like the military has taken enough land in the CNMI. No one anticipated the relocation of the troops from Okinawa and the changing U.S. needs in the CNMI. Article 8 provides for land needs from the military for the Northern Islands. In the end, the Legislature is afraid that the U.S. could use eminent domain no matter what the Legislature wants (but that only applies during national emergency). The military is not sharing enough information with the Legislature about its plans. It needs more transparency. Something that is not classified should be shared with Legislature; make the Legislature a partner so that it can come up with solutions and not ask for the moon when you engage them too late.

The Legislature could care less about the Environmental Impact Statement. Every time we look at Environmental Impact Statement findings that say no impact, they are suspicious. What is the point of reviewing the Environmental Impact Statement? The findings are all

negative – no impact. Be careful about how you structure the findings. Be more sensitive about the feelings of people because they are very strong. The gap in understanding is 10 miles wide.

5. Can you describe your relationship/interactions with the Marianas Public Land Trust?

The Marianas Public Land Trust still exists and is separate from Department of Public Lands. Department of Public Lands manages the land and leases it out for revenue. The lessee pays fees to Department of Public Lands, who withholds an amount to cover administrative costs, and then turns over the remainder to the Marianas Public Land Trust. The Marianas Public Land Trust invests it and the interest goes to General Fund and gets spent by the Legislature. Department of Public Lands and Marianas Public Land Trust have tension because the Marianas Public Land Trust believes the Department of Public Lands does not turn over enough funds.

**5. Open Topic**

Department of Public Lands does not have a database of CNMI permits but can assemble files upon request.

**6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Please provide all materials that were submitted by JG Sablan Rock Quarry Inc. in their application for a permit to mine and extract pozzolan on Pagan. A permit was issued, based on this application, on September 8, 1995.
- b. Is there a Department of Public Lands permit for the seismic monitoring equipment? Please provide.
- c. For the Lease Back Area, can you provide current Department of Public Lands permit parcel maps, copies of the permits, and a list of permit holders by name and their specific parcels?
- d. What is the status of the Comprehensive Land Use Plan updates? Has there been an update since 1989? If so, please provide copies of the updates. If not please indicate in writing.
- e. Was a Public Lands Advisory Board ever established? If so, are there minutes from their meetings? Can these be provided?
- f. Will Duenas and Associates prepare a single comprehensive plan for the CNMI or one for each island? In particular, what Pagan land use option is being considered?
- g. Can you provide the Geographic Information System files that Duenas and Associates are preparing for the land use plans? Also, can you provide Geographic Information System files for the “Tinian Land Classification as of Fiscal Year 2013” map?
- h. Can you provide land-lease permits for Tinian resorts (such as *Pulan at Matua Bay*, *Neo Goldwings*, *Tinian Oceanview*)? Or status updates if there is no current lease?
- i. What is the status of the quarry projects (Management International and Marpo Valley quarry) on Tinian?

Commonwealth of the Northern Mariana Islands

<input type="checkbox"/> Saipan	<input type="checkbox"/> Rota	<input checked="" type="checkbox"/> Tinian
<input type="checkbox"/> Public Land	<input checked="" type="checkbox"/> Military Leaseback	

# Agricultural/Grazing Permit (AGP) Application

## GENERAL INFORMATION

Name of Applicant: *(If a corporation, please provide corporate charter and other relevant documents showing principle shareholders)*

Village Address

Home Phone No.

Work Phone No.

Mailing Address

## LAND OWNERSHIP INFORMATION

Do you or your spouse own land in the CNMI?  Yes  No

*If you answered YES, please answer the following (please use additional sheet if necessary):*

Location of property \_\_\_\_\_ Lot No. \_\_\_\_\_

Present occupant of land \_\_\_\_\_ <sup>EN</sup>Size \_\_\_\_\_

How is the land being used? \_\_\_\_\_

Are you presently occupying and developing any public land for Agricultural/Grazing purposes?  Yes  No

*If you answered YES, please answer the following:*

Location of property \_\_\_\_\_ Land being used as \_\_\_\_\_ %Grazing \_\_\_\_\_ %Farming

Size \_\_\_\_\_ I have/had an active permit with the Division of Public Lands.  Yes  No

## PURPOSE FOR APPLYING FOR A PERMIT TO USE PUBLIC LAND

Requested Land Size

Location

Proposed Capital Investment on land

\* How do you plan to finance the cost of improvements? *(please see note below)*

Type of structures you plan to construct

Will the proposed farming/grazing activities be for:

Subsistence  Recreational Farming  Commercial purpose

Proposed use of public land *(check all that apply)*

Cattle Grazing  Goat Grazing  Fruits/Vegetables  
 Others *(state purpose)* \_\_\_\_\_

\* Note: a revocable permit prohibits the construction of permanent structures on any public land for residential or commercial use

**PURPOSE FOR APPLYING FOR A PERMIT TO USE PUBLIC LAND (continuation...)**

Do you own any livestock?  Yes  No

If you answered YES, specify the number of livestock:

Cows \_\_\_\_\_ Pigs \_\_\_\_\_ Goats \_\_\_\_\_ Chickens \_\_\_\_\_ Others \_\_\_\_\_ Duck \_\_\_\_\_

Location of livestock(s) \_\_\_\_\_

Are you presently farming?  Yes  No

If you answered YES, please answer the following:

Location \_\_\_\_\_

Land Owner \_\_\_\_\_

Have you been a recipient of an Agricultural Homestead from the Trust Territory or Commonwealth of the Northern Mariana Islands Government?

Yes  No

If you answered YES, please answer the following:

Location of land \_\_\_\_\_ Size \_\_\_\_\_

Present occupant of land \_\_\_\_\_ Purpose \_\_\_\_\_

Do you have a business license to sell agricultural products?  Yes  No

Do you understand that agricultural & grazing permits are only renewable on a year to year basis and that the permits are revocable at any time with or without cause?

Yes  No

**CERTIFICATION OF APPLICANT**

I/we \_\_\_\_\_, declare under penalty of perjury that the foregoing information, including those contained in any attachments hereto are true and correct and that this declaration was executed on \_\_\_\_\_ at \_\_\_\_\_, Commonwealth of the Northern Mariana Islands. I/we understand that falsifying any answers herein will result in the automatic denial/rejection of my application or the automatic cancellation of any subsequent agricultural and grazing permit resulting from said application.

Applicant's Signature \_\_\_\_\_ Date \_\_\_\_\_

**FOR DPL USE ONLY (Do not write below this line)**

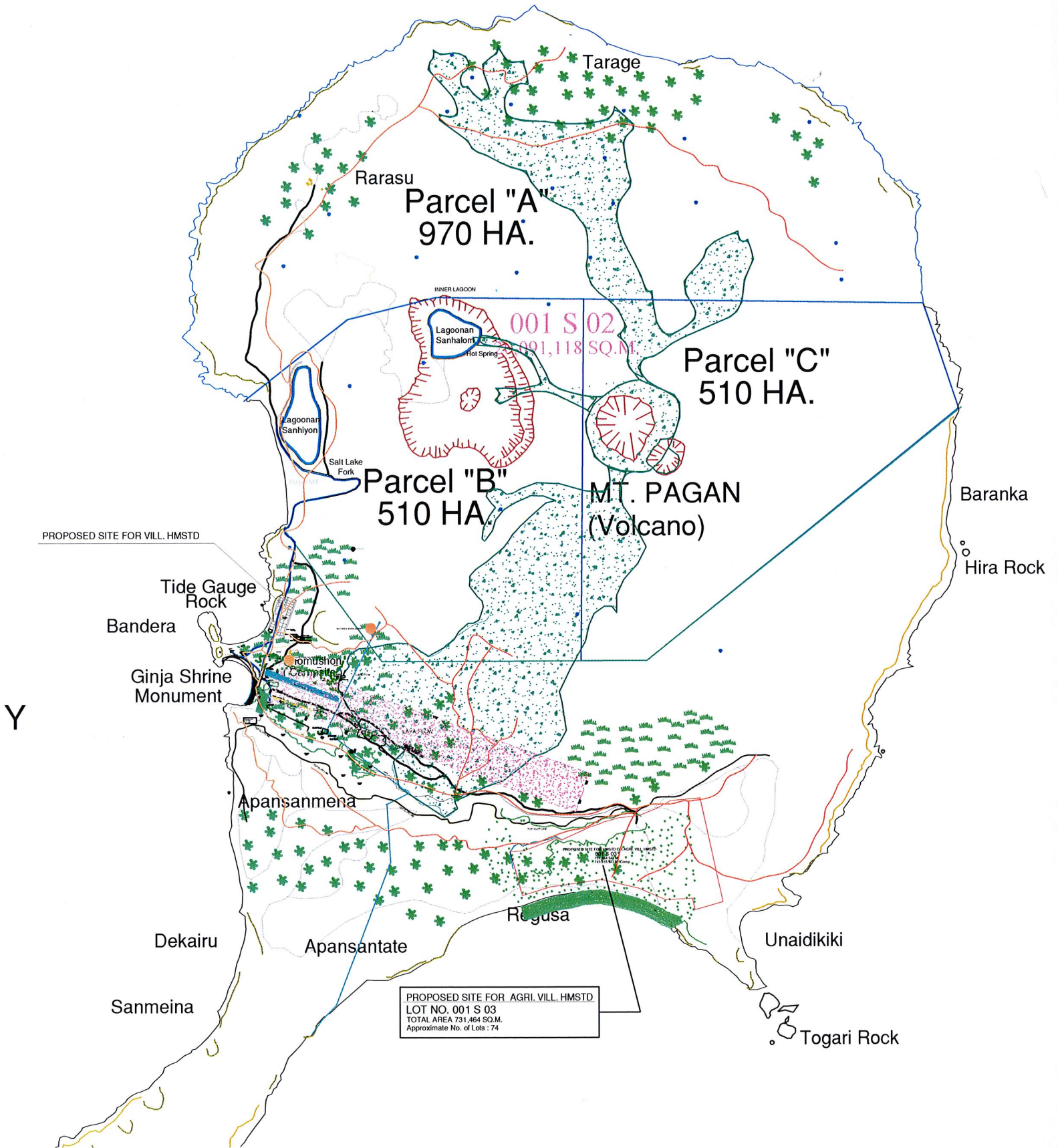
Date Application Received

Interviewed by

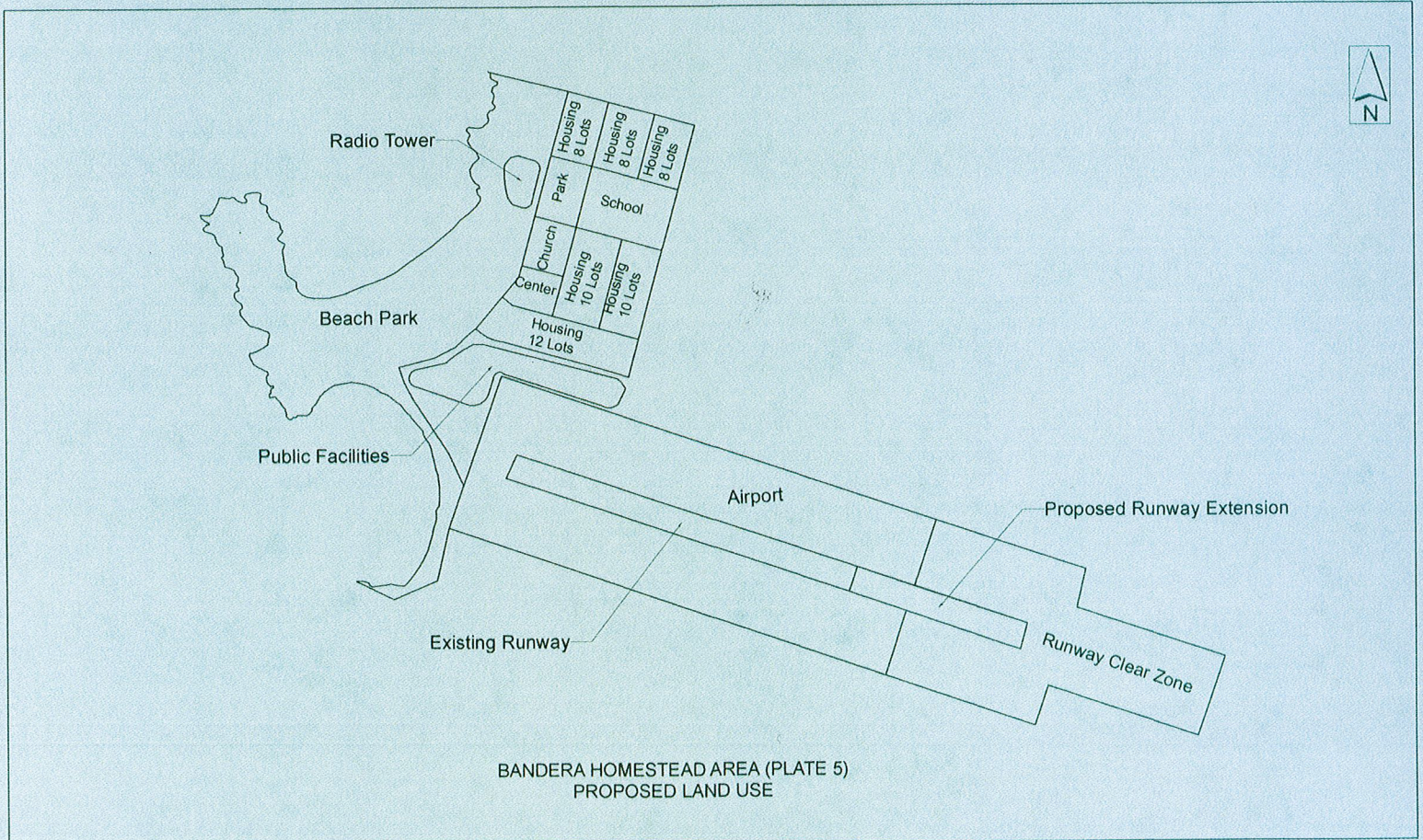
Date of Interview

Comment(s)/Recommendation(s)



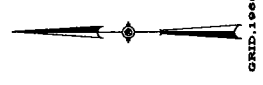
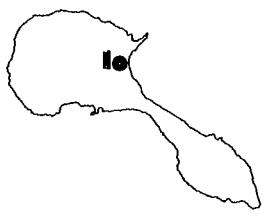






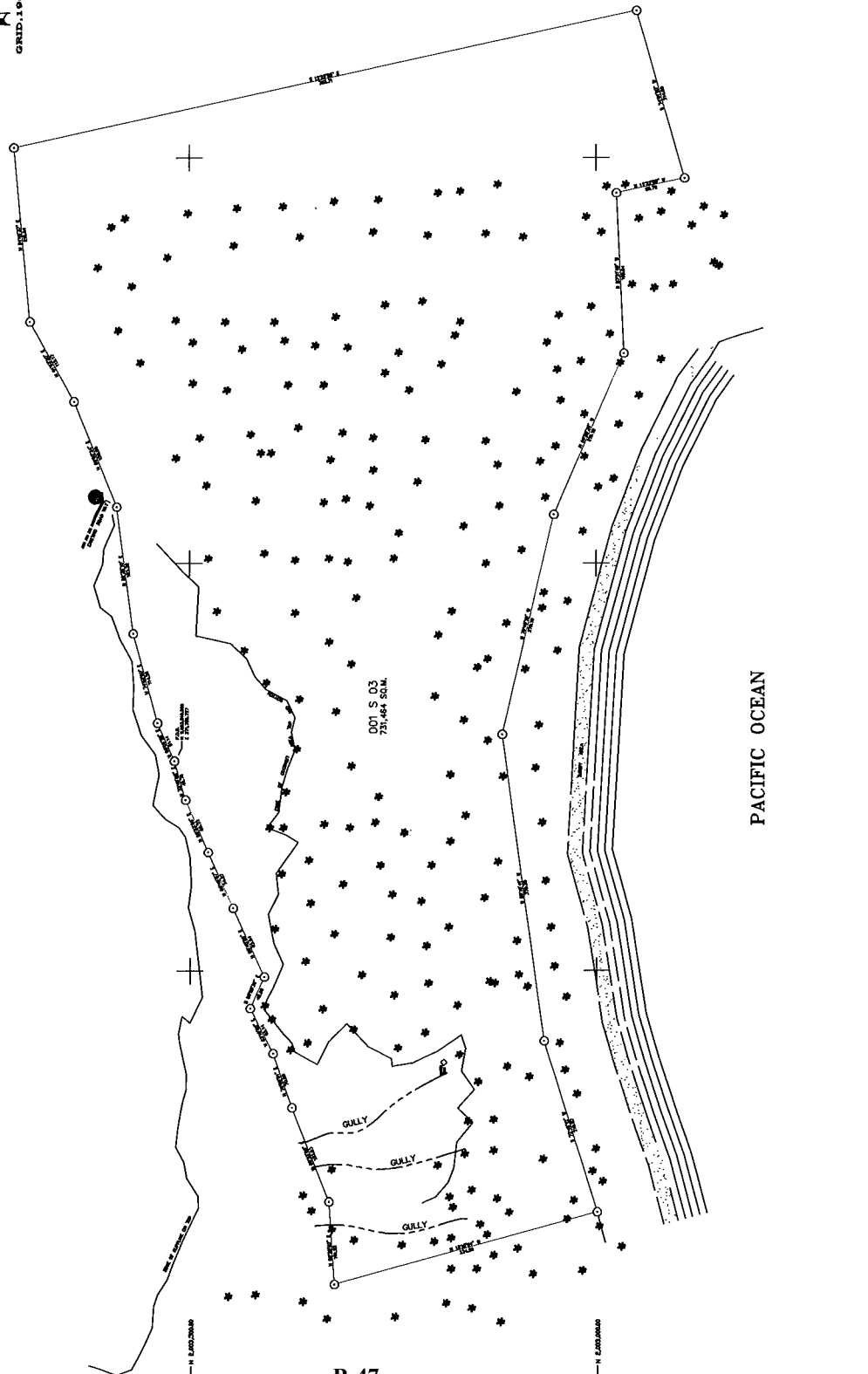


LOCATION MAP



NOTES:

1. COORDINATES ARE BASED ON MARSHALL ISLANDS DISTRICT COORDINATE SYSTEM OF CLARK 1966.
  2. SURVEY WAS BASED ON TRIANGULATION STATION PAGAN 1 WITH A COORDINATES OF N 2304.942.897 AND E 269.225.430 AS SHOWN.
  3. ALL DISTANCES ARE IN METERS, UNLESS OTHERWISE NOTED.
- REFERENCES(S):
1. SEE DLS CHECK NO. 001 S 00, DOC NO. 876Z.



B-47

**CLEARANCE:**  
 Pursuant to Division of Land and Surveys regulations, as published in the Commonwealth Gazette Volume 15, Number 15, December 15, 1981, the applicant has ascertained that this map appears to be free of other encumbrances. This clearance is not a warranty of other encumbrances, but a declaration of the applicant's belief and a determination of statement to the competency of the applicant.

Based this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

**CLEARANCES RECOMMENDED:** \_\_\_\_\_ **COMMUNALITY SURVEY:** \_\_\_\_\_

**CLEARANCES APPROVED:** \_\_\_\_\_ **SECTION, LAND REGISTRATION & SURVEY:** \_\_\_\_\_

**L. JEROME ELLIOTT,** hereby certify that this map was prepared by me or under my direct supervision that the survey was conducted in accordance with the Survey Act and that I am a duly qualified and authorized surveyor and that I am a member of the Survey Board of Niue.

Signature of Comm. Land Registrar: \_\_\_\_\_ Date: \_\_\_\_\_  
 Registered of Comm. Land Registrar: \_\_\_\_\_ Date: \_\_\_\_\_

NO.	BY	DATE	REMARKS	APPROVED	DATE

**DIVISION OF LAND REGISTRATION & SURVEY**  
 COMMONWEALTH OF THE NORTHERN MARSHALL ISLANDS  
 DEPARTMENT OF LANDS & NATURAL RESOURCES  
 SUVA, FIJI (PHONE: 89 2880)

**CADASTRAL PLAT**  
 OF  
**001 S 02**

PREPARED FOR AND SUBMITTED TO: \_\_\_\_\_

DATE OF SURVEY	DATE	SCALE	001 S 02
FIELD BOOK NO.	REGISTERED ON:	IN THE NAME OF:	N/A
FIELD BOOK NO.	DATE	SCALE	1:2,000
COMPILED BY:	DATE	SCALE	1:2,000
CHECKED BY:	DATE	SCALE	1:2,000
DRAWN BY:	DATE	SCALE	1:2,000
CHECKED BY:	DATE	SCALE	1:2,000

JOB NO. 03-000-00 **001 S 02**

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**CNMI Department of Lands and Natural Resources**

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**Agency Name:** CNMI Department of Lands and Natural Resources

**Date:** February 4, 2014 at the Director's Office; 1:20 p.m. to 2:30 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Arnold Palacios	Department of Lands and Natural Resources	Secretary	aipalacios55@gmail.com	670-322-9834
Manny Pangelinan	Department of Lands and Natural Resources Division of Fish and Wildlife	Acting Director/Manager Administrative Service	mmpangelinan@gmail.com	670-664-6080/6004
Edward Lynch	Marine Corps Forces, Pacific	NEPA Specialist	edward.lynch.ctr@usmc.mil	808-477-8480
Scott Glenn	TEC JV	Socioecon Team	scott.glenn@cardnotec.com	808-528-1445

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the general functions of your department, what are your goals and mission?

Department of Lands and Natural Resources has responsibility for the three protected areas in the CNMI Constitution. It focuses on conservation, mitigation, and environmental impacts on marine and terrestrial resources. It has four Divisions:

- Division of Fish and Wildlife, with the following responsibilities, among others:
  - Marine and terrestrial resources and management.
  - Recreational uses and development of fisheries resources/programs (training, economic development).
  - Wildlife research and resource management.
  - Regulation and enhancement of habitat to protect critical, endangered, threatened, and unique species.
  - Recreation for hunters outdoors activities (e.g., bird watching).
  - Wildlife conservation areas.
  - Marine Protected Areas.
  - Division of Fish and Wildlife is also responsible for promoting economic activity such as the small fishing industry and recreational fishing.

- Division of Agriculture, which handles quarantine and promotes agriculture development. It includes Forestry.
- Division of Parks and Recreation, which focuses on parks and recreation in populated areas, not larger nature parks.
- Division of Lands and Survey, which is focused on technical matters and land records.

CNMI delegates some authority to the municipalities. Tinian and Rota are considered local governments, while Saipan is considered the state government. Richard Farrell is the Resident Director (i.e., the equivalent to a city or a county director) for Tinian. Mr. Palacios is the Secretary for Saipan and the equivalent of the state director. If there are conflicts between military activity and Department of Lands and Natural Resources programs, Department of Lands and Natural Resources Saipan, i.e., the Secretary's Office, resolves the conflict, not the Resident Director on Tinian. Using brown treesnake as an example, if an F-18 goes to Tinian, Department of Lands and Natural Resources Division of Fish and Wildlife will send staff to Tinian, but the staff does the inspection under the Saipan chain of command, with the Tinian Resident Director responsible for ensuring that proper inspection occurs.

2. What are your major sources of funding, the CNMI government? Federal money?

The majority of funding comes from federal agencies, but it is a mix of that and grants or cooperative agreements with non-governmental organizations or other organizations. The coral reef conservation program is a cooperative agreement with National Oceanic and Atmospheric Administration, not a direct grant. Funds can be used for everything allowable under the grant. The CNMI government also provides funding; Saipan receives the money and then disburses it to Tinian and Rota.

3. What type of cooperation currently occurs between the military and the Tinian Department of Lands and Natural Resources?

The military and Tinian Department of Lands and Natural Resources cooperate on quarantine and inspections. They also do for monitoring of turtle nesting beaches and wildlife resources within the Military Lease Area. We have standard operating procedures for all of this as well as reviewing military training plans.

4. How many full-time equivalent staff members were employed at the Tinian Department of Lands and Natural Resources Parks and Recreation in fiscal year 2012?

There are about 100 employees at Department of Lands and Natural Resources Saipan.

5. What is the permitting process for fishing? How many fishing licenses are given each year? How many of these are commercial?

There is no permit process for non-commercial fishing. People can just go fish. We have restrictions from the federal government that boats more than 40 feet long cannot fish within 50 nautical miles of the southern islands. [Note: This means from the shoreline to 50 nautical



miles and from the Guam-CNMI exclusive economic zone boundary to a line halfway between Farallon de Medinilla and Anatahan Islands (73 *Federal Register* 75615)]. This was passed because of concern about overfishing, but the concern never materialized, so perhaps we are being overly restrictive with ourselves and thereby hurting ourselves.

There is no permit for fishing if the fish is sold, but the person still need a business license for the commercial activity. Really, though, even “commercial” fishermen share the majority of their catch with the family.

6. Are any fishing areas currently considered crowded?

No fishing areas are currently considered crowded but sometimes there can be competition among fish buyers. Prices vary based on supply and the season.

People are concerned about the military closing Tinian fishing grounds. The tsunami reef south of Tinian is very productive as well as the area around Goat Island. That area could become overcrowded if the northern part of Tinian is closed off. Even if people were permitted to go into the northern areas when the range is cold, people wouldn't bother at all going there and just give up on the area. People will focus on the southern end of Tinian and the Saipan banks. That might shift people into trying to go further north into the Northern Islands if they have the capability.

The military stationed on Tinian will compete with local fisherman for recreational fishing areas. This would not likely be an issue unless there are more military than locals fishing.

7. What are the factors for people to fish in the Northern Islands?

People don't often go up there, but it cycles in popularity. In Saipan, there are four or five boats capable of going up to the Northern Islands for at least a week. Two of those boats are very active (e.g., the Micronesian Challenger). Tinian and Rota have some big boats but they don't go up there because of the high cost.

A trip to the Northern Islands can cost \$5,000 to \$10,000 in fuel. But, the fishing is so good that you can recoup the fuel cost. In three or four days, you can catch about 4,000 pounds of fish. Not many people though can afford to front that kind of money. No loans are available and collateral would have to be pretty much everything you own. Also, boats are too small to carry the amount of fuel needed to get up there and back. You basically need about a 40-foot boat minimum and no fuel is prepositioned up there.

Years ago the CNMI used to have a robust transportation system with fuel staged at each of the islands. That was the responsibility of the Northern Island Mayor's Office.

Perhaps the military could help with fuel staging areas and logistics? It could leverage what it would be doing to help local people get up to the Northern Islands. I'm not sure how that military involvement there would affect people, but if people do get the ability to go there, we would have to work together to establish standard operating procedures.

8. Is Department of Lands and Natural Resources pursuing any activities on Pagan currently?

Department of Lands and Natural Resources is working with the Northern Islands Mayor on a fisheries development project. There is discussion about setting up a permanent fishing village on Pagan. The village would have a refrigeration system. We would develop marketing strategies and processing in Saipan. There are some people on Pagan now working on this. The Northern Islands Mayor supports this. He is arranging for Arctic Air to fly there to pick up whatever fish the locals are able to catch. Department of Lands and Natural Resources would help with the landside facility, fuel, and logistics. People would use small skiffs, maybe 15-foot boats based off of Pagan. It would be similar to Tinian now.

9. What are some of the impacts you are concerned about from the proposed action?

We're concerned the military will impact fishing grounds, but we don't know how to quantify that. Fishing is very important to the community for people's livelihood. It is important socially and economically. It is important to not restrict. Local people do not have the capacity to fish more than 60 miles out from shore. Even 20 miles is too far for most people. Being able to fish in that range around each island is important to provide food for families.

The Federal Aviation Administration and Commonwealth Ports Authority could be impacted on air and marine transportation. If a terrestrial resource is impacted in the Military Lease Area, then the resource may have to migrate from there to the southern one-third of Tinian. For the last major project with mitigation, the improvement of Tinian airport, mitigation was put up in the Military Lease Area. If we couldn't have used the Military Lease Area, then the mitigation would have to have been in the southern one-third. In principle, mitigation should be on the same island as the impact. This could especially be a problem if the Tinian Monarch is re-listed. Mitigation areas in the southern end of the island could limit potential use of land and developments may need to do Section 7 Endangered Species Act consultation or other federal agency reviews that could raise the cost of the project. Goat Island might be used as mitigation area for impacts on Tinian.

A lot of impacts hinge on how the federal government decides to use submerged lands next to military lands. Marine resources on Tinian are contingent on submerged lands. Department of Interior could limit activities in the water column. Guam has federal and territorial waters; we need to define the arrangement for the CNMI. Once they are defined, then we can discuss how fishing management can occur and what impact it might have on access and fishing.

10. What are opportunities for Department of Lands and Natural Resources and the military to work together?

It would be helpful if the Department of Defense could get the National Oceanic and Atmospheric Administration to do a biomass study for the fisheries throughout the CNMI, not just the Northern Islands. Department of Lands and Natural Resources has been trying to work with National Oceanic and Atmospheric Administration National Marine Fisheries Service. It's unfortunate that in this day of data crunching, a lot of coastal communities don't have the data to quantify fishing quotas accurately. Whatever quantification is there is

understated. A Northern Islands study would be helpful, though. I'd like to do a life history of the fish resources, specifically the commercially viable fish. We need to research to know what types of fish are there. We do not know where the fishing grounds are because we don't have the data. A study was done in the 1980s indicating good biomass, but quality is more important than biomass to command higher prices.

## **5. Open Topic**

Department of Lands and Natural Resources has not seen any development plans for "eco-tourism." The term is too broad.

The National Park Service proposed the Tinian Historical Interpretative Center. The Park hasn't been declared a National Park because the federal government says it's up to the military. If the military says they won't use it, then National Park Service could put it into the Register. CNMI Historic Preservation Office is taking the lead on this and we're assisting them.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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## **CNMI Fire Division**

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**Agency Name:** CNMI Fire Division

**Date:** February 7, 2014 at Garapan Fire Station; 2:55 PM to 4:00PM

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Thomas Manglona	CNMI Department of Public Safety	Fire Chief	tmanglona@hotmail.com	670-664-9137
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.Lynch.ctr@usmc.mil	808-477-8480
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the general functions of your department, what are your goals and mission?

The CNMI Department of Public Safety consists of two divisions: Police and Fire; and bureau: Bureau of Motor Vehicles. The Commissioner of Public Safety heads the department.

Saipan is like a state and city government in itself. Rota and Tinian are managed primarily through a municipality, where the Mayor is the head of local government. Article 25 delegates law enforcement authority from the central government to the Mayor. If there is a conflict in authority, then the central government, in the form of the CNMI Governor or the Department of Public Safety Commissioner (if delegated the authority), can trump a Mayor. If Department of Public Safety gets federal grants, Saipan is the lead and usual recipient. Tinian and Rota usually needs to be mentioned explicitly in the grant proposal for them to get money. Tinian and Rota have greater challenges than Saipan because of their isolation and limited capabilities. It's harder for them to get to resources.

2. What are your major sources of funding, the CNMI government? Federal money?

Funding for human resources for the Fire Division is local (i.e., CNMI) funds, which also cover some operational costs. We rely heavily on federal funds for operational costs – especially vehicles, equipment and training. For example, the fire engines we received in 2011 were through federal assistance to firefighters (Assistance to Firefighters Grant). We were able to obtain a fire boat through a federal port security grant through the U.S. Coast

Guard. Capital improvement funds are hard to get because of one, are politically/legislatively driven, that focuses on infrastructure projects such as roads, and two, requires local matching of funds. Minor facility renovations go through housing U.S. Housing and Urban Development Community Development Block Grant funds. We hired about 20 firefighters through federal U.S. Department of Homeland Security/Federal Emergency Management Agency Assistance to Firefighters Grant/Staffing for Adequate Fire and Emergency Response funds. That was a 2-year program with \$0 matching funds from the CNMI. Now the CNMI is assuming responsibility for the staff.

The way that federal grants are structured implies spending money on the CNMI is impractical. We have a small population but huge challenges because of our isolation and distance from the mainland U.S., even more so for Tinian and Rota, but when federal grants look at frequency per population that hurts our ability to compete for and receive funding. Some federal legislative funding specifically excludes U.S. Territories whether intentionally or unintentionally. Working with the military is a chance to enhance our mission and for us to support the military's mission. Building on local infrastructure is the key to help us long-term. Once the military leaves, we're left with the impacts and will need the ability to deal with it not to mention the economic effects.

3. What type of cooperation currently occurs between the military and local fire departments?

U.S. Coast Guard and the Fire Division work together. We are involved in planning for port security, hazmat, and search and rescue. As part of the port security grant to get the fire boat, we working on a Memorandum of Agreement/Understanding with the U.S. Coast Guard that the fire boat has two missions: port security and hazmat; as part of the Memorandum of Agreement/Memorandum of Understanding we can let the U.S. Coast Guard, our Police Division, and CNMI Department of Land and Natural Resources, Division of Fish and Wildlife use it as well as others.

The U.S. Coast Guard has a detachment in Guam that gives us training. We've also been training with Navy Fire and Andersen Fire and Emergency Services in Guam.

We have a mutual aid agreement but not explicitly in writing with Department of Defense and Guam Army National Guard. We do annual weapons of mass destruction training, and other types of mutual training, arranged through the Governor's Office and Office of Homeland Security and Emergency Management.

Perhaps Department of Defense could work with Department of Public Safety to use "opportunistic lifts" to bring excess public safety property from Defense Reutilization and Marketing Offices in Guam for Department of Public Safety to use.

4. How many full-time equivalent firefighters were employed at the CNMI Fire Division in fiscal year 2012? Do you have this information broken down by island?

There about 85 employees in Saipan, 6 in Rota, and 12 in Tinian, maybe 103 total; all are Firefighter/Emergency Medical Service trained.



5. According to the June 2013 Department of Public Safety Examiner, the CNMI Fire Division received five new ambulances, a custom-built Multi-Mission Fire Boat, one new fire truck, a surplus wildland fire truck from U.S. Forest Service, and an upgrade and installation of base radios. Have any additional resources been obtained recently?

Those are the most recent resources. One of the ambulances went to Tinian and the one fire truck is going to Rota. This is an example of the support that Saipan provides to Tinian and Rota.

6. If direct flights from Asia begin travel to Tinian, would additional fire suppression capacity be needed?

Our concern is the size of the passenger load because that would affect how we might have to deploy assets from Saipan. Larger planes could cause larger fires, which might mean we need to bring support over from Saipan or Rota. Commonwealth Ports Authority has jurisdiction at the airport with crash rescue capabilities, but the Fire Division is responsible for providing primary emergency response to the seaport. We have a fire boat to help address that gap in case we can't use a helicopter or plane. The fire boat is 30 feet in length so it can move personnel but can't move additional fire trucks or ambulances.

We used the fire boat to bring personnel over to Tinian for the recent Star Marianas crash investigation. Tinian was able to handle that plane size, but we brought people in to do investigation, protect the site, and cover shifts.

7. What concerns are there and/or what accommodations would need to ensure safety during training activities on Tinian? Are these similar to current activities during training operations?

Firefighter/Emergency Medical Service and hospital capabilities would have to increase. Tinian needs the ability to move patients to Saipan quickly or alternate sites such as Guam. The aircraft rescue and firefighting at Tinian airport needs to be improved, but improvements are a Federal Aviation Administration responsibility.

8. What are concerns about the various proposed activities on Pagan (pozzolan mining, homesteading, ecotourism)?

Department of Public Safety has no infrastructure in the Northern Islands. Anything north of Saipan goes through Homeland Security and Emergency Management for emergency support, such as setting up pozzolan mining or monitoring the volcanoes. As for the Northern Islands Mayor's office, they would handle issues such as establishing a workforce on Pagan or working with Department of Public Lands on establishing homesteads for settlement. If people are living on Pagan, we would probably have to send a crew up there to train citizens on public safety.

Not sure if the fire boat can handle going up to the Northern Islands; a test would be required to find out.

There is a cruise ship to Pagan related to ecotourism, but we haven't been approached about being involved. They are probably working with Homeland Security and Emergency Management or the Department of Public Safety Commissioner directly.

Another concern of the Northern Islands is the U.S. National Marine Monument established by the former President George Bush. Several islands at the very north of the chain are federally protected but how to manage and surveillance those resources are at the hands of the U.S. Government.

9. Are there any concerns about the southern end of Saipan, near Tinian?

There are gaps in coverage in the southern area, but it is our most active service population. There is a high need for medical services. At least 75% of medical runs are coming from the southern side. There is a diverse population (poorer, lower education). Crime statistics are also higher coming from that part of the island.

With a population of about 50-60,000 and six fire stations around Saipan, we run an average of about 8,000 calls a year on island. We can handle the load generally. On a 24/7 schedule, we've done a decent job but there are always issues that need to be addressed such as high cost of fuel, repairs and maintenance, and the availability of additional units for continuous emergency operations. All the fire stations have prepositioned assets, but we also spread it around to cover areas around the island, so it might not be readily available should something happen as a result of live-fire training on Tinian and we need to deploy assets over to there. We should be able to backfill personnel on Saipan while people are deployed to Tinian for any emergency for a short period of time.

## 5. Open Topic

All of Micronesia comes to Saipan for training on crash and rescue, even Guam. We could market the area as a premier training center for that specific purpose but are looking into expanding for some limited capabilities for structural firefighting and law enforcements needs.

The Department of Public Safety needs to be part of the active discussion on live-fire training on Tinian and Pagan. Department of Public Safety cannot say what the structural needs will be if it's not part of the discussion.

One concern about live-fire training is the potential for wildfires.

When the U.S. Geological Survey installed the volcano monitors on Pagan, Department of Public Safety accompanied them on a National Oceanic and Atmosphere Administration charter boat. We ate the cost of having personnel up there and the overtime to pay for personnel here to cover shifts while those guys were in the Northern Islands. It's not clear if CNMI was reimbursed for this extra cost.

Communications is still a big issue here in the CNMI from landlines, cell phones, internet, to emergency radios. IT&E, the local phone provider for the CNMI, monopolizes the underwater fiber optic cables between here and Guam and maybe elsewhere. They receive an

American Recovery and Reinvestment Grant to upgrade and/or enhance the current infrastructure but we haven't seen much improvement between Code Division Multiple Access to Global System for Mobile Communications cellular technologies. In fact Code Division Multiple Access seems to be much better and we have a lot of "dead" spots throughout the island. Internet is still very slow compared to Guam, Hawaii, and the U.S. mainland even for commercial or government customers. Emergency radios are still on the 800 megahertz system for Saipan and ultra high frequencies for Rota and Tinian although these two islands can access the 800 megahertz on a limited capacity. The local hospital uses a MotoTurbo system or some type of VoiceOver IP and can communicate clearly to the health centers in Rota and Tinian clearly. P25 compliance is very expensive and we don't have the infrastructure to support. The FirstNet U.S. presidential initiative for a more secure public safety radio communication has begun but funding continues to be a big issue for the CNMI as with everything else.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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# **Homeland Security and Emergency Management Office**

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**Agency Name:** Homeland Security and Emergency Management Office

**Date:** February 3, 2014 at Homeland Security and Emergency Management Director's Office; 4:30 p.m. to 5:30 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Marvin Seman	Homeland Security and Emergency Management Office	Special Assistant	marvin.seman@leo.gov	670-664-2216
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the functions of your office. What are your goals and mission?

The CNMI Office of Homeland Security and Emergency Management is the unified command/primary lead for emergency response for the whole Commonwealth. The Emergency Management Office and Homeland Security were recently merged to create the Office of Homeland Security and Emergency Management. Public Law 18-4 gave Homeland Security and Emergency Management additional authority and responsibilities. It is the liaison between the CNMI and federal partners and is responsible for coordinating with the military, such as with Joint Region Marianas and the U.S. Pacific Command in terms of the Stafford Act and mission assignments involving natural hazards and catastrophic events.

Homeland Security and Emergency Management and Department of Public Safety are distinct. Department of Public Safety focuses on law enforcement and emergency response. Homeland security primarily looks at terrorism while emergency management looks at the bigger picture, such as natural hazards. Homeland Security and Emergency Management can command Department of Public Safety assets when needed.

2. What are your existing initiatives and concerns?

Currently we are revising the state emergency operation plan. As mentioned, there used to be confusion and conflict among the agencies on who had the lead, but with Homeland Security and Emergency Management established we are not trying to develop a new culture where each agency has clearly defined roles and a chain of command.

3. What are your funding sources?

The CNMI funds personnel, equipment, and operations. Homeland Security and Emergency Management needs a helicopter and equipment for staging emergency response in the Northern Islands.

4. What are examples of coordination and collaboration?

Homeland Security and Emergency Management coordinated the Star Marianas crash after Tinian Department of Public Safety contacted the Office. Homeland Security and Emergency Management requested permission from Joint Region Marianas to clear a path, which they did until they noticed a historical area and then stopped. The path went halfway to the crash site and then emergency personnel had a 45-minute hike to the site. We were able to transport the living to Saipan within an hour of getting to the site. There were no jurisdictional glitches. We took out nine vessels and 114 rescue personnel and coordinated with everyone.

Homeland Security and Emergency Management managed an incident with military aircraft on the runway. Notification came in from the military and Commonwealth Ports Authority. There was conflict between us and Commonwealth Ports Authority on who had lead. In our Standard Operating Procedures it is a military responsibility, so we secured the site until the military could arrive.

We are also working well with the military to develop the operation plan. Homeland Security and Emergency Management is directly connected to Rescue21 and can coordinate with U.S. Coast Guard and military for proper response. Homeland Security and Emergency Management wants protocols that are flexible to rescue people.

5. What are Pagan access regulations?

Homeland Security and Emergency Management, Department of Public Lands, and Department of Land and Natural Resources have authority over access to Pagan, including individuals, residents, and business activities. We have standard operating procedures for Pagan in place to do emergency management. We also have a coordinated plan with the military to do long-range rescue from Saipan to Pagan; e.g., using ospreys.

If someone wants to go to Pagan, they are to contact us, so we know they are going up there and can ensure boater safety. This is a discretionary approval from Homeland Security and Emergency Management; the agency can tell boaters “no” based on, for instance, volcanic activity. We require applicants to give us a float plan, which is something new. It is our responsibility to protect the border, so we need to know a boater’s intention to enter and exit CNMI jurisdiction. We can also inform the boater of locations that the boater is entering at



the boater's own risk. If someone leaves CNMI territory but does not enter another territory, then there is no need to clear customs. We typically issue approvals (or denials) within a day.

If the pozzolan mining company were to begin operation, it would have to submit a medical and evacuation plan to Homeland Security and Emergency Management for approval.

There is no penalty for people who just go to Northern Islands without clearance. We want to amend the statute to add a penalty. Right now the statute allows the state to charge people to be reimbursed for the cost of rescue.

Homeland Security and Emergency Management has worked with the Governor to impose an emergency declaration for Pagan. We are lifting it for Agrihan. The volcano on Pagan has never stabilized, based on reports from U.S. Geological Survey. Military contractors recently on Pagan noticed two significant gray smoke clouds. The U.S. Geological Survey was out there for 6 weeks through August and recorded about seven incidents. We are issuing the emergency declaration because of safety reasons. We have spent a considerable amount of money doing emergency evacuations for residents who go up there. When we do these evacuations, we contract Americopter. We have avgas staged on Pagan (Americopter has its own). We lost four drums already because it's hard to protect it.

6. What are Homeland Security and Emergency Management concerns about live-fire training on Tinian?

The military has safety and emergency management protocols. The community is concerned about impact of transitioning military in and out of Tinian. Local people on Tinian view it more as an economic opportunity. My concern is security outside military jurisdiction, particularly for military transitioning through CNMI to military jurisdictions (e.g., movement of munitions, fuel, personnel). I've raised this concern to Joint Region Marianas and with the Governor's working group.

## 5. Open Topic

Homeland Security and Emergency Management is now responsible for unexploded ordnance and brownfield clean up. It used to be handled by the Emergency Management Office. Homeland Security and Emergency Management arranges for disposal with Department of Public Safety and Joint Region Marianas through a memorandum of agreement. The Memorandum of Agreement is with Homeland Security and Emergency Management but Department of Public Safety does the coordination. We just did a demo last week. Note that Pagan has never had unexploded ordnance clearance since World War II. The north/northeast end of the island was covered with lava so unexploded ordnance should be less there.

There is overlap between the seismic monitoring sites and live-fire areas. We will end up recording live-fire results on the monitoring equipment. We have one ultrasound that can detect nuclear detonation hundreds of miles away. We are concerned that live-fire could be confused with volcano activity.

## 6. Conclusion & Action Items

Additional Follow-up Information:

- a. Can you provide a copy of the emergency rescue protocol for military cooperation for actions on Tinian?
- b. Can you provide a copy of the emergency rescue protocol for military cooperation for actions on Tinian?
- c. How many rescue evacuations and at what cost have occurred on Pagan in the last five years?
- d. What were the primary reasons for the evacuations?

# **CNMI Ports Authority**

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**Agency Name:** CNMI Ports Authority

**Date:** February 5, 2014 at the Port Authority Office, Charlie Dock; 9:00 a.m. to 10:30 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
MaryAnn Lizama	Commonwealth Ports Authority	Executive Director	cpa.mqlizama@pticom.com	670-237-6500
Chris Tenorio	Commonwealth Ports Authority	Port of Saipan Manager	christenorio@cpa.gov.mp	670-664-3550
Ed Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the Port Authority.

The Commonwealth Ports Authority has a seven-body board; this is an advisory board the management. There is one representative from Tinian, one from Rota, and five from Saipan. The Commonwealth Ports Authority is led by the Executive Director and four managers: Airport Saipan, Seaport Saipan, Ports manager Tinian, and Ports manager Rota. The Commonwealth Ports Authority controls entry for all three airports and seaports for passengers and cargo.

Commonwealth Ports Authority has full fiscal autonomy; funding does not come from central government. Commonwealth Ports Authority has two bonds floated: a \$45M bond for expanding Saipan harbor with fill soil and a \$25M bond for airport upgrades. We have capacity to issue bonds but do not given current interest rates.

Commonwealth Ports Authority has 198 employees. Most employees are in aircraft firefighting and ports police. There are 38 firefighters and 34 police on Saipan, while Tinian has 12 and Rota has 10 dual firefighter/police.

2. How would you characterize the current capacity of the CNMI air and sea ports?

Saipan Harbor – Some upgrades were completed in 2009. These upgrades included dredging of the channel. Able dock is 244 feet in length, Baker dock is 1,414 feet in length and Charlie dock is 516 feet in length.

The military has “first priority” on Charlie Dock. If there is a conflict (i.e., the dock is needed by a military ship and a container ship, the container ship has to sit in inner anchorage and wait. Military will move sometimes to accommodate. Charlie dock is used for submarines. There has also been a destroyer and other military ships there. Average military dock time is 5 days. Largest vessel at port of Saipan is Queen Victoria at 964 feet and draft was 32 feet; Queen Mary II could not fit due to an additional 250 feet on her making her unable to make the turn at the entry of the channel.

Tinian Harbor – The breakwater is in a dilapidated state. It is the most important repair needed. Repairing the breakwater should be done first because if it is not done, then other repairs would get washed away over a short period of time.

The water gets shallow in north quay area.

A structural and underwater assessment for strength of wharf was done at the request of the Coast Guard.

Adding lighting to the dock would be a shared responsibility; Commonwealth Ports Authority is working on it-

Rota Harbor – The Rota Channel has a threshold of 250 feet, any vessel greater than the threshold is not recommended. Currently, the tug and barge services Rota, however, on inclement weather, it is advised that they do not enter the channel due to the possibilities of vessels running aground.

International flights to Tinian – Tinian Airport is lacking navigational aids, such as instrument landing system and does not have the volume of passengers to justify the purchase of an instrument landing system. The airport would need a lot of improvements including a fuel farm, an improved medical facility, the Aircraft Rescue and Firefighting would need to be relocated to the middle of the airport to be able to see entire runway (this is on the list of Federal Aviation Administration funded projects and will commence to meet the Federal Aviation Administration response time requirement. The Aircraft Rescue and Firefighting department will be relocated to the center of the runway to provide the line-of-sight on all aircrafts), and Transportation Security Administration and U.S. Customs and Border Protection aren't set up.

3. Are there any current plans related to Pagan? Are there documents addressing these plans?

Commonwealth Ports Authority is informed if and when a sea or air vessel goes up to Pagan but until Pagan has an airstrip meeting Federal Aviation Administration standards, Commonwealth Ports Authority does not control it as a port of entry. There are no current plans to upgrade the airport or put in a seaport in Pagan.

4. Do you have data on annual passengers/cargo that has gone through the ports in recent years?

Data can be provided.

5. Cumulative Projects

- Ferry system between Saipan and Tinian. It would have roll-on roll-off capability. It is being planned in conjunction with a proposed Rota/Guam ferry service. The project would include constructing ferry terminals. Department of Transportation Federal Highways Administration awarded a \$39 million grant for a feasibility study. It is anticipated the feasibility study would be completed in 2 years. It would be located at the finger piers.
  - Dynasty had a passenger ferry system in the past. There were two ferries - the Saipan Express ran aground in Tinian (captain fell asleep) and the Tinian-Express was sold and moved out of CNMI.
- Tinian Harbor Rehabilitation Project “Power Builders International upgraded dock surfaces, bulkheads, and bollards.” Can you confirm that this was completed in 2010?
  - Yes, all done
- Tinian Harbor: Xiong Family Company: Proposal to lease part of Tinian harbor for commercial fishing operation. 170-foot 1,088 ton landing craft vessel to operate in Guam and CNMI. What is the status of this project? This proposal never went through. The company was asked to provide a comprehensive business plan and to date, nothing has been provided to Commonwealth Ports Authority.
  - Commonwealth Ports Authority does not lease out main operational pier. Only finger piers can be leased out but those are in bad shape; finger pier A is leased out but it can’t be used in current condition.
- Tinian Seaport Rehabilitation- Status of breakwater rehabilitation.
  - Commonwealth Ports Authority wants to fix breakwater itself – the Department of Interior, U.S. Army Corps of Engineers, Department of Defense, CNMI, Tinian Mayor are all talking about improvements.
- Tinian Seaport Dredge?
  - In assessment, under National Environmental Policy Act review
- Inter-Island Super Ferry Transport. Links between Guam-Saipan-Tinian-Rota. Anticipated to be a largely a private venture with some public sector costs. Success would depend on Department of Defense commitment to use the ferry to make the venture viable.
- Pagan: Any port or airport infrastructure improvements planned? No.
- Tinian Titanic Hotel – initial plan was to build a boardwalk, which got Commonwealth Ports Authority interested. The hotel would be built over part of the port that has bad pylons and Commonwealth Ports Authority discourages boats from landing in that area.

Commonwealth Ports Authority is requiring hotel proponents to do boring samples for studies. There are security concerns about having tourists staying at the harbor facility. Proponents would have to deal with U.S. Geological Survey, U.S. Environmental Protection Agency, etc.; right now just want to do studies and then deal with red tape later; very early in their process. We also have current tenants slowing down the testing; they're asking for a conditional lease for 5 years, Commonwealth Ports Authority likely to give it to them.

## **5. Open Topic**

Commonwealth Ports Authority is concerned about airspace and military proposed activity restricting landing paths for commercial flights; an extended route on the west side of Tinian would be dangerous, take longer, cost more; extended routes could affect Commonwealth Ports Authority revenues.

Commonwealth Ports Authority cannot accept money from outside sources like Tinian Marine Stevedore, Inc. or Dynasty/Megastars; Federal Aviation Administration has strict rules on where funds come from. Foreign investors cannot put money directly into Commonwealth Ports Authority.

Pagan pozzolan mining – Not sure what kind of port infrastructure would be needed to support pozzolan mining shipments. Commonwealth Ports Authority has no plans to develop port infrastructure on Pagan but an operator could build harbor improvements. These improvements would need to meet safety standards of the Commonwealth Ports Authority and U.S. Coast Guard and it would have to be a U.S. Coast Guard regulated facility. Vessels to Pagan – need U.S. Coast Guard approval – people request to Commonwealth Ports Authority, who notifies U.S. Coast Guard and Homeland Security and Emergency Management, to make a float plan. Saipan has quarrying, they used to send materials to Tinian – a lot of heavy equipment is needed to move quarried material between the islands; moving heavy equipment up to Pagan has to be approved by U.S. Coast Guard, which would monitor safety.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Would you provide a copy of the Tinian wharf assessment results? Will be requesting from the company who did the assessment.
- b. Are master plans of each port and airport publicly available? If so, can you provide them? There has to be an official request made to Commonwealth Ports Authority and will be able to confer with Engineering as to what Commonwealth Ports Authority has.
- c. Can you provide a list of Capital Improvement Plan projects or plan for each harbor and airport? Is there a best source for lists of projects? If so, what is it? Need to confer with the CNMI Capital Improvement Plan office for the current and future projects.



# **CNMI Public School System**

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**Agency Name:** CNMI Public School System

**Date:** February 6, 2014 at the Public School System Conference Room; 8:20 a.m. to 9:15 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Glenn Muña	Public School System	Associate Commissioner for Administrative Services	Glenn.muna@cnmipss.org	670-237-3069
Derek Sasamoto	Public School System	Director of Finance	Derek.sasamoto@cnmipss.org	670-237-3067
Cyndi Deleon Guerrero	Public School System	Director of Human Resources Office	Cynthia.deleonguerrero@cnmipss.org	
Tim Thornburgh	Public School System	Federal Programs Officer	Tim.thornburgh@cnmipss.org	670-237-3065
Rachel Fusco	Public School System	Program Coordinator, Capital Improvement Projects	Rachel.fusco@cnmipss.org	670-322-3716
Gerald Reyes	Public School System	Data Program Manager	Gerald.reyes@cnmipss.org	670-237-3083
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the CNMI Public School System, what are your goals and mission?

The mission of the Public School System is to provide a quality education to every child. Every child wants an opportunity to succeed in school.

We have about 430 classroom teachers. All of them meet U.S. Department of Education requirements. All have at least a Bachelor's degree, one-third of them have a Master's degree. Our turnover rate is 10% or about 42 teachers per year. The main causes for turnover are

retirement and relocation. We have a challenge recruiting teachers. Elementary school teacher recruitment is no problem, but junior high school and higher is a little tough, especially for special education, higher math, higher science, chemistry, and sometimes English language arts. We often have to recruit from the U.S. mainland. We are using Facebook to recruit graduates who moved from CNMI to the mainland.

2. What are your major sources of funding, the CNMI government? Federal money?

School breakfast and lunch funding come from the U.S. Department of Agriculture. We get federal money for the head start program and a number of other federal programs. CNMI funds go to services and personnel. About half of the personnel funding is federal.

The CNMI invests \$3,000 per child and the federal government invests \$3,200 for a total of \$6,200 per child.

A good indicator of quality education – 60% of students go to college (U.S. is 62%); 20% enter military; balance 19% (seeking employment 14%; 5% undecided).

3. The 2011-2012 CNMI Facts and Figures report indicates that the CNMI Public School System had 10,505 students enrolled in 7<sup>th</sup>-12<sup>th</sup> grade. Has that number changed?

Numbers and statistics will be provided in a follow up data request.

4. What are the conditions of the CNMI Public School System's schools (e.g., can the current space accommodate existing staff and enrollment). Tinian specific issues?

CNMI is probably the top in facilities among the territories, but we still need work and renovation. The campuses are aging and we have a history of being underfunded. Previous administrations have taken our funds for other purposes. We do well with what we have but we need more resources. Recently, Office of Insular Affairs and the U.S. Army Corps of Engineers did a big assessment of Saipan facilities. The final version was released last April and is current. The Office of Insular Affairs made commitment to fund \$1 million in renovations per year for five years because of the U.S. Army Corps of Engineers report.

For Tinian, the junior/senior high school is in good shape. It is a newer facility. The elementary school needs a lot of work because it's older. There is population decline so some of the classrooms are unused. There is plan to do parking lot improvements, but no plan to expand the footprint. The land there has been deeded for only education purposes, so there's little concern it could be taken if there are development pressures in the southern one-third of Tinian.

The Public School System is responsible for transporting students to school. On Tinian, we have two buses and two vans for special needs students.

5. Are there other concerns about increased training activity in Tinian?

We have a lot of campuses in southern Saipan around the airport. Schools nearby are in the flight path. In the afternoon, three international flights go directly over the high school.

Students are exposed to smog, vapor trails, and other chemicals and that would increase with increased activity. There's also a proposal to develop storage sites for the southern areas (as part of Divert), which has dangers of leaks and explosions. The increased activity also means increased chemical use with increased use of equipment; e.g., chemical spill at Saipan airport involving military jets.

Noise in classroom creates trauma from hearing explosions. The noise is a constant interruption to learning. Instruction has to stop completely until the noise stops. We are trying to do energy conservation by limiting utility uses, so all schools' windows are open. Even with the windows and doors closed one can hear the military jets. With windows open, even the existing commuter flights can be loud for some of the Saipan schools.

Increased military activity could impact internet bandwidth. IT&E is reluctant to increase the Tinian-Saipan bandwidth, which is a constraint on our ability to deliver education. Perhaps the military could upgrade that. We pay \$30 per megabyte compared to the U.S. average of \$2.

There are concerns about increased crime from unknown soldiers that might affect children.

Schools serve as emergency shelters. We may need additional funds if we take on additional responsibilities as an emergency shelter, especially if it relates to military activity.

## **5. Open Topic**

For the Northern Islands, there was a bond passed for a school that was supposed to be on Anatahan, but the volcano erupted and the people evacuated. There is no plan or funding now for a school in the Northern Islands. School construction is driven by student population and there are no students in the Northern Islands right now. The main plan for Pagan is eco-tourism. Agrigan used to have about 200 people and twice-a-month shipping. But, no one is there anymore.

Pagan is a place everyone cares about. It is natural, pristine. People still go up there and don't want to see it destroyed. There appears to be real potential for geothermal and pozzolan. If the military takes it over and doesn't allow its use, it hurts the CNMI economically. People don't want to see it torn apart.

PSS sends teachers from Saipan to Tinian for special education, physical therapy, speech pathology, and even classroom teachers for long-term needs. (Public School System has a day pool of teachers on Tinian.). We send teachers by the cheapest flight. If the weather is bad, teachers will refuse to go, even by ferry when there was one.

The expiration of foreign work visas would affect our students because the parents may be foreign but their children are often U.S. citizens who are able to stay. If their work visas expire, then the parents would probably go back but arrange to leave their children with someone here so the kids can stay in school. That already happens now. Having no foreign workers would also impact our Capital Improvement Plan and contracted services because construction and contracted services mainly rely on foreign workers for their employees.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. What is student enrollment by grade, island, and ethnicity?
- b. What are the Tinian bus routes?
- c. What percent of students are on free/reduced meal plans for CNMI, Saipan (especially southern Saipan), and Tinian?

## **CNMI State Police Division**

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**Agency Name:** CNMI State Police Division

**Date:** February 5, 2014 Department of Public Safety Building; 9:00 a.m. to 10:00 a.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Pete Deleon Guerrero	CNMI State Police (Department of Public Safety)	Director of Police Operations	plguerrero@dps.gov.mp	670-285-7013
Anthony Macaranas	CNMI State Police (Department of Public Safety)	Police Sergeant	amacaranas@dps.gov.mp	670-483-5818
Ed Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
David Kiernan	TEC JV	Socioeconomic Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department, what are your goals and mission?

The State Police Division is the primary law enforcement agency in the CNMI, handles criminal and traffic enforcement and the 911 system. Additional information was provided, in written form (attached).

2. Do you keep crime statistics? Is that information available or do you know of any other sources?

Yes. Can provide upon request.

Petty theft, breaking and entering, assault, disturbing the peace (can be drunk and disorderly) are common crimes. No homicides last year, three vehicular manslaughters.

Human trafficking remains a big problem. Nobody talked about it when garment industry was doing well. Federal immigration has helped human trafficking situation. There is a human trafficking section – bureau of intelligence and technology unit – this is a joint unit between

CNMI Police and Micronesian Transnational Crime Unit. Department of Justice/Immigration and Customs Enforcement/Federal Bureau of Investigation/Drug Enforcement Agency can step in to help with human trafficking when needed.

Alcohol is the big driver of crime. Per capita, Saipan consumes more Budweiser products than any other state.

Ice is the most common drug. Most ice comes in from (Asia - Phils, Taiwan, China) through air or sea ports. Saipan is a transit point of Asian meth into America. More of a problem at the sea port than at airport, there may be some corruption at the ports.

Economic problems have led to people breaking into people's houses to steal and breaking into other buildings to steal copper wire etc. Economics a bigger driver than in the past, because economics have gotten worse.

3. What are your major sources of funding from the CNMI government? Federal money?

Mainly funded by CNMI government. Also grants from federal government, but these are specific to reason of grant (non-fungible). Some equipment paid for by grants for highway or boating safety. Patrol is funded locally.

Provided written information on department funding (attached).

4. Where does money used to fund employees come from?

The CNMI government.

5. How many full-time equivalent police officers were employed at the Commonwealth State Police Division in fiscal year 2012?

Information on the number of sworn police officers, by island was provided in written form (attached).

6. How big is the service population that the Commonwealth State Police Division serves? All CNMI population, or just the Saipan population?

Written information on service population and service ratio provided in written form (attached).

## **5. Open Topic**

Direct flights from Asia into Tinian would generate a requirement for more officers on Tinian.

When sailors/military are here, the police look out for them and work with those that file a complaint. Police coordinate with shore patrol. Shore patrol is effective. No particular problem with military members and crime.

No conflict between military and local population.

Military activity here would help the economy, which should help with crime problems.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Can you provide a detailed set of crime statistics for the CNMI and specifically for Tinian?

Date : February 5, 2014

Subject : CNMI Joint Military Training EIS/OEIS

The following Data information is provided for the EIS/OEIS.

Department responsibilities:

The Members of the CNMI Department of Public Safety are dedicated to providing the highest quality public safety service in order to enhance community safety, protect life and property, and reduce crime and the fear of crime. To do this, we pledge to develop a partnership with the community, lead a community commitment to resolve problems, and improve the safety and quality of life in the Commonwealth.

Conditions and capacity of facilities:

The Infrastructure of DPS is in a poor condition with lots of needed renovations and upgrading several technological capabilities. The facilities were built back in 1969-1992 with little regards of what the building was for, except to meet typhoon condition. As for the capacity, the facilities are old but workable, DPS responded and entertained between 11,000 – 13,000 police request for assistance for both criminal and traffic yearly.

Department funding:

Personnel	\$5,775,610.00
Operations	\$746,139.00
Utilities	\$694,836.00

Staffing and service population:

The Department of Public Safety staffing:

Saipan 115 sworn police officers

Rota 21 sworn police officers

Tinian 18 sworn police officers

Population:

Saipan 48,220 Ratio 1=419

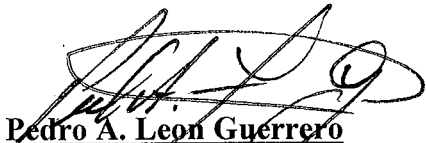
Rota 2,257 Ratio 1=120

Tinian 3,136 Ratio 1=174

Commonwealth of the Northern Mariana Island Visitor Arrival Statistic:

2013 total visitor arrival 438,908

Monthly average arrival 36,575



**Pedro A. Leon Guerrero**  
DPS, Acting Director of Police Division

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# **Commonwealth Utilities Corporation**

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**Agency Name:** Commonwealth Utilities Corporation

**Date:** February 6, 2014 at the CUC Conference Room; 10:30 a.m. to 11:30 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Brian Bearden	Commonwealth Utilities Corporation	LCDR; USPHS	Brian.bearden@cucgov.gov	670-287-8388
Larry Manacop	Commonwealth Utilities Corporation	Associate Engineer	Larry.manacop@cuc.gov	
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. How many power customers are there in the CNMI overall? How many are residential and how many are commercial or government?

About 12,000 power customers in all CNMI; water is about 9,000; less than 3,000 sewer customers (customer = accounts; meters; payers etc., not individuals)

Commonwealth Utilities Corporation is independent; under emergency order that abolished board of directors and put Governor in charge; almost like line agency but legally an independent agency; the board of directors should be restored at some point in the future; we

have the authority to do bonds but not able to issue bonds currently and there's limited opportunity to get bonds

2. Power rates

All three islands share the same rate structure; Tinian and Rota cannot sustain themselves so Saipan subsidizes them; electrical rate is based on a complex formula incorporating customer numbers, fuel costs, etc.; Commonwealth Utilities Corporation has a rates consultant who does the work; Chief Financial Officer has this data in summarized form.

3. What percentage of current power usage on Tinian is residential, commercial, government?

About 50% used by International Broadcasting Bureau and Dynasty; on water side – Dynasty has its own well and R-O; International Broadcasting Bureau gets its own well water because it is off of the Commonwealth Utilities Corporation distribution system.

4. Are any capital improvements needed or planned in order to maintain current operations?

There is a Capital Improvement Plan list; mostly U.S. Environmental Protection Agency-funded projects on water/wastewater side; power – doing work on fuel tanks and fuel lines funded by U.S. Environmental Protection Agency and Department of Interior; water task force operates independently working on water system with different funding source; goal is to shore up capacity and reconfigure the system; on Saipan trying to optimize water system operation, connecting distribution system to storage tanks instead of pumping directly to people's homes; replacing old infrastructure, getting rid of asbestos pipes and replacing bad polyvinylchloride pipes.

5. Cumulative

- Tinian: Green Global Solutions Guam, Inc. 30-megawatt wind farm sought 25-year purchase power agreement from the legislature for \$300M project. Commonwealth Utilities Corporation is not negotiating with this company and notes that any new power purchase agreement will have to follow Commonwealth Utilities Corporation competitive procurement rules.
- A 10-megawatt solar project is also on hold. It was in contract negotiation but then stopped because the Renewable Energy Integration Study identified only about 8 megawatts of capacity. We already gave out 3 megawatts to entities, so we only have about 5 megawatts available.
- Saipan geothermal power project was awarded to the Australian company Kuth Energy. It is being rebid even though it had done the full bidding process. Initially, the project got \$1.2 million from the federal government, but that was not enough, so Commonwealth Utilities Corporation bid it with concessions to incentivize people to bid on it. Commonwealth Utilities Corporation awarded it to Kuth, who would do it at their own expense, but the procurement was cancelled because it was decided that the concession was not in the CNMI's best interest. So, now we are bidding it again but without the concession, and are in the process of selecting a contractor for the drilling. The well would be drilled in Gualo Rai.

- There is sufficient water on Tinian for a water park at the Dynasty, but note that the fountain is turned off there.
- Commonwealth Utilities Corporation has not been approached about windfarm or natural gas projects. Those are only political discussions at this point.

## 5. Open Topic

Overview of Commonwealth Utilities Corporation - provide water (all three islands), wastewater (only Saipan) and power (all three islands).

The main water issue on Saipan is that the chloride (salinity) content is high. It is potable but salty. It will not make you ill but we do not advise drinking it. The U.S. Environmental Protection Agency has a secondary standard focused on palatability. U.S. Environmental Protection Agency considers it potable, but not palatable.

Our biggest issue is providing reliable service. We have increased to 24-hours reliable service to 90% of the population on Saipan. We have enough water. The challenge is delivering it properly. We fixed 800-1000 leaks in 2011 and 2012.

We only bill for about 30% of the water that we produce. The other 70% we are not paid for. The exact reasons remain unknown to some degree, but we think in many cases it is primarily because of theft, especially in agricultural areas where we have fixed the leaks but are still not getting revenue. People hook up illegally to water lines next to meter so meter does not register usage. Also, many meters do not work well because bad equipment was purchased and these are slowly being replaced. If a meter is not working, then we bill using a conservative, flat rate estimate. Ten years ago virtually all customers paid a flat rate.

On Tinian, cattle grazing uses some water. The Commonwealth Utilities Corporation gave them a well, which is operated by the Mayor's office. People have an expectation of free water for agricultural purposes.

There are times we might be over-pumping the aquifer on Saipan. We get better water quality from wells in the highland.

The meters for power use are in good working order.

Pagan/Northern Islands – plans for utilities, infrastructure; there might be something on the shelf, but definitely not on the Capital Improvement Plan list; no request for service up there.

Tinian sewer system – no current plans; there are previous proposals that were messy; current master plan for Tinian and Rota is to do a feasibility study for each; any new development on Tinian would have to put in its own; don't think we can afford sewer on Tinian with the customer base.

Golf course on Tinian – should have enough water in form of localized groundwater resources; on Saipan the golf courses have good water management, would likely use same practices on Tinian; Commonwealth Utilities Corporation could not guarantee supply for a golf course.

Tinian has a couple of wells that are inactive in the Military Lease Area but could be reactivated, although condition is not known.

Water repairs on Tinian – there are only two pressure zones on Tinian, with the main storage tank at 400 feet above sea level tank providing very high pressures to farm areas in valley nearly at sea level; the main village of San Jose is served by a pressure reducing valve. We have a project with U.S. Environmental Protection Agency funding to put in pressure relief valves to reduce the high pressures in the agricultural Marpo Valley area; leaks are believed to be mainly pressure-related but also because of poor quality material used in some pipelines – a thin-walled fiber-reinforced polyvinylchloride pipe.

## **6. Conclusion & Action Items**

Information provided:

After the meeting Brian Bearden provided “CNMI-CUC Benchmark Questionnaire – 2013” Excel file.

Additional Follow-up Information:

- a. Can Commonwealth Utilities Corporation share its Capital Improvement Plan list? Yes, but it is subject to change because the draft Capital Improvement Plan is part of the draft Master Plan.
- b. Can Commonwealth Utilities Corporation share portions of its master plans such as for water, wastewater and power? Unsure because the report is court-ordered and still in draft form.
- c. For the 30-megawatt wind farm, have specific sites for Tinian been proposed? Can you identify potential sites on a map? Please ask Alan Fletcher, Commonwealth Utilities Corporation Director.
- d. Can you share the Renewable Energy Integration Study? This is available on the [cucgov.org](http://cucgov.org) website.
- e. What is the status of the solid waste transfer station on Tinian? Please ask Department of Public Works.
- f. What is the status of the Tinian landfill improvements? Please ask Department of Public Works.

**Commonwealth Ports Authority Tinian International  
Airport**

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**Agency Name:** Commonwealth Ports Authority Tinian International Airport

**Date:** January 28, 2014 at Tinian International Airport; 1:30 p.m.to 2:30 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Joseph Mendiola	Commonwealth Ports Authority Tinian	Ports Manager	mendiola@cpa.gov.mp	670-433-9294
Gerald Crisostomo	Commonwealth Ports Authority Tinian	Assistant Ports Manager	cpatinian@pticom.com	670-433-9294
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of Tinian International Airport, what are your goals and mission?

Commonwealth Ports Authority Tinian is responsible for the airport and seaport. Both are under the supervision of the Tinian Port Manager. We monitor the coming and going of every vessel to the island. Manager of airport and the harbor master is same person.

This is a certified airport for air carriers. We handle commuter flights, jets, charter flights. We operate from 6 a.m. to 8 p.m. Flights after those hours are paid for by the military or the commercial flyer. We operate 7 days a week. The airport never shuts down unless a disaster occurs. The Federal Aviation Administration mandates that certified airports have to be open to the public all the time.

Tinian airport can be classified up to C class aircraft because of the Aircraft Rescue and Firefighting building, the runway extensions, and charter flying. Tinian is not a controlled airport, meaning we do not have a control tower. The Saipan flight tower controls planes for here. Two airlines, Freedom Air and Star Marianas, provide commuter traffic. Occasionally, a

private Lear jet comes in from Macau for the Dynasty. The Marines came on 737 airbuses during Forager Fury II.

2. Do you have data on annual passengers/cargo from Tinian? Is that data available?

This will be shared in a follow up communication.

3. What are your major sources of funding, the CNMI government? Federal money?

We are an autonomous agency of the CNMI government. We charge landing fees so we have a revenue source that covers operating costs. Our biggest expenditures are gas then labor.

4. Where does money used to fund employees come from?

Port fees pay for employees.

5. Where does money used to fund facilities and equipment come from?

Federal Aviation Administration counts scheduled flights but not charter flights for funding purposes. Commonwealth Ports Authority prefers to have scheduled flights because it helps project budgets more consistently and supports more staff. Statistics to Federal Aviation Administration are based on scheduled flights and so do not reflect the full usage of the airport. Commonwealth Ports Authority provides numbers on military flights to the Federal Aviation Administration.

For the runway expansion project, we used Federal Aviation Administration and local money in anticipation of direct flights that would come for the Dynasty.

For example, Federal Aviation Administration is funding the new Air Rescue and Firefighting Building. The Air Rescue and Firefighting has two fire trucks. There is a 90/10 split with the Federal Aviation Administration. Federal Aviation Administration wants to protect the truck, but the truck requires a lot of maintenance. The old Air Rescue and Firefighting station was too small, with not enough space to train personnel. The original cost projection for the new Air Rescue and Firefighting was \$4 million but will likely cost about \$6 million now. We have to bid it out. The new Air Rescue and Firefighting will have a training room, a conference room, a command center, and parking for three trucks. It is designed anticipating larger aircraft like international flights coming into the airport.

Most equipment is for maintenance. The weather service station funded by the National Weather Service. Trucks, mowers, etc., are purchased in-house with funds from service fees.

6. What type of cooperation currently occurs between the military and Tinian International Airport? Are there ever conflicts or logjams created by military and commercial use?

We have an annual training that is much smaller scale than what is being proposed. Smaller exercises have problems and there is concern that larger exercises will create larger problems.

Geiger Fury was our first experience with military training. We learned a lot about requirements for military use of airports. They brought in so many troops and equipment. The



military lease agreement gives military unlimited use of the airport, such as landing a C-130 or other military aircraft, though it is still a civilian airport. For the Rota and Saipan airports, the military has to pay after exceeding a certain number of landings and weight. We can charge if the military uses a charter. This is the same for oceangoing vessels.

7. How many full-time equivalent staff members were employed at the Tinian International Airport in fiscal year 2012?

We have 28 staff members (including one at the seaport). Sometimes our hires go to Saipan. Our employees are all local residents. Some are green card holders.

8. How would you characterize the current capacity of the airport relative to demand for commercial use? Is there excess capacity or not enough capacity to handle existing traffic?

We have seen tremendous growth in commercial activity with the development of the hotel and casino, especially from Asia. Sometimes we get up to 200 customers a day coming through the airport. We do about 20 flights, mainly between 2 a.m. and 7 a.m. for the tourists. You can hear the flights in town, though not from inside your house.

Tourists subsidize flights because they come over in large groups and the airline has to make a lot of flights to Tinian that go back to Saipan empty, and then vice versa, so the locals try to fly on the off leg.

We think airlines get enough tourists to have scheduled flights. Star Marianas is also almost on a regular schedule already.

Freedom Air has regularly scheduled flight. Star Marianas is on charter basis, because to have regularly scheduled flight you have to have Federal Aviation Administration approval. Now, most of their flights are night time flights because that's when China Airlines comes in. Once they announce on 24-hour schedule, then they are mandated to have an airline running 24 hours a day. The Federal Aviation Administration approval process mostly consists of putting in a flight schedule that is set on date and time. Star Marianas said the airline is still waiting to get Federal Aviation Administration approval of regular flights. Arctic Circle has a charter but only comes here a few times, maybe five times since it started.

9. What other improvements would be needed for direct flights from Asia (e.g., customs, immigration, Transportation Security Administration, baggage handling)?

Currently, international charter flights have to fly to Saipan first and then Tinian. These flights usually need 90 days' notice so Commonwealth Ports Authority can meet the federal requirements to process the passengers into Tinian.

If an airline from Korea, for instance, wanted to set up a route directly to Tinian, the Transportation Safety Administration and Customs and Border Patrol would have to be set up at Tinian airport. They have not set up here because there are no international flights because there are other constraints to accepting international flights such as the lack of jet fuel.

10. What are some of your upcoming Capital Improvement Plan projects?

- Tinian Airport Fuel Farm would incorporate a fuel farm to expand the potential aircraft that could land at the airport. There is no jet fuel supply here, which limits the aircraft that can travel to Tinian and return. There have been discussions for a fuel farm at one point but it is currently on hold. It would be dependent on direct charter flights from Asia or the military. A fuel farm would help with military/civilian co-use and could be a factor for Divert. The military needs one on Tinian anyway. Is the military open to a joint fuel farm and helping with the Air Rescue and Firefighting?
- Tinian Airport High Speed Taxiway B has no funding. We hope funds will free up since the Saipan Airport has completed its renovation. It was initially funded through local Capital Improvement Plan funds and started construction in 2002-2003. The first contractor defaulted, so the bonding company hired another company to complete it, which meant that there wasn't enough money to complete it. Having this would provide faster access to Runway A and save fuel. It would also facilitate co-use with the military by reducing the military impact on commuters, who have to wait when the military uses the airport because the military planes block the runway. It would be great if Red Horse (Rapid Expeditionary Deployable Heavy Operational Repair Squadron Engineers) built it.
- Tinian Airport Tinian Security Access System is on hold because the Transportation Safety Administration is not active on Tinian. We currently have only lock and key security. There is no funding and it's low priority. If international flights to Tinian started, then the Transportation Safety Administration would have to get active.
- Tinian Airport Perimeter Security Fence Replacement needs to happen. Currently, the fence is 6 feet (7 feet counting the barbed wire) and it doesn't meet Federal Aviation Administration requirements. The requirement is now 9 feet plus 1 foot of barbwire. The current fence was built under older specifications. The Federal Aviation Administration requires the fence to be re-done but there is no funding. If it is not replaced by a certain deadline, the Tinian airport will lose its certification and have to shut down. Likely, it will be replaced last minute once it becomes clear the airport will have to shut down otherwise.
- Tinian Airport West Terminal has been completed, but it is delayed because of deficiencies. Departure terminal was constructed in 2005. It needs Americans with Disabilities-compliant and structural upgrades and a quarantine area. A bid was put out to correct the deficiencies.
- Tinian Airport Instrument Landing System Improvements are on hold due to future maintenance costs that are not funded yet. It is not known when funding will come through for that.

11. What are some of the Commonwealth Ports Authority concerns with increased military training on Tinian?

The biggest concern of the Commonwealth of the Northern Mariana Islands Joint Military Training (CJMT) is the proposed restrictions on airspace. The main concern is flying between Tinian and Saipan. Currently, it is a seven-minute flight time. When the range is hot, it could be a 20- to 30-minute flight time. One cannot fly single-engine aircraft more than two miles out into the ocean per Federal Aviation Administration regulations. This would impact the ships as well in terms of fuel and travel time.

Scheduled flights would likely be reduced because the airlines would have to use larger planes that consume more fuel, so they would wait until there are enough passengers to justify the flight. For our purposes, single-engine planes use less fuel and are more efficient. The cost could double, but income won't increase. Two airlines would not be able to survive and would probably consolidate into one airline. There will be fewer flights but more expensive, so import costs will go up. The impact might be less on tourism, especially if there are direct charter flights, and more on local Saipan and Tinian people.

We also experienced how loud the military is during the training exercises like Forager Fury II. They fly in the F-18s during the early morning and the noise impact is big. Now they want to shoot 50 millimeter howitzer and 155 millimeter guns. If you go to North Field now you can see how quiet it is; you can hear sound in Tinian and the southern end of Saipan. The military used dynamite to knock down some trees and we could hear that. Dynamite is nothing compared to that size of artillery. You can't compare our situation to the mainland because the mainland has too much ambient noise. This affects the community more than the airport, but the airport gets impacted because people get tired of the noise and call the airport to complain.

The concentration of the CJMT will be up in North Field. Most flights coming in from Saipan use North Field direction for visual flying. There is a risk that the hot ranges could close the Saipan Airport to international flights because the 7-mile approach is very close to North Field. The military is working with Federal Aviation Administration and CNMI on that issue.

The military blocks civilian use of the Tinian airport when it doesn't coordinate properly. Tinian is a civilian airport and the military has to accommodate civilian flights. Commonwealth Ports Authority gets tax dollars so the civilian comes first. If commercial activity is restricted, then it can limit eligibility for Commonwealth Ports Authority funding. Forager Fury II coordinated closely with Commonwealth Ports Authority Tinian to avoid commuter impacts, but the first time for the training was a total mess and military came unannounced and entered the safety area. Now, when military comes, we do a briefing and make sure they are in compliance. There is a need for consistent standard operating procedures for all the military departure flights from airports coming to Tinian. We need someone from the Marines who can sign documents like how the Air Force has it set up. The Marines have to send their document for signature to Japan and Hawaii; they need a coordinator in the Marianas who can take care of everything.

## 5. Open Topic

Commonwealth Ports Authority Tinian Airport and the Department of Public Safety work together closely. If Department of Public Safety is lacking resources to combat a fire, we send out our truck. That's the small island way. We also have our tri-annual training exercise that takes place here.

There is talk about restarting ferry service between Saipan and Tinian. This would affect scheduled flights because most passengers preferred to take the ferry. Dynasty had a ferry and people took it as part of the package deal to stay at the Dynasty. It was rarely used for cargo.

The majority goods transferred from Saipan to Tinian come by boat. Freedom Air runs the "cargo express" among Tinian, Saipan, and Rota. Mail comes by small plane.

## 6. Conclusion & Action Items

Additional Follow-up Information:

- a. How does the Federal Aviation Administration fund Capital Improvement Plan projects?
- b. How many annual passengers and how much cargo depart from Tinian airport and seaport to Saipan (and other destinations if available)?
- c. Please update the status on the following items:
  - a. Relocation of the Aircraft Rescue and Firefighting facility building, funding for it, and acquisition of a 1,500-gallon Aircraft Rescue and Firefighting vehicle;
  - b. Installation of a new water line and funding for it; and
  - c. Instrument Landing Improvements.

# **First Hawaiian Bank**

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**Agency Name:** First Hawaiian Bank

**Date:** February 3, 2014, at the First Hawaiian Bank, Saipan; 9:00 a.m. to 10:00 a.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Juan Lizama	First Hawaiian Bank	VP/Saipan Branch	jlizama@fhb.com	670-235-3090
Vickie Izuka	First Hawaiian Bank	Assistant VP	vizuka@fhb.com	670-236-8923
Elisse Takara	Naval Facilities Engineering Command Pacific	NEPA Planner	Eliss.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Can you describe how the CNMI economy has been trending lately? And what are some of the reasons for this?

Tourism is increasing. That impact has not filtered to local people (into broader economy). Overall economy is very weak.

2. Do you see current trends continuing?

Saipan is lacking hotel rooms, so increases in visitors may not be possible. Tourism cannot continue its upswing unless number of rooms increases.

3. What are some of the major variables that could change your outlook?

The opening of new hotel units has been very uncommon. Market is not responding well to high level of room demand.

Governor is pushing Palms Resort, formerly known as the Nikko Hotel, (300 rooms) to re-open but not sure how quickly that will happen.

Marpi project (proposed 500 room resort).

Coral Ocean Point is also doing some renovation.

4. How has the investment climate been?

Cost of operating business on Saipan (utilities costs) and lack of infrastructure (roads, hospitals, water) make doing business on Saipan unattractive.

Applications for financing lately have been mostly related to rental car businesses to buy vehicles.

Mostly Chinese companies are investing. Chinese owners are buying out Korean retail stores. Chinese, in general, are coming into Saipan market in a big way. However, Chinese do not get financing on Saipan (with notable exception of rental cars).

5. Have there been any economic or financial trends specific to Tinian that have been important lately?

Only know what is printed in the newspaper. The bank does not have a branch in Tinian. Bank does some online customers on Tinian. Proposed training is the big news for Tinian.

Interisland travel, for commerce purposes, is difficult because only air transportation is available.

6. Can you provide information on the Construction workforce/foreign construction workers.

Workforce has been mainly guest workers.

The bank does have construction companies as customers.

Bank has never heard of a manpower problem (i.e., never an inability to find workers). Usually labor for projects can be mobilized from Saipan workers.

If Marpi project (proposed 500 room resort), or other big project, then workers would be absorbed into that project, and additional foreign workers would be needed for other projects on-island.

Because they may be forced to leave at the end of the year, some foreign workers are already evaluating their options as to stay here or not.

If foreign workers forced home via regulation, then there would be major problem for CNMI. It would be chaotic for the economy.

Northern Marianas Trade Institute trains people to do construction work. Only has a small effect. Bank granted funds and banking services to Northern Marianas Trade Institute. Northern Marianas Trade Institute tried to build local labor pool to replace foreign workers but had problems with students; for instance, unemployed adults would not pay back loans for tuition and students were slow to pick up skills.

Food stamps keep people out of the workforce because if a worker gets a job then income increases and then the person does not qualify for food stamps anymore. For this reason people are sometimes reluctant to take jobs.



7. Has there been progress in efforts to relax rules/laws restricting property ownership by those not of CNMI heritage?

Older people are reluctant to change article 12. CNMI banks are limited in mortgage financing because of Article 12. Fanny and Freddy don't touch CNMI because of Article 12. If a bank holds a foreclosure for 10 years, then the bank needs to relinquish the mortgage to the government; this is a difficult situation for the bank.

Bank does lend on long leases (as collateral), after a check on the title.

Northern Marianas Housing Corporation (trustee for federal government) facilitates U.S. Department of Agriculture housing program to help low-income families to become homeowners, Northern Mariana Islands is under Hawaii office, money gets divvied out, program was stopped because process was slow and loans went unpaid.

Article 12 makes mortgages more expensive; title insurance premiums are significantly higher (2 to 3 times) due to past Article 12 claims.

Some single family homes have been bought (leased) by Russian tourists.

More activity in commercial real estate lately. There is an oversupply of commercial retail space. About 10-15 years ago a lot of retail space was built. Now space is empty.

Article 11, government homestead program - People who have not owned land before can apply for a homestead lot. Homesteaders must build a structure within 2 years of getting homestead lot. Bank cannot lend on homestead property. Lots of land was granted that was never built on.

8. Are you aware of any significant projects in the CNMI/Tinian that have recently been constructed, recently started construction, or are set to start construction?

Ask building permit office.

## **5. Open Topic**

Have not seen any activity related to Pagan. Lots of talk about doing things there but there has been no action. No loan applications for Pagan. Commonwealth Development Authority would have most insight.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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## **Fleming Restaurant and Tours**

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**Agency Name:** Fleming Restaurant and Tours

**Date:** January 30, 2014 at Fleming Restaurant; 1:15 p.m. to 2:15 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Deborah Fleming	Fleming Hotel	Owner	tinianmf@pticom.com	670-433-3232
Meagan Ostrem	Marine Corps Forces, Pacific	NEPA Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	NEPA Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe your tour operations generally; do you operate exclusively on Tinian, what is a typical tour like, do you serve a particular kind of clientele?

The restaurant has been closed since August 2013. It was losing money because the utilities are too high and cost prohibitive. The restaurant is too big to air condition.

The hotel is still going (it has leaks during heavy rains – still patching it). There are 13 rooms.

We do tours; the next tour is Feb. 4 with about 90 people who are coming to the CNMI on a cruise ship coming from Europe via Hawaii to Saipan. The number of people coming over to Tinian keeps going down, maybe because they heard about the Star Marianas crash. It will maybe be down to 35 or even 10 people. Most of these people are war buffs who come to see the historic, natural, and cultural resources. We do windshield tours for military leaders, like taking the admirals and generals to look at sites such as the landfill. Hopefully, the landfill will be in the military lease area.

I have a farm east of Dynasty. The farm was built in the 1950s inadvertently right over the aquifer lens, but I learned how to protect it. Aquifer should be declared a sole-source aquifer to protect it. The Legislature would have to do this. I've been advocating this since the 1980s. I raise pigs and other animals for local foods and have an orchard for ornamental plants. I built one of the first Natural Resources Conservation Service projects to build a piggery with

rain water collection. The casino buys my ornamental trees and I have sold some palms to my cousin who owns a landscaping company in Saipan. I sell it cheap by making them come and dig it up.

2. How much of your business is federal (Department of Defense, other federal agencies)?

Pretty much federal employees are my only clientele now.

3. How would you characterize the strength of tourism in recent years?

We get a boat maybe twice a year. We used to do tours every day with day tours coming in from Saipan. Before Star Marianas, other airline only did certain flights and tourists had to wait, which soured them on coming. The Star Marianas crash has caused tourism numbers to dwindle.

We used to get 10-15 Japanese and Korean tourists a day, but that has dwindled. Those tourists wanted to see the WWII sites, especially the atomic bomb pits and suicide cliffs. There is an annual group that comes here for the past 35 years – the Marianas Repatriation group. One couple comes here every year for fishing baby amber jacks.

4. What are the major reasons visitors come to Tinian?

The tour season is pretty much March because as part of an Iwo Jima tour; the June anniversary; and then August. Hiroshima and Nagasaki send their students over here as student exchange.

Tourists come for the atomic bomb anniversary on August 6 and 9. In March, we have veterans coming in because that's the only time when Iwo Jima is open for one day. There is only one Japanese tour company authorized to book for Iwo Jima. A lot of people wait for years to go to Iwo Jima – it's very limited. You get one day on land from 6 am and have to leave by 5 pm. I'm honored to meet a lot of these veterans who come here for culture and hear their stories.

This year is the 70th anniversary of the end of the War in the Pacific. There will be a celebration June 5-9. On the big 5-year increment anniversaries we bring in big speakers.

Star Marianas and Dynasty are doing pre-packaged tours out of China. Those are pre-packaged, so there is no opportunity for Fleming Tours. The campaign in China is for the casino and fun and sun. The package includes a windshield tour. The tourists seldom get out of the bus except at major sites, and then they go to the beach and casino. Sometimes I don't want to cater to them because they're too high maintenance. Chinese tourists don't know how to line up or do things orderly.

## **5. Open Topic**

The Tinian Chamber of Commerce has fallen apart. No one wants to be the head of it. We last met six months ago. Some Chamber members thought this meeting was the same as the meetings that took place about a month ago so they didn't want to come.

Marianas Visitors Authority doesn't advertise Rota or Tinian. About 10 years ago, the Guam Visitors Bureau wanted to do a co-promotion of Guam and the CNMI aimed at Japanese retirees who would be traveling for 14 days. It didn't go through because the airlines didn't cooperate with setting up that tour group. Marianas Visitors Authority members are wheel spinners; they're not innovative. It's a numbers game at the board meetings based on lining up votes to get funds for what you want and the committees do all the money allocation. The Marianas Visitors Authority is made up of the presidents of Hyatt, etc., who use the Marianas Visitors Authority as a supplement to their own promotion. They're not organized to facilitate Tinian and Rota participation. Marianas Visitors Authority has nine board members with some reserved positions and four at-large at large members.

There is only one construction company on Tinian and it is really busy now. It is Power International Builders, run by Don Power. He also runs the quarry, certified cement, and because of necessity, sells tires, batteries, and hollow blocks. A lot of people here like to do self-construction because they can't get loan to get a house, so build their own gradually.

We call Commonwealth Ports Authority fees as "double taxation." Everything we import has to come in through Saipan, which taxes it, and then Tinian people have to pay more to have it shipped to Tinian.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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# **Freedom Air**

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**Agency Name:** Freedom Air

**Date:** February 3, 2014 at Freedom Air Ticketing and Reservation Center; 8:30 a.m. to 9:40 a.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Dennis Cruz	Freedom Air	Station Manager	freedomairspn@pticom.com	670-288-5882/5005
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the services Freedom Air provides. Do you provide both cargo and passenger services?

We have as many as 135 passengers a day on the Saipan-Tinian route. We use single-engine Cherokee planes that carry up to six passengers. There are 13 scheduled flights a day. If there are more passengers, then we do more flights. Lately passenger counts are down because of competition from Star Marianas. Our license allows both scheduled and charter flights. We also have a twin-engine plane that can carry 30 passengers scheduled for three trips a week, but we need parts for it, so it is Guam waiting for the parts. Aircraft parts are not cheap. We got a new engine overhauled at \$500,000. You can buy a second-hand engine for \$300,000, but only 200 to 500 flight hours before it has to be overhauled.

For cargo, we have a 330 Sherpa that can carry 6,000 pounds. We can fly from here to anywhere. We do a regular charter on Thursday and Sunday between Guam and Saipan. We also have a seven-seat Navajo twin-engine that flies Saipan-Rota-Guam and can carry 1,000 pounds. When the 30-seat plane is operational, we sometimes remove the seats and fill it with mail. Cargo can be lab specimens, hazmat, or anything someone needs to send.

2. About how much fuel is used for an interisland flight (between Tinian and Saipan)? How much of this is used at takeoff and to get to altitude?

For the Cherokee we use about 1.5 drums (a drum is 55 gallons) of fuel on a regular day. For busy days, we may use up 2 or 3 drums. A round trip flight from Tinian to Saipan is 4 to 5 gallons.

3. What has been the average price you have paid for a gallon of fuel lately?

The fuel our single-engine planes use is avgas (aviation gas). The twin-engine planes use jet fuel. We order an isotainer (6,000 gallons) of avgas at a cost of \$56,000. The fuel itself is \$30,000, but the transportation cost is another \$20,000. There are no bulk fuel transportation options because none of the major fuel companies bring in avgas anymore. Freedom Air used to buy drums from Mobil, but that stopped, so Freedom Air has to order it directly. Other users of avgas are Star Marianas and small charter flyers. Mobile only brings in jet fuel now.

Because we buy fuel directly, we are asking the government to try to do something about the custom fee on importing the fuel to help bring down cost.

4. Who is your customer base? Do you distinguish between CNMI resident and non-resident (tourist) customers? Do you know an approximate breakdown of local vs. visitors?

We have maybe a half and half tourist/local split. We are not part of the Dynasty package tour, so we get tourists who are here for other reasons. Locals are also customers, especially for medical referral. No local rate is offered. We do not have numbers for distinguishing tourist or local customers.

5. When military operations have occurred on Tinian, has there been any effect on your business?

During Forager Fury II, there were no changes to our operations. When the military does training involving the runway, the Commonwealth Ports Authority issues a notice to reroute. It's never a "no fly" notice. When we have to deviate the flight, we make sure we're in glide distance. It's not too much and there's no difference to fuel use. We don't have to change the flight times. This might change though if the proposed action is implemented.

6. What do you think the most important factors are that bring tourists to the CNMI? How do you see these factors trending into the future?

There is a travel company that brings tourists to Tinian and it has another company that takes people around the island. Some tourists just show up by taxi and do self-tour. People go for the beauty and history. Some tourists go for the casino, but they are mainly the Star Marianas passengers.

7. How does the number of flights and length of each flight figure into your business model?

Competition has lowered the number of flights we do. We reached out to Pacific Development, Inc. to set up arrangement to feed tourists to our airline. Sometimes we don't have business for two months. When Star Marianas had that crash, people came to us. Some high ranking people on Tinian are supporting Star Marianas. That's not fair to us. There are two airlines. The mayor should support having two airlines not help only one. There's too much politics.

8. How does the number of flights and length of each flight affect travelers, including tourists?

If there is more training on Tinian and we have to reroute, then that could affect our price. We have to talk to the military. If we keep having to reroute, then we will have to raise the price. We don't want to raise the price. People know the trip is the same, so if we tell the customer we raised the price because of the military's needs, then the public go to the politicians to talk to the military. Our license allows us to set prices. We don't offer a local discount, but we are considering it. We are still working out pricing with Pacific Development, Inc. Star Marianas charges the same price for tourists and local between 6 a.m. and 6 p.m. In the evening, they give a local discount.

We used to have a special rate for medical referrals, but the hospital started using a travel agency so we went back to the normal rate.

9. What changes to air transportation in the CNMI do you see occurring if direct flights from Asia to Tinian are initiated?

Direct flights from China to Tinian wouldn't affect us as much as it would affect Star Marianas. We are more reliant on locals and independent tourists, not Dynasty-driven Chinese tourism.

## **5. Open Topic**

A fuel farm on Tinian with avgas and JF4 (for helicopters) wouldn't affect our operation. Our twin-engines are JETA (similar to JP4) and would be able to fly there and refuel.

Larger planes cut across Tinian all the time just because they want to and can. It causes problems for us. Military airplanes are fast and worry our pilots.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. How many and what kind of planes are in the fleet?
- b. How many annual passengers do you carry? How many of the passengers are tourists versus local residents?

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## **Friends of Marpi**

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**Agency Name:** Friends of Marpi

**Date:** February 3, 2014 at Law Offices of O'Connor Berman Dotts & Banes; 10:50 a.m. to 12:00 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
David Banes	Friends of Marpi	Legal Counsel	davidgbanes@gmail.com	670-234-5684
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the Friends of Marpi, what are your goals and mission?

Friends of Marpi initially had a limited focus. It was created to oppose the MARPI power poles that the central government was installing. D. Banes' comments in this interview may not reflect the consensus of all Friends of Marpi members but he is answering to the best of his ability. D. Banes and Tina Sablan were the main founders. They met through working on brownfield clearance to put in homesteads in Marpi. (This is still an issue; Marpi continues to be suggested as a homestead location). The cemetery was supposedly the reason for the power poles, but they were visual blight. A variety of stakeholders, including hotels, the Marianas Visitors Authority, and non-profits backed getting rid of the power poles.

The government did a ham-fisted process. The cemetery was not even open yet. It tried to exploit a loophole about public notice stating that it had announced the plan in a footnote in a document on building a back-island road via Kalabera Cave.

FOM filed a temporary restraining order and won a preliminary injunction. The CNMI Supreme Court dismissed the government's appeal for jurisdiction. The Governor decided to negotiate with the result being that the Commonwealth Utilities Corporation took down the poles for free (the wire had already been vandalized) and the government would use alternative energy for the cemetery. The two remaining parts of lawsuit are for the government to have a land use plan (not just the existing zoning map) and have appropriate staff at the Historic Preservation Office (there's no archaeologist/historian).

The government has some plans for developing Marpi but won't say what or how. Friends of Marpi wants to preserve Marpi for its natural beauty. Marpi is part of the National Historic Landmark and the Saipan Upland Mitigation Bank is up there.

We're also interested in the broader CNMI, but we mainly came together for this issue. The Northern Marianas Nature Alliance is broader-based.

2. What sorts of projects/initiatives would you consider sustainable development for the CNMI?

Any kind of eco-tourist related development would be preferred. Marpi already has mountain bike trails. There's limited ATV (Marianas Trekking) that is being designed to reduce erosion. There's The Village Hotel on Pohnpei where all the rooms fit into the naturescape. Rota used to have something similar with Coconut Village.

3. Is eco-tourism in the CNMI something that you are interested in encouraging? What specific sites in the CNMI are currently being used for eco-tourism?

Yes, not really many places are doing eco-tourism besides just mentioned. We don't get that too much in the CNMI.

4. Do you know of any plans for new ecotourism developments? What stage of planning? Are you aware of any planning documents related to these developments?

People float development ideas but don't have a good idea because they work for the government and don't work in private sector; e.g., a bridge to Tinian. There is no clear thinking about sustaining the environment alongside tourism/development. Renewable energy proposals like the undersea cable, a wind farm, and a solar farm are not going anywhere. There was a proposal for a cable car on Mt. Tapochau. A Korean guy proposed a zip line in Gualo Rai but people opposed it and the landowner wanted too much money for private land.

Chinese tourists just want to take photos, stay at the beach for 10 minutes, then go somewhere else. Tan Holdings is doing a Chamorro village in Upper Navy Hill. They already have trails in the jungle.

I don't know anyone who is pushing ecotourism on Pagan. It's a very limited market. It would be hard to get American or Australian tourists. Maybe Russians would go.

It would be tough to sustain a real hotel on Pagan because of the transportation costs. It could be a good idea. No one talks about the other conservation islands as eco-tourism destinations. Making the Monument was promoted as bringing tourists but it didn't.

5. Would you characterize some types of development as things that change the character of the CNMI community (for better or worse)? Examples?

The social life here is shaped by the beach. On the weekend people go to beach for barbeque and spending time together. Sugar Dock beach is popular right now because you can drive onto it. There is discussion about building a Tinian ferry at Sugar Dock. A lot of people are opposed to that because it would interrupt public use of that beach. It's not clear where else

the ferry could go. The second most popular beach is PauPau. Its parking lot is close to the beach. The concern there is about a new hotel blocking beach access.

People don't really go to Tinian. There is diving off Tinian but the boats leave from Saipan. People on Saipan go to Tinian once a year, if that, unless you have relatives.

People on Saipan don't care about military use of Tinian; they do care about military use of Pagan. They don't want shelling or live ammo. It's virgin land.

People don't go to Pagan because it's expensive. I've never been there. People's concern is about existence value, not direct use value. People want to preserve it but also want to develop it. We have a hazy idea of preserving the Northern Islands and no one is doing anything about them.

## **5. Open Topic**

Putting any military training on Saipan would be problematic, especially Marpi. Rota would be a concern because it's such a pretty island. There's limited military on Rota now and no plans to do more at the moment.

Coral Ocean Point golf course redevelopment might be affected by noise from Divert and Commonwealth of the Northern Mariana Islands Joint Military Training (CJMT). Planes pass over all the time and never bother people. They may bother golfers, but no one complains about overhead plane traffic.

We need economic development. We need two economies. Guam has two: tourism and military. It would help CNMI to have second industry. We had the garment industry, which poured in money, but CNMI didn't spend it well. If the second economy is military, then it's the military.

What's important is having a second economy. We need to know what it's going to be and how invasive will it be.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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## **Hotel Association of the Northern Mariana Islands**

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**Agency Name:** Hotel Association of the Northern Mariana Islands

**Date:** February 3, 2014 at the Hyatt Regency Saipan; 12:00 p.m. to 1:00 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Nick Nishikawa	Hyatt Regency Saipan	General Manager	Nick.nishikawa@hyatt.com	670-323-5810
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Eliss.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe what your organization does; what are your goals and mission?

The Hotel Association supports the hotel industry in the CNMI and also does some fundraising. There are 12 hotels in the association. The Association has been together since 2012.

2. What are some of the things that drive tourism visits to the CNMI?

Visitors enjoy the beaches and shopping (shopping more), golf, marine sports such as snorkeling.

3. Visitor arrivals to the CNMI have been increasing recently; do you expect this trend to continue? Why?

Yes as long as the Chinese traffic continues to Saipan. China population is huge and Chinese travel agents are planning additional flights to Saipan.

There are not currently enough rooms to support continued increases in visitor arrivals but the Palms hotel (320 rooms) and Coral Ocean Point (90 rooms) will open soon. Maybe need a few hundred more rooms but capacity only a minor concern (primarily for the high season Chinese new year). If a new hotel chain that does its own marketing or a new international flight comes in, then a big increase in rooms could be justified.

4. News reports suggest that there will be a lot of investment in hotel properties in the coming years; is it expected that the CNMI will be able to accommodate more guests once these improvements have been made? Is additional hotel capacity needed?

Hyatt lease is set to expire in 2021; other hotel leases are set to expire between 2018-2020.

Public vote and Department of Public Lands decide on lease extensions. Association wants to extend leases with current management. Hotels want a long extension and then holding companies would be willing to invest in improvements and upgrading services. Investment not necessarily a mandatory requirement of lease extensions but would come with long lease extensions.

5. Is there any planned hotel development for Tinian?

There have been reports in the past but nothing has happened.

6. Labor

The Hyatt uses foreign contract workers now: 60% U.S. and 40% foreign, but moving towards local. If foreign workers have to leave, it would take time to train local workers. Local turnover is very high, hard to keep qualified applicants.

China/Russia visa waiver is important and beneficial for tourism and to have employees that speak the language of visitors.

Not enough construction workers for a large project. It has been difficult to get enough workers for even small projects. Not enough local skilled workers.

7. What have been your experiences with military training operations in the past? Are there noticeable changes in business activity?

Don't notice. Only see in the newspaper. Military come here for shopping (good business when ships in town). Military operations have never been a problem.

## **5. Open Topic**

Marianas Visitors Authority tracks visitor data.

Charters come in every three days from different places in China. The trend for this is expected to continue throughout the year.

Want to be well balanced in terms of visitor origin. If visa waiver is canceled and dependent on Chinese market, there would be problems.

No Hyatt visitors have ever asked to go to Pagan. Hotel association not marketing Pagan – there is no access, no place to stay.

## **6. Conclusion & Action Items**

No additional follow-up information requested.



**Mariana Resource Conservation and Development Council**

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**Agency Name:** Mariana Resource Conservation and Development Council

**Date:** January 31, 2014 at Hyatt Poolside; 2:12 p.m. to 3:15 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Laurie Peterka	Mariana Resource Conservation and Development Council	Acting Vice President	Laurie.peterka@gmail.com	670-483-7499
Rosemond Santos	Guardians of Gani	Member Volunteer	Rosemond.kkmp@gmail.com	670-483-7693
Cecilia Selepeo	Guardians of Gani; Friends of the Monument	Member Volunteer	Cil.kaipatselepeo@gmail.com	670-989-8097
Ignacios "Ike" Cabrera	Friends of the Monument	Chairman	Ivac1@pticom.com	670-256-5648
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the Development Council; what are your goals and mission?

Mariana Resource Conservation and Development Council's purpose is to promote conservation education, sustainable development, and smart use of natural resources to improve economic opportunities, community health, public awareness, and quality of life for the people of the Mariana Islands. The charter is mainly conservation and community development.

Friends of the Monument – (Laurie is secretary; Ike chairman); was set up before the CNMI monument was created, the goal is to help create a monument, promote tourism at the monument, and to educate people; original Friends of the Monument vision and what Bush declared are not the same thing; we are trying to establish a baseline and correct aspects of how the monument was established; trying to get most benefits for CNMI. The focus is now almost entirely on youth education.

Guardians of Gani (“gani” describes all islands north of Saipan) – Guardians of Gani is a local grassroots organization dedicated to safeguarding and reclaiming our birthright-access to our Northern Mariana Islands. Our mission is to perpetuate the practice of our native maritime heritage. Through stewardship, conservation and preservation, we aim to protect the enduring link between the well-being of our islands and the health of our people.

2. How would you characterize Pagan's cultural importance? Why is it important and to whom?

All of the islands are important. The military practiced on one of the islands in Hawaii and then they stopped because they caused a lot of problems. We have the same concern of that happening.

Pagan is home to our culture. Ike: my grandfather's ancestors are buried there, I have ancestral ties. We don't want the military to go to any of the islands. If we lose, and military is able to do its training then there will be contamination. The military should do a pre-test of each of the islands to find out what contamination is already there so there is a baseline to compare the military's impacts. It is especially for our grandchildren so that they are able to compare.

Cecilia: We only have 14 islands; I believe I might be last generation born there on Pagan. My father was first representative of Northern Islands and he was assassinated; he died trying to bring people up there; transportation to the northern islands is tough; that land will heal you inside out.

Rosemond: There is always sentiment to resettle, not only Pagan but, all of the islands. We all want to go back, we all have family who lived and died on these islands. There are still ancient villages untouched on the islands. The islands are part of our language and culture. You cannot separate people from their land and their water. Pagan, before the war, was a thriving economy - agriculture (farming and livestock) made for a good economy. The

volcano erupted and the Governor moved people against their will. “We would rather die by lava than a bomb”. To say that it is currently uninhabited and desolate is a lie.

Laurie: I’ve been to Pagan; it was a privilege to visit; not something to take lightly; it was an honor to visit; you just feel the power of the land when you’re there

Rosemond: Pagan is my house, who are you to come into my house and tell me what you’re going to do? She (meaning Pagan) still speaks to us; it is like a limb.

3. Do residents of the CNMI see Pagan as something with economic value that they all, in a way, own a part of?

Yes, it’s our islands and none of them are for sale; we own the island, not the military, and the military needs to understand that.

There is a lot of potential for ecotourism. Even as it is right now we go up to Pagan to get food, meat, jewelry. Many people have requested a business be opened that makes excursions up to the northern islands. Economic feasibility for much of the economic development plans on Pagan is around the corner, not 10-20 years off like people used to think, but sooner. Laurie looks for partners to try to create economic development. Talk is to designate Pagan as a “green island” with 90% green energy and to designate it like Niihau.

Department of Public Lands wants to do resettlement of homesteads on Pagan but need an evacuation plan, U.S. Geological Survey volcano monitoring is a step in that direction.

We have fisherman who go up there to fish for restaurants, there are also cows, pigs, and goats.

We want the monument to get scientists to go up there and do studies to identify what minerals and resources are up there; whatever is in the northern islands might also be on Pagan. National Oceanic and Atmospheric Administration National Marine Fisheries Service does studies up there, but they don’t share the results with us, we want students to go with them to learn and bring back that knowledge to us.

We want to establish a mini-laboratory/staging area on Pagan too because it’s a long trip from Saipan to the Northern Islands.

4. There have been reports about potential development on Pagan – pozzolan mining, ecotourism, and aquaculture – but no development has occurred, for what reason(s) have these developments not yet come to fruition?

U.S. policy is put on the CNMI like butter on bread but it doesn’t work well that way, it is not democratic. In asking: “why haven’t you got this done”, i.e., why no economic development yet?” it implies an attitude of “you should know better”, i.e., this should be done by now. But it’s an unfair expectation of a young democratic society like the CNMI. There is a lot of talent, knowledge, and technical skills in the mainland and CNMI tries to build this ability, but its younger generations go to the mainland for learning and don’t come back; we are

transitioning from an indigenous clan style to a democratic society, this doesn't happen in 20 years or even 40 years, the CNMI is still sifting this out.

It's not a reasonable expectation to think Northern Mariana Islands should be able to turn around development so quickly.

Prior to the eruption, Pagan was a thriving community, it had a school and people were working. Now at any given day there could be 6-50 people, there are people who live there for months at a time.

5. Are there any plans for sustainable economic development on Tinian? Are there any documents available on this topic?

From a conservation aspect, not in favor of pozzolan mining, but people do see it as a resource. Interested in alternative energy, like geothermal, the volcano itself is a resource, volcano tourism is huge. Herman Cabrera is looking to do that Pagan tour.

Agriculture would be good, land is arable and fertile, just need to figure out sustainable use; Ike is doing closed-cycle farming.

If the governor declared tomorrow that Pagan is safe, the next day people will be there. The governor does not declare it safe because it's not able or ready to put in the infrastructure to protect health and safety.

Aspect of islands more important than others – some people like east side more, but west side is where the port and village will be. Agriculture will be on east side and fishing on west side, but people will fish on both sides. Pagan is the only island that we have left that's big enough to settle.

Expertise is needed to take the next steps and improvement of government; we need to find true leadership.

## **5. Open Topic**

Homesteading – about 50 families (about 500 people) were evacuated; people who were evacuated just want to go home, those people are not just on Saipan but also Guam and other places; many of those people have passed away; children want to go; it's not just Pagan, but it's former residents of all the islands.

Paganville – Located next to the hospital on Saipan; the neighborhood has become mixed, there are some Micronesians there, too; that's where evacuees were initially put.

Mariana Resource Conservation and Development Council wants to be involved in the assessments, especially social, cultural, historical studies. Genevieve Cabrera and Mike Fleming are experts.

In the 1990s, University of Guam did a soil study of Pagan, worked with Natural Resources Conservation Service to do it, not sure if the report came out.

People should have to vote on the use of Pagan and only CNMI Department of Commerce can vote.

There is a rumor that there was a jet fuel spill (millions of gallons?) on Tinian, but no one can find out anything about it.

Ike used to work with soil conservation service and Department of Environmental Quality.

Lack of trust due to lack of follow-through on requirements, promises, negotiated previously.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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# **Marianas Visitors Authority**

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**Amended by the Marianas Visitors Authority 3/21/14**

**Agency Name:**           **Marianas Visitors Authority**

**Date:**                   *February 3, 2014 at Marianas Visitors Authority Conference Room; 1:55 p.m.  
to 3:00 p.m.*

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Marian Aldan-Pierce	Marianas Visitors Authority	Chair, Marianas Visitors Authority Board of Directors President, DFS Saipan	Marian.aldan-pierce@dfs.com	670-236-2500
Perry Tenorio	Marianas Visitors Authority	Managing Director	ptenorio@mymarianas.com	670-664-3200/01
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe what your organization does; what are your goals and mission?

The Marianas Visitors Authority is the US Commonwealth of the Northern Mariana Islands State Tourism Office with the responsibility of promoting travel to the Northern Mariana

Islands of Saipan, Tinian, and Rota. Ninety-five percent of total visitors to the Northern Mariana Islands are from Japan, South Korea, Peoples Republic of China and the Russian Federation. Its efforts, however, are not limited to these four (4) source countries as the Marianas Visitors Authority seeks other visitor sources although at a smaller scale. At present, the Marianas Visitors Authority has in-country offices in Japan, South Korea, Peoples Republic of China, the Russian Federation and Taiwan. As tourism is the Northern Mariana Island's sole economic driver, the Northern Mariana Islands and Marianas Visitors Authority has invested much resources in developing working plans for guidance:

- Northern Mariana Islands Strategic Initiatives for 2006 – 2010
  - Northern Mariana Islands Tourism Master Plan for 2010 – 2016 (funded by the Office of Insular Affairs, US Department of Interior)
2. What are some of the things that drive tourism visits to the CNMI? Do visitors come to the CNMI to visit specific places/things, or are visitor numbers more dependent on other factors such as the location of the USD exchange rate, and overall economic conditions in Asia?

The Northern Mariana Islands has many selling points. Of most importance, however, are the following:

- No Seasonality – year-round beach resort
- Proximity – short flight time
- Time Difference – relatively the same time zone
- United States – nearest point in the U.S. to Asia
- Land and sea resources – untouched nature and amazing clarity of the sea offering multitudes of marine activities (voted #1 dive location in the world)
- Broad Appeal – appeals to all market segments

Under the Guam/CNMI Visa Waiver Program, allowable countries can enter without the Electronic System for Travel Authorization prerequisite as required under the U.S. Visa Waiver Program. Additionally, and through the U.S. Department of Homeland Security's parole authority, nationals of the Russian Federation and the People's Republic of China are permitted to enter the Northern Mariana Islands without a visa.

The travel industry is sensitive and fragile. Travel demand to the Northern Mariana Islands, like many, can be negatively impacted by regional or global events. In the more than 30-year history of the Northern Mariana Islands travel industry, events such as the Gulf War, Asian Economic Crisis, 911, Korea's economic downturn, and more recently the Tohoku Earthquake and Tsunami have negatively affected travel demand to the Northern Mariana Islands. These and the continued presence of pandemics such as the H1N1 (or a variation) or the Swine influenza are very concerning. As for the fluctuation of foreign exchange and being a dollar-based destination, we are very sensitive to the weakness in the Asian currency.

Below is the projected visitor arrival statistics from fiscal year 2004 to fiscal year 2014.

Fiscal Year	JAPAN		KOREA		CHINA		RUSSIA		OTHERS		TOTAL
	Arrivals	M/S	Arrivals	M/S	Arrivals	M/S	Arrivals	M/S	Arrivals	M/S	
2004	384,845	72%	69,480	13%	29,238	6%			48,021	9%	531,584
2005	376,263	71%	65,049	12%	32,441	6%			55,804	11%	529,557
2006	280,292	63%	80,764	18%	36,978	8%	1,571	0%	44,207	10%	443,812
2007	215,196	54%	98,403	25%	41,024	10%	3,043	1%	37,694	10%	395,360
2008	202,041	51%	116,710	29%	31,095	8%	6,178	2%	40,473	10%	396,497
2009	210,567	56%	92,995	25%	27,859	7%	6,801	2%	37,586	10%	375,808
2010	182,820	50%	108,079	29%	40,712	11%	4,329	1%	32,246	9%	368,186
2011	148,634	44%	106,483	31%	46,451	14%	5,092	2%	31,446	9%	338,106
2012	150,292	39%	127,197	33%	78,928	20%	5,611	1%	27,447	7%	389,475
2013	148,423	34%	135,458	31%	112,570	26%	11,002	3%	26,472	6%	433,925
2014 (P)	131,423	27%	177,285	37%	126,096	26%	17,392	4%	27,779	6%	479,975

P - Projected

When the price of fuel increases, it impacts travel and the cost of goods.

Regarding the North American market, the Marianas Visitors Authority is working with Pacific Asia Travel Association Micronesia in this regard. The U.S. mainland is a difficult market for us. To bring them here, we need to market multiple destinations in Micronesia.

Since the termination of Japan Airlines direct service to Saipan in 2005, Japanese arrivals have decrease by more than 30 percentage points. For the first time in the Northern Mariana Islands travel history, Japan is expected to lose its designation in fiscal year 2014 as the largest source of visitors to the Northern Mariana Islands. Japan will be replaced by South Korea with Peoples Republic of China only 2 percentage points behind.

The Marianas Visitors Authority is very concerned of this development and a task force is working to arrest this negative trend. The Northern Mariana Islands being a stagnant and old destination are the reasons cited for the decline. Efforts are in the works to encourage existing hotels to invest resources to upgrade their property and two new hotel developments are expected to be online in the next couple of years in Marpi and San Antonio. Additionally, more “optional” tours need to be created as part of the Northern Mariana Islands’s effort to re-attract Japanese tourists.

Besides domestic travel, there are only two carriers providing scheduled and direct air services to the Northern Mariana Islands – Delta Airlines from Japan and Asiana Airlines from South Korea. Other direct air services are on a charter basis.

Visitors from South Korean and Peoples Republic of China are increasing. Asiana Airlines remains committed to the destination by increasing its seats to the island. With Peoples Republic of China, the Northern Mariana Islands is receiving eight (8) times weekly charters from three major cities. Additional charters are expected in the coming months. A similar strategy exists from Far East Russia with two weekly charters. Although the total numbers are small, Russian tourists tend to stay longer and spend more than other tourists.

Prior to the federalization of the Northern Mariana Islands immigration, the Northern Mariana Islands visa waiver program allowed the Northern Mariana Islands to diversify its visitor mix. Following the takeover of its immigration in September 2011, the Northern

Mariana Islands successfully argued the economic importance of Peoples Republic of China and the Russian Federation to its economy. Although they were not included in the Guam/CNMI Visa Waiver Program, U.S. Department of Homeland Security Secretary exercised her parole authority to allow these two countries continued access (see above).

Below is the overview of the room situation in the Northern Mariana Islands. The Marianas Visitors Authority estimates that 200 visitors are needed to fill a single room for a one-year period.

	Online Rooms		Offline Rooms		New Development		Total	
	Rooms	Pax Needed	Rooms	Pax Needed	Rooms	Pax Needed	Rooms	Pax Needed
Saipan	2,873	574,600	609	121,800	1,000	200,000	4,482	896,400
Tinian	454	90,800	-	-	600	120,000	1,054	210,800
Rota	125	25,000	58	11,600	-	-	183	36,600
<b>Saturation</b>	<b>3,452</b>	<b>690,400</b>	<b>667</b>	<b>133,400</b>	<b>1,600</b>	<b>320,000</b>	<b>5,719</b>	<b>1,143,800</b>

3. What are the major tourist locations that visitors frequent? Do most or all CNMI tourists go to these places?

The Northern Mariana Islands is a leisure destination. Beyond the surf, sand and sea activities, tourists frequent many of the on-land tourist sites on Saipan, Tinian and Rota. As the majority of the hotel rooms are on Saipan, a large percentage of the visitors stay there. Because of a stable air service to Tinian, however, Tinian in itself is the primary destination or a day tour for some.

The Marianas Visitors Authority also promotes the Northern Mariana Islands for sports and culture. Events such as triathlon, cycling and running events can be found on all three islands as well as cultural events.

4. Do tourists come to the CNMI specifically to visit locations on Tinian that are not the casino?

Yes, the casino is an added attraction. The island has much to offer beyond the casino. Marianas Visitors Authority has never really separated out casino from other reasons why visitors should go to Tinian. Tinian is home to ancient Chamorro ruins, as well as significant WWII historical sites throughout the island. The North Field is home to the 'Little Boy' and 'Fat Man' atomic bomb pits.

5. What are major constraints to increasing the number of visitors to the CNMI? Is airport capacity sufficient? Are there enough hotel rooms?

We see the current tourism trend continuing to increase. As we are an island destination, our limiting factor would be air service (number of airplanes flights and support services at the airport) and the availability of hotel rooms. In fiscal year 2013, the Hotel Association of the Northern Mariana Island (note: member hotels account for 2,401 rooms only) reported an annual occupancy of 81.2%. Above is the chart on projected number of hotel rooms and pax needed. With increased demand, there is a need to add more room inventory to what is currently available. At the current rate, we are very close to full saturation.

The Palms Resort is currently offline but will open in summer 2015 and will be branded as a Sheraton. Department of Public Lands has issued Requests for Proposals to develop new hotels in Marpi and San Antonio. It is expected that these new hotels will be operational within two years. In Tinian, the Tinian Dynasty and Casino is expected to add 300 more rooms and another group is interested in construction a 5-star hotel with 300 rooms.

6. Is there any planned tourism related development on Tinian? What stage of planning?

Yes. See above paragraph.

7. If there were additional military training in the CNMI, might there be a change in visitors' perception of the CNMI? Could this lead to an increase or reduction (change) in tourism?

Yes, tourism could be affected in a negative way if live-fire ranges are operational on Tinian. Noise, No Access/Restricted Travel Areas and closed beaches cannot be envisioned as destination enhancements. On the island of Tinian, we are concerned that frequent or permanent military exercises will limit access to significant tourist sites in the northern part of the island as already explained by Commonwealth of the Northern Mariana Islands Joint Military Training (CJMT) Officials. Additionally, the Tinian Triathlon and Tour de Tinian (100-kilometer bike race) will be negatively affected if access to the Northern portion of the Island is restricted or not allowed.

Further, Japan is an important source of tourists for us – if the Japanese perceptions toward the military in Okinawa carry over to their perception of the CNMI, it could be a problem. Less tourists from Japan would mean less revenue generated from that most important market for the CNMI and is therefore a significant economic concern.

It is our understanding that live mortar, heavy artillery and helicopter support activities will be part of the training exercises. We are concerned that this may have an impact on the air space and the surrounding ocean -- possibly limiting or disrupting access to the island via air and sea. As the northern part of Tinian is just 3 miles from the southern part of Saipan, there is a concern that the noise could frighten visitors and residents and will destroy a prime attraction of the CNMI in general (i.e., a calm, peaceful and relaxing environment) on both islands. The impacts from the proposed activities will also therefore impact the island of Saipan. We are not certain what kind of impact this may have on commercial flights to the Saipan International Airport.

8. Does Marianas Visitors Authority have any plans for tourism to Pagan?

Marianas Visitors Authority does have a development plans for tourism for Pagan that are strategically based on using private investors as the engine to drive tourism development. Operators that would like to do eco-tourism related types of activity on Pagan have and continue to approach the Marianas Visitors Authority. Separately, and starting in September 2014, cruise ships will anchor and shuttle people between the ship and Pagan for day-trip nature excursions before sailing on to Saipan and Tinian. Pagan is and can be developed into a valuable and viable addition to our tourism product mix.

9. How does the issue of land alienation affect the tourism industry?

Articles 11 and 12 of the Constitution are about land alienation. There is a lot of fear around this issue because people don't understand it. Politicians aggravate the situation. Some of the hotels are on several tracks of private land. It will take 10 years to get approvals from all of the landowners. If the leases are not renewed, the hotels would be non-operational and the hotels will not reinvest in them. Hyatt and other major hotels' leases expire within 10 years. There is not enough time to invest in them and recoup the investment. Marianas Visitors Authority tried to get attorney general's opinion on the subject, but was not successful.

**5. Open Topic**

Marianas Visitors Authority has met with various teams on the proposed CJMT action. Make sure you are internally coordinating.

We are concerned about the proximity of live-fire training on Tinian to the tourist destinations and activities on Tinian and Saipan.

**6. Conclusion & Action Items**

Additional Follow-up Information:

- a. During the interview, a Pagan tourism plan was referenced. Can you provide a copy of that plan or additional information about it encourages private initiatives?



## **Northern Islands Mayor's Office**

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**Agency Name: Northern Islands Mayor's Office**

**Date:** *February 5, 2014 at Northern Islands Mayor's Office Conference Room; 2:30 p.m. to 3:30 p.m.*

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Diego Kaipat	Northern Islands Municipal Council	Council Member		
Herman Cabrera	American Institute of Architects	Architect	hbcabrera@gmail.com	
Wil Torres	Consultant			
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the Northern Islands Mayor's Office; what are your goals and mission?

Northern Islands Mayor's Office's focus is on repopulating the Northern Islands, specifically Pagan. Having the military take Pagan is too much. Four islands are already off-limits to people, one of which, Farallon de Medinilla, for military purposes.

**Background**

Established pursuant to Article VI, Section III, of the Commonwealth Constitution, the Northern Islands Mayor's Office administers government programs, public services, and appropriations provided by law, for the islands served by the Mayor and report quarterly to the governor, relating to these programs and services or appropriation.

We honor the public trust and inspire pride in our community to provide the best and quality services and programs to promote economic prosperity, safety, social welfare, and a clean and healthy environment in

the Northern Islands. We endeavor in the longstanding effort for Gani Islands residents to be returned to their islands and rebuilt sustainable communities. This calls for a more sound representation dedicated to honest and ethical actions in public service and treating everyone with high dignity and fairness including residents of Gani Islands.

Among the Gani Islands resettlement and redevelopment goals and objectives include:

1. **RESETTLEMENT OF THE NORTHERN ISLANDS** – The Northern Islands Mayor’s Office continues to focus on its continued mission to return the residents of the Northern Islands back to their respective islands. These include former and future residents. The office despite running into many detractors would continue to work diligently to get these folks situated on their respective islands and provide the necessary infrastructure to better their livelihood.
2. **TRANSPORTATION** - The Northern Islands Mayor’s Office continues to work with Commonwealth Ports Authority in seeking funding to at least level the airfield on Pagan Island so that it may be safe and more easily accessible for commercial airplanes. In addition, to request funding for more frequent trips to the Northern Islands by ocean going vessel. To continue working with owners of long liner vessels to implement a routing system to service the Northern Islands while conducting fishing activities in its surrounding waters. The Northern Islands Mayor’s Office is also working very closely with the Arctic Circle so that air transportation could be available to the Northern Islands.
3. **HOMESTEAD PROGRAM** - To continue working closely with the Department of Public Lands to swiftly implement the Northern Islands Homesteading Act of 2008, which is currently an existing law. To provide Northern Islands Mayor’s Office employees to assist on any anticipated field work that is going to be conducted by the Department of Public Lands with respect to the Homestead Program. In addition to the Homestead Program, to inquire on the status of claims submitted by Northern Islands Residents to the Department of Public Lands claiming lands in the Northern Islands under the Waiver Act Program. The Northern Islands Mayor’s Office has been in communication with the Department of Public Lands for the implementation of these programs.
4. **COMMERCIAL ACTIVITY** – To entice businesses to invest in the Northern Islands so that the people of the Northern Islands could be afforded job opportunities and be self sufficient.
5. **HEALTH AND EDUCATION** – To inquire with the Commonwealth Health Center for interested professionals to work in the Northern Islands to cater to the residents. This would also apply to the Public School System where teachers could be tapped to teach in the Northern Islands.

6. INFRASTRUCTURE – To further negotiate with the Department of Public Lands to designate a minimum of 5,000-10,000 square meters of public lands to be used as a multi-purpose center. The Northern Islands Mayor’s Office has written and met with the Department of Public Lands Secretary with respect to this request.
7. ADVERTISEMENT – The Northern Islands Mayor’s Office has been working closely with the Marianas Visitors Authority to include the Northern Islands as a tourist destination. This would allow the Northern Islands to be featured in Marianas Visitors Authority’s booklets and promotional advertisements. Indeed, the Northern Islands is now part of Marianas Visitors Authority’s 5-year tourism enhancement master plan.

Meanwhile, accomplishments by Northern Islands Mayor’s Office are not limited to the following:

- The Northern Islands Mayor’s Office as part of its contribution to the Community of Saipan had been assisting the different elementary schools with yard clean up and paintings of building. The most recent community project was the clean-up of the Tanapag Elementary School yard which was overly grown with weeds and bushes.
- The Northern Islands Mayor’s Office has been providing seasonal crops to the residents of Pagan and Alamagan to be planted as part of the Northern Islands Mayor’s Office’s project to have the residents be more self sustaining. These folks although a few in numbers had been cultivating and consuming their crops and not necessarily relying on the Northern Islands Mayor’s Office for food supplies.
- The Northern Islands Mayor’s Office also assisted the National Oceanic and Atmospheric Administration on retrieving the seismic machines that were installed on Pagan Island a few years back by extending their employees to locate and board the machines unto the ship.
- With the absence of the Emergency Management Office, Fish and Wildlife Office, and other government office in the Northern Islands, the Northern Islands Mayor’s Office has been the key communicator to the island of Saipan and Guam with respect to volcano activities, wild life issues, etc., in the Northern Islands. In doing so, the office continues to work in harmony with other government agencies such as the Department of Lands and Natural Resources, Department of Environmental Quality, and Coastal Resources Management that have some control of the resources in the Northern Islands so that the needed development and studies are completed on a timely manner.
- The Northern Islands Mayor’s Office hosted the Historical Northern Frontier Summit which brought together members of the business community, government, and the public in general. The summit was a way to disclose the potentials of the untapped resources in the Northern Islands. As

a result, businesses from near and far have been contacting the Northern Islands Mayor's Office for more detailed information on how to conduct business in the Northern Islands.

- Overall the Northern Islands Mayor's Office is still providing trips to the northern islands to service the islands and the people despite the hard economic times and the limited funding being afforded to the Office.

Northern Islands Mayor's Office looks forward to the following accomplishments:

- The Northern Islands Mayor's Office is still looking forward to the implementation of the Northern Island Homestead Act of 2008, with the cooperation and assistance of the Department of Public Lands. The Department of Public Lands is aware of this law and has provided its willingness to assist the Northern Islands Mayor's Office in its effort to afford the Northern islands residents the opportunity to avail to the said program.
- The Northern Islands Mayor's Office had requested the Department of Public Lands to designate at least 5,000-10,000 square meters of public lands on the islands of Alamagan, Agrigan and Pagan to the Northern Islands Mayor's Office for its Multi-Purpose center. It will continue to seek the Department of Public Land's cooperation and concurrence on said request.
- The Northern Islands Mayor's Office is looking at other areas that the Federal Government can offer to provide some form of assistance to aide in the development of the Northern islands and not merely rely on the Central Government. As part of this quest for funding the Northern Islands Mayor's Office has submitted two (2) grant proposals to the Marine Conservation Plan for a Cold Storage Facility and the Pagan Fishing Community totaling \$95,000.00. If funded the Northern Islands Mayor's Office would have a start of point in re-building the incentives of the northern islands community.
- To Northern Islands Mayor's Office is working diligently to bring up as many residents to the Northern islands so that it could meet the 1,000 population provided for in the CNMI Constitution to become a Senatorial District.
- The Northern Islands Mayor's Office is looking at working with the 18<sup>th</sup> Legislature and Senate to introduce laws that will allow the Mayor of the Northern Islands power to receive permit fees for fishing and hunting licenses in the Northern islands similar to the control the Tinian Mayor has on Goat island.

## 2. What was life like before the forced evacuation?

Villagers farmed the "back area" (where the latest volcano deposit is). People made copra that they sold to a Saipan-based company. Everyone practiced a subsistence lifestyle. There was a grade school (1-6), small dispensary, radio station, and airfield equipment shed. These were destroyed in an ash slide a few years after the eruption. After the eruption, the island changed because the feral animals left behind by the evacuees cleared away a lot of the plants.

See Attached Articles on Life in Gani Islands of Agrihan and Alamagan, as they all have things in common as far as life in the Northern Islands goes.

3. What are the economic development plans that you are involved in? (Can you share those plans?)

H. Cabrera is hosting an eco-tourism visit. He has a permit to clean and landscape around the landing strip area on Pagan.

There are no homesteads currently planned on the southern end. The vegetation is too dense and the terrain too steep. After World War II, there was a village on the southwestern edge of southern end.

See also the detailed descriptions in the meeting notes at J's Restaurant on February 4, 2014.

4. There have been reports about potential development on Pagan (such as aquaculture, mining, and ecotourism); what is the current status of these types of economic development projects?

H. Cabrera did a pozzolan study in 2012. He was hired to look at the quality and valuation of the pozzolan as well as general environmental condition. His is the latest study. The report is confidential for trade information. H. Cabrera worked with a researcher from the University of Taipei and a mining company. The researcher also worked on the 2007 University of Taipei study for Department of Public Lands.

For the pozzolan mining permit, Sablan Rock Quarry only has a permit for Parcel A on the Northwest Slope. There are two other parcels that Department of Public Lands could issue to other companies. There is a road around the slope from the harbor to Parcel A. To be clear, it's not truly "mining." It's more like removing the top layer, or a removal of surface material. Pozzolan has a lot of uses besides an additive to concrete. This pozzolan has low sulfur content and low carbon emissions for extraction so it is the highest quality pozzolan in the world.

Geothermal is a potential project for Pagan. The best place to put it would be in the northern part of the isthmus on the other side of the wall.

Pagan could have rare earth minerals that could be of value to military also. Some companies are looking into undersea mining or rare earths and even gold.

5. Can you characterize the Northern Islands community, what sorts of things would identify someone as a member of that community? What sorts of ideals or feelings are shared among Northern Islanders?

We need to be aggressive by engaging in self-help approaches to Gani Islands resettlement and redevelopment goals and objectives. The local government appears not to be for the people's interest, but its own, by discriminating against the residents of Gani Islands in the distribution of homesteads, for instance. Rota, Tinian and Saipan residents have received their homestead properties in fee while Gani residents continue to wait. But, for how much longer before a class action lawsuit is instituted?

Gani Islands our land, our ancestral homeland. We must preserve it for our future and for the future of our children who would one day return from college equipped with college degrees in biology, business, environment, and want to make a future in the CNMI, including the Northern Islands

6. Are there individuals on Pagan now that currently have freehold or homestead claims that are recognized by the CNMI government?

Department of Public Lands says that the reason it has been reluctant to issue grants is because of the uncertainty surrounding the military proposal. The military proposal has unsettled a lot of plans that have been in the works. Our leaders should have asserted themselves much earlier. People can go to Pagan now but do so defying government order. At some point there could be a class-action lawsuit against the CNMI government for discriminatory practices against its people.

7. Are there any infrastructure improvements planned for Pagan? If so, what stage are these plans in? Are there any planning documents available?

There are alternative ways to put in infrastructure to promote homesteading without having the government come and do it for you. There is a proposal to put in local waste that can process itself.

There is a broken pier built by the Japanese that will be fixed. There are distinct plans to engage in redevelopment, such as HB Cabrera's eco-tourism conceptual rendering and others that are described in the First Frontier Summit Report published earlier this year and discussed at the J's Restaurant meeting

We can sustain eco-tourism by using indigenous materials in abundance in Pagan, for instance.

## 5. Open Topic

The military already has taken 2/3 of Tinian for live fire and other trainings and maneuvers and live fire bombardment from the air, water, and other undisclosed trainings over the entire island of Farallon de Medinilla, an island known for its fertile fishing ground. The military had previously only approached the Legislature about doing ground combat training without live fire. The environmental cost of military activity will be high. How will the military mitigate its impacts?

Pagan, as part of the Northern Islands, is what makes it purer than those islands on Rota, Tinian and Saipan. Pagan is a keystone island for the migration of marine species throughout the archipelago. Pagan has a natural upwelling, making its surrounding waters a treasure house for fish, corals, seaweed, etc. Allowing the military to contaminate Pagan and the surround water is a sure way to poison the water in the Northern Islands. For example, a study conducted around Guam waters found that the toxicity level in dolphins around Guam ingest higher than normal level of toxic materials those dolphins around Saipan, this attributed by increased military activity around Guam waters. There is a National Oceanic and Atmospheric Administration report on the condition of the ocean and climate change and



increased water level that would flood low-lying areas. Pagan is no exception, if the military is allowed to destroy and contaminate the island. Scientists presented a study of tagged species. They believe that Pagan would have even lower levels of toxicity. Meanwhile, a study is being conducted to determine the level of cancer toxins now in Pagan and in Farallon de Medinilla compared to those in Guam, Rota and Tinian.

## **6. Conclusion & Action Items**

It was requested by Northern Islands Mayor's Office as part of the socio-economic data gathering for a study to be conducted in Farallon de Medinilla on the physical destruction caused by live fire on the land and the surrounding reefs. Another study was requested for the waters and the fish to be tested for toxins around Farallon de Medinilla.

# Beautiful Pagan paradise



Category: Around the Islands  
Published on Friday, August 02, 2013 00:00  
By Jenny Santos - For Variety

1 Comment

WHEN I was growing up I always wondered what it was like 5,000 years before I was born.

My parents were raised on an island with vegetables, fruits of different sorts, local produce and wild animals. There were few worries and they had everything including food from the sea and birds, fruit bats not to mention giant coconut crabs.

I was 16 when I first went to Alamagan and it was an experience that I never could have imagined. A long and breath-taking boat trip from Saipan, passing three other islands before reaching, the island of Alamagan was worth every hour it took.

Along the way I saw dolphins riding the blue waves and surfacing alongside the boat as we sailed up to the Northern Islands.

We felt so relaxed that we just laid back and watched the night go by with shining bright stars and cool ocean breezes.

When we arrived at the island all I could see was a green island with nice rocks along the shore with waves pounding on them. I looked up and saw people from the village waiting for us to come ashore.

Our vessel anchored and my feet couldn't wait to get on the small boat that came to pick us up along with our cargo. This moment was something that is beyond imagining.

I thought to myself this is a beautiful memory for a summer vacation. When we finally touched down on Alamagan, the first thing we ate was dried meat with coconut juice combined with a second course meal of coconut crab.

Boy, was the lunch mouth-watering! It was only my first day on Alamagan and I wanted to do a lot of exploring. We went looking for betel-nut, leaves and fruit as part of our day's activity. This was just my first day on the island and I was going crazy because there was so much to do.

There was no modern equipment so we worked manually most of the time gathering firewood to cook. The guys would do the hunting for food and us ladies would stay back and clean the village, cook and wait for the hunters to return.

It was a natural way of living in which we co-existed with nature. For recreation, I went fishing or took a stroll in the jungle. These were fun times for me on Alamagan.

As I grew older, I witnessed the hardships of those from my neighboring islands of Pagan and Agrigan.

These people lived a long time on these islands without the luxuries of power, running water, or the other luxuries enjoyed here in the south from Saipan to Rota. It is a hard way of living but the residents didn't mind because it was the way they lived.

For light they would use solar panels donated by different folks who visit the islands or small generators purchased by the Northern Islands Mayor's Office.



They have to catch rainwater for drinking. Electricity is limited because of the lack of fuel on the island normally fuel is delivered by the NIMO on a quarterly basis. So the people were always relied on what nature had to offer. It's not a simple life but it is a life they enjoyed.

I visited Pagan in 2012 with my family and it was an amazing island.

The water was so beautiful and the black sandy beaches were just incredible. I had to constantly be on the look-out for my son because he couldn't keep himself away from the ocean.

Pagan looked so peaceful and all I could hear was the sound of the ocean breeze and the seabirds that were in abundance.

My husband and I wanted to take a walk just after sunset and were amazed by the beautiful ocean mist sparkling like diamonds as the waves hit the rocks and splash into the air. We kept on exploring because our stay there was limited and we tried to see all that we could.

My husband and I visited the place the residents called the slaughter house. We reached the slaughter house and my husband said to be careful not to insult the ancestors or they would run after me.

My son turned and said mommy look there's a big gun. I told him yes son it's a machine gun from World War II and he was amazed with what he saw. The last stop on our agenda was the Church. It is the church on Pagan that withstood the volcanic eruption and lava flow when all the residents' houses were burned to ashes. The church was lit up with candles and looked so beautiful considering that there are few lights on Pagan.

The next day we went to the other side of the bay where there were smooth rocks but very hot so I couldn't stand on them without my slippers. We loved it anyways despite the heat. My husband, son and I sat on a rock and to our surprise there were a group of dolphins very close to shore just swimming and having a good time. I said to myself you could never get this close to nature except in the Northern Islands.

That is just a glimpse of my experience in the Northern Islands and now I'm going to get into why I wrote this.

I understand that the Military has plans to take Pagan Island and turn it into a military warfare playground. I have nothing against the military folks but I have everything against live firing and bombing where Pagan is concerned.

Just picturing the total destruction that would cause when Pagan becomes a military bombing place brings tears to my eyes. It's just too beautiful to be destroyed and the experience I had may be unavailable to others if and when the military takes over Pagan. I'm looking at our sister island of Farallon de Mendinilla and I can't imagine more destruction of my islands.

I strongly believe that enough is enough and Pagan Island should be left for the people of the CNMI to enjoy and develop. I'm thinking of closure of our Northern Islands once Pagan is grabbed by the military.

We will probably not set foot on it anymore or even be able to fish around it. It would be a very sad story not only for the residents of Pagan but the entire CNMI because they would not know or understand the beauty of this island because they never set foot on it.

Now I ask these questions that may seem harsh but it's how I feel personally and would like to ask them of the military and all those who are pro military take-over of Pagan Island:

- 1) How would you like it if you were the one living on Pagan half of your life and I just come and say I am taking over your land without first consulting you? No I don't want a portion but I want your entire land!
- 2) Would you respect the plea of the majority of the residents of the Northern Islands including the entire CNMI for no military take-over of Pagan Island? Or would the military use every means possible to take the island and destroy it like most military training sites all over the world?
- 3) What is it really that the military wants from Pagan considering that it already has the entire island of Farallon de Mendinilla, two thirds of Tinian, and a portion of Tanapag? Is it really worth destroying these pristine and beautiful island all for security practices.

4) How do you plan to remove all your junk after you destroy the island and leave the pieces for the people of the CNMI to pick up after such as unexploded ordinance, contamination, toxins, and all the great things that the military practice brings with them? Why Pagan, why not New York, New Jersey or California?

The bottom line is that I want to speak up for my people that have been stamped on and left to fend for themselves because their own government has failed to help them.

The way of life and the values of Pagan would be lost forever if we don't fight to protect it from destruction even in the name of security and protection of our nation. So I say pack up Jack and leave town because the island of Pagan is not going to come easy. We shall stand and fight for the protection of our islands just as you are trying to protect your interests.

*The author is an Alamagan resident.*

- See more at: <http://www.mvariety.com/special-features/around-the-island/57908-beautiful-pagan-paradise#sthash.tyqv1BGc.MbxOtfh.dpuf>

## **A SNAPSHOT OF LIFE ON Agrihan**

*By Lynn A. Knight, June 1992*

The people of Agrihan were surprised to see our helicopter land on the grassy plateau above the striking black sand beach. Proudly roughing it out on their remote island home, the 19 residents returned only recently after being ordered to leave by Commonwealth of the Northern Marianas officials who said the island's volcano was in danger of erupting.

The highest point in the Marianas chain, the cloud-tipped volcano is 3,166 feet above sea level. While it contains one small bubbling sulfur pit, the wide caldera is also filled with giant tree ferns, attesting to the fact that this volcano has not erupted in decades.

We handed out small gifts to the few, delighted children. We noticed that the residents didn't seem to mind the swarms of pesky flies, which inhabit Agrihan. After pitching our tents on the beach for an overnight stay, Ino Saures, the highest-ranking citizen of the island invited us to his home for fresh tuba and stories.

"Out of respect for the government who told us to leave, we left," explained Saures, who said he was the official representative for the Northern Islands Mayor, "but I've lived here 48 years. I know when the volcano is active because of how the smoke looks and the earth quakes. Every time they take me off this island I come back."

Saures says life on Agrihan is safe and pleasant, with few worries. "Money goes too fast on other islands, and besides, my family is all here."

Indeed, all of Agrihan's residents are part of Saures' extended family. Originally of Carolinian descent, Saures and his wife have eight children: four boys and four girls. All of the children attended school on Agrihan until the seventh grade. Saures explains that if the island has six or more children of school age, the Commonwealth government will send a teacher to stay on the island until they reach the seventh grade. After that, it's on to high school in Saipan. Six of the Saures children have graduated high school, married and returned to Agrihan with their spouses.

Mrs. Concepcion Saures has been given permission by the Catholic Church to act as the official of Agrihan's small church. For baptisms, deaths and other important religious events, she opens the Bible and reads to her family.

The island of Agrihan has no power and no dock for boats. The men of the village drag their boat onto the beach after a successful morning of fishing. At one time the residents attempted to build a dock, but found the water too deep and the currents too strong.

We are told the fishing is easy here, although Agrihan has no protective reef. Just throw a hook in and you'll catch fish. Or throw a net. In deep water, you can also catch shrimp in a trap.

Hot and dirty from a full day of island-hopping, we were anxious to jump into the surf for a swim, but were immediately warned by residents: there are sharks in these waters. Several years ago, one fisherman had his arm nearly bitten off.

Since then, the villagers avoid swimming in the ocean, preferring an inland pond near the

village. However, when nearing the ocean's edge, one must throw a rock into the water as a ritual to ward off sharks.

Heading the warning, I found a small tide pool in the rocks off the beach and jumped in. A member of the Saures family was immediately assigned to make sure that sharks did not enter the pool and carry off one of their rare visitors to the island.

Fresh water for drinking and bathing is plentiful on Agrihan. The people consider their prized possession to be a deep water well that was built during the Japanese occupation of the island. With rich soil, the residents easily grow bananas, Chinese cabbage, green beans and other vegetables. Ripe mangos hang heavily from the trees. The men of the village use family dogs to help hunt wild pigs.

"The only problem is if typhoon comes," says Saures, who is trying to raise money through the Northern Islands Mayor's Office for a new typhoon shelter. "It wipes out everything."

During Typhoon Carmen in 1972, Saures says 12 Japanese fishing boats came to Agrihan seeking a safe harbor. During the storm, 9 of the boats and half of the crew were lost.

"I just stayed together with my family in my typhoon shelter. All of the windows and the doors broke. The typhoon cleaned everything out," said Saures.

After typhoons, help usually comes by a Commonwealth-sponsored ship bringing rice, boxed milk, coffee and other supplies. "We're very lucky because we have a radio. We just go up a coconut tree and hook up an antenna at the top and call Saipan," Saures explained. "One time a plane came overhead and dropped a letter, saying: 'Please, if you're alive, come out so we can see you!'"

In addition to the lack of building materials for a typhoon shelter, another issue troubling Saures is land ownership. Currently all of the land in the Northern Islands belongs to the CNMI government.

"I don't know when they're going to give the people land up here," says Saures. "The Marianas Public Land Corporation has been talking about a homestead program for a long time, but I know they have a lot of other things on their minds other than a handful of people up here on Agrihan."

The inability to lease land has been a deterrent for at least one potential developer who wanted to bring tourism to the island. According to Saures, few years ago, a Japanese businessman attempted to build a small hotel on Agrihan for tourists. After bringing a boatload of building materials to the island, he learned that anything he built would belong to government ownership with the land it sat on. He abandoned all plans and has not been heard from since.

Even though they can't own the land their tin and wood houses are built on, the residents of Agrihan enjoy quiet subsistence living and isolation from the dangers of big island hustle and bustle like they've experienced on Saipan and Guam.

"This island is very good, very safe," says Saures. "We don't have to worry about our children or about traffic. Here you don't have to lock your door. The only danger is if you're drunk on tuba and sleeping outside -- you might get stepped on by a pig!"

**Northern Marianas College Cooperative Research,  
Extension and Education Service 1**

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**Agency Name:** Northern Marianas College Cooperative Research, Extension and Education Service (NMC-CREES)

**Date:** February 6, 2014 at NMC-CREES Conference Room; 3:50 p.m. to 4:50 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Claus Bier	NMC-CREES	Outreach Coordinator	claus.bier@marianas.edu	670-285-1175
Arnold Route	NMC-CREES	Agricultural Extension Agent	arnold.route@marianas.edu	670-237-6846
Edward Lynch	Marine Corps Forces, Pacific	NEPA Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	NEPA Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe what the Northern Marianas College does. What are your goals and mission?

CREES stands for “cooperative, research, extension, education service.” We are community-based and we help farmers who come to us with a problem. If we see it as a danger (e.g., invasive species), then we do more research. There are so many invasive species on all three islands. We have a food and nutrition scientist. We also help develop value-added products like wine and vinegar from coconut (called tuba) and research how to do same from other plants and extend shelf life. CREES has a 5-year plan that is available on the website.

CREES works with the University of Guam and the University of Hawaii. We used to have an entomologist, an animal scientist, and a plant pathologist but those positions are vacant. We have one scientist on staff and one extension agent for plant protection. Teaching occurs mainly through brochures, books, videos and workshops. We have work study and finance scholarships for natural resource management students. CREES is federally funded.

CREES promotes aquaponics which is hydroponics using the feces of tilapia as fertilizer. Here on Saipan a restaurant is using it to grow lettuce. We also do aquaculture to raise and hatch rabbitfish. CREES does tilapia on Saipan and gives it to farmers on Tinian. CREES does research on medicinal plants and published a book of them.

2. Are there plans for aquaculture on Pagan?

Rosemond Santos and others would like to do aquaculture on Pagan. No one, though, has really thought out what to do with the island. There is a proposal for pozzolan and homesteads, but the CNMI is waiting for the military or private investors - the latter would be preferred - to install infrastructure. There is research into off-shore aquaculture for Pagan but nothing solid. The best person to contact on this issue is Mr. Mike Ogo ([michael.ogo@marianas.edu](mailto:michael.ogo@marianas.edu)). To the best of my knowledge, there are some investors looking into it.

Ocean-based aquaculture around Pagan is feasible because the water is deep and steep and clean. There is sufficient current to wash away the refuse. This is true for areas around Pagan and some areas on northern Tinian and Saipan. It will also need facilities on shore to process the fish and ship it directly to markets like Japan and Korea, either live on ice or filleted. If it is filleted, then it needs to be refrigerated. This kind of effort would be for high-value fish. It is unclear what kind of federal regulation is needed.

Resettlement and use for ecotourism.

3. To what degree do people practice subsistence living?

A lot of people subsistence farm. We encourage aquaponics. We have a system built using rain gutters that cost about \$100 to build and has a monthly operational cost of about \$2 for power plus maybe \$5 for miracle grow. We work with the big farmers, too. We are helping a client who is renovating a commercial space into aquaponics to sell produce to hotels.

The role of cattle is very important in Chamorro life. Everyone knows someone who can slaughter a cow. They use every part of the cow. Islanders usually grow pigs on Saipan because they are easier, but there is more money in cattle. The Micronesian Development Corp. herd was very big on Tinian. Saipan has a new pig slaughterhouse and is trying to increase the number of pigs. There is also shrimp farming on Saipan (4th largest producer in the U.S.).

We've actively supported Tinian livestock improvement. Tinian's main focus is having enough cattle to justify a slaughterhouse. The herd size should be about 2,500 cattle but people are willing to support a slaughterhouse even at a loss with subsidies in order to help generate beef. They are exploring a relationship with a Korean investor to get the slaughterhouse going. Their goal is market high-value beef to Asian markets.

On Tinian, people want to do agriculture and homesteading, but the military wants to do military exercise. For 50 years the land has been sitting there. The Tinian Mayor asked

CREES to help develop agriculture. The military's ambiguous plans cause ranchers to not invest because they are uncertain what will happen to the Military Lease Area.

Pagan has a lot of cows and goats. People on there will go and hunt it and bring the food back. There are maybe six people at a time on Pagan.

There is someone from Hawaii trying to develop a breadfruit industry for the CNMI. They intend to start on Saipan, and then spread to Tinian and Rota eventually. The first plants have been distributed and the project has received very positive feedback.

## 5. Open Topic

## 6. Conclusion & Action Items

Additional Follow-up Information:

- a. Can you provide a copy or online link to the "Agriculture Master Plan for Northern Islands"?

Aquaculture plan:

<http://crees.org/resources/files/CNMI%20Aqua%20Dev%20Plan%202011.pdf>

Our Plan of Work is available on the U.S. Department of Agriculture National Institute of Food and Agriculture site.

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**Northern Marianas College Cooperative Research,  
Extension and Education Service 2**

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## Original

Meeting with Michael Ogo  
May 19, 2014, NMC CREES  
9:00AM

Can you expand on aquaculture activities in the CNMI? During the February interview, NMC CREES stated that “there are eight tilapia farmers in the CNMI (five on Saipan, two on Rota, and one on Tinian.”

Mr. Ogo explained that the 2 farms on Rota can best be described as demonstration farms and is essentially a government sponsored activity. Two individuals, Mr. Barcinas and Nicolas Songsong, spent three months training at a facility in Waimanlo, Hawaii, funded by the Office of the Rota Mayor, NMC CREES, and the Office of Insular Affairs, Department of Interior.

The sole Tinian tilapia farm was owned by Mr. Dela Cruz who sold the fish on a retail basis at his gas station. Since his passing, it is unclear whether the farm is still active.

Of the five tilapia farms on Saipan, four are subsistence operations, the other is commercial. Owned by the Matsumoto Trust, the commercial farm produced 30,000 lbs of tilapia in 2013 and expects to increase the harvest by 5,000 lbs in 2014. Saipan Aquaculture, formerly owned by Tony Pellegrino, was purchased by Tan Holdings and produces shrimp for its own hotel operations and exports breeding stock to China, Indonesia and the Philippines for \$40 dollars each. The Saipan shrimp are designated pathogen-free, meeting global bio-security concerns. In Mr. Ogo’s assessment, there is room for growth.

NMC CREES initiated its aquaculture program in 1995, developed tilapia first, and shrimp after that in 2000, successfully supporting a commercial shrimp operation by 2004, investing four years from research to development.

CREES is now farming Rabbit fish or Manahak as it is known in the vernacular. This species was selected by stakeholders in 2012, based on its appeal to the local palate, its hardiness and ability to survive environmental fluctuations. A herbivore, the Rabbit fish can be grown to a length of 8 to 10 inches, a marketable size. The smaller fish, about 1 inch, can also be consumed, usually salted.

An off-shoot of tilapia farming is aquaculture and hydroponic vegetables, mostly lettuce and tomatoes.

NMC CREES has met its goal of developing hatchery expertise and local food production capacity to meet food security goals. CREES ultimate goal is to develop an off-shore cage. The ideal location for open sea farming is just outside the western lagoon, an area occupied by the pre-positioning ships. The alternate location, on the west side of Marpi is the area now contemplated for off-shore fishing cages.

Mr. Ogo provided a variety of informational material: an SPC funded report titled, "Commonwealth of the Northern Mariana Islands: Aquaculture Development Plan 2011-2015", and three brochures, one paid for by NOAA, called "What can restore self-reliance and revitalize our local economy?-Aquaculture in the Commonwealth of the Northern Mariana Islands" and the other published by the University of Hawaii titled "Learn Aquaponics Online". The last brochure was published by the Oceanic Institute, an affiliate of Hawai'i Pacific University, called "Shrimp Farming in the CNMI and Guam".



## Revised

Meeting with Michael Ogo  
May 19, 2014, NMC CREES  
9:00AM

Can you expand on aquaculture activities in the CNMI? During the February interview, NMC CREES stated that “there are eight tilapia farmers in the CNMI (five on Saipan, two on Rota, and one on Tinian.”

Mr. Ogo explained that the 2 farms on Rota could be best described as small-scale, commercial, Tilapia farms operated by Mr. Nicolas Songsong and Garnder Barcinas. A government-owned, aquaponics demonstration facility was constructed in 2013 to encourage the Rota Community to get into Tilapia and vegetable production using this system. Prior to the construction of this facility, five (5) individuals spent three months training at a facility in Waimanalo, Hawaii, in order to learn about aquaponics production in order to transfer knowledge and technology to the greater CNMI community. This project was funded by the Office of the Rota Mayor, NMC CREES, and the Office of Insular Affairs, Department of Interior.

The sole Tinian tilapia farm was owned by Mr. Jose P. San Nicolas who sold the fish on a retail basis at his gas station. Since his passing, it is unclear whether the farm is still active.

Of the five tilapia farms on Saipan, four are subsistence operations, the other is commercial. The commercial farm is owned and operated by Matsumoto Trust, which produced 30,000 lbs of tilapia in 2013 and expects to increase the harvest by 5,000 lbs in 2014. Saipan Aquaculture, formerly owned by Tony Pellegrino, was purchased by Tan Holdings and produces shrimp for its own hotel operations and exports breeding stock to China, Indonesia and the Philippines for \$40 dollars each. The Saipan shrimp are designated pathogen-free, meeting global bio-security concerns. In Mr. Ogo’s assessment, there is room for growth.

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CREES is now conducting research on Rabbitfish or Manahak as it is known in the vernacular. This specie was selected by stakeholders in 2012, based on its appeal to the local palate, its hardiness and ability to survive environmental fluctuations. A herbivore, the Rabbit fish can be grown to a length of 8 to 10 inches, a marketable size. The juvenile Rabbitfish, about 1 inch, can also be consumed, usually salted.

An off-shoot of tilapia farming is aquaculture and hydroponic vegetables, mostly lettuce and tomatoes.

NMC CREES has met its goal of developing hatchery expertise and local food production capacity to meet food security goals. CREES ultimate goal is to develop an off-shore cage. The ideal location for open sea farming is just outside the western lagoon, an area occupied by the pre-positioning ships. The alternate location, on the west side of Marpi is the area now contemplated for off-shore fishing cages.

Mr. Ogo provided a variety of informational material: an SPC funded report titled, "Commonwealth of the Northern Mariana Islands: Aquaculture Development Plan 2011-2015", and three brochures, one paid for by NOAA, called "What can restore self-reliance and revitalize our local economy?-Aquaculture in the Commonwealth of the Northern Mariana Islands" and the other published by the University of Hawaii titled "Learn Aquaponics Online". The last brochure was published by the Oceanic Institute, an affiliate of Hawai'i Pacific University, called "Shrimp Farming in the CNMI and Guam".

## **Northern Marianas College (Saipan)**

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**Agency Name:** Northern Marianas College (Saipan)

**Date:** February 3, 2014 at Northern Marianas College Saipan; 3:30 p.m. to 4:30 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Dr. Sharon Hart	Northern Marianas College	President	president@marianas.edu	
Tracy Guerro	Northern Marianas College	Chief Financial Officer	Tracy.guero@marianas.edu	237-6714
Bobbi Merfalen	Northern Marianas College	Dean of Academic Programs	Barbara.merfalen@marianas.edu	237-6706
Jackie Che	Northern Marianas College	Director of Office on Institutional Effectiveness	Jacqueline.che@marianas.edu	237-6834
Leo Pangelian	Northern Marianas College	Dean of Student Services	Leo.pangelian@marianas.edu	
Jonathan Liwag	Northern Marianas College	Director of Information Technology	Jonathan.liwag@marianas.edu	
Amanda Allen	Northern Marianas College	Director of Distance Education/ Accreditation Liaison Officer	Amanda.allen@marianas.edu	
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe what the Northern Marianas College does. What are your goals and mission?

A new mission statement was recently developed. Vision is that Northern Marianas College serves as engine for economic growth and development and social and economic vitality in CNMI. Northern Marianas College is a land grant institution.

Northern Marianas College manages the state archives for the CNMI through its library programs. Northern Marianas College runs the state General Educational Development program.

Northern Marianas College provides assistance to register online students in Tinian and Rota – students there can get up to 50% of coursework completed online. Students on Tinian or Rota can do 1st year and first semester of second year online and then have to move to Saipan, because classes have been stopped on Tinian and Rota.

2. How many students are enrolled?

1,200 students per semester, mostly full-time degree students. And about 20,000 non-degree students in a given year through a variety of programs (Cooperative Research, Extension and Education Service, workforce training programs, computer literacy, work values/ethic etc.). Expecting an increase in enrollment if the school is re-accredited.

About 20% of students are non-U.S. citizens. But many of these students are eligible for financial aid; these are mostly residents of Federated States of Micronesia.

3. How many faculty do you have?

31 full-time, 22 adjunct teachers teach courses for credit. There are many more that provide support by teaching non-credit courses.

4. Have there been any recent upgrades to programs, facilities, or technology? Are there any upgrades planned?

Mostly renovations as opposed to new construction. Video and telecom network has been upgraded and wireless connectivity is being improved. Access to Tinian and Rota through online education and integration of servers over the three islands has been upgraded.

Facilities management master plan has been completed but need funding to implement. About \$20 mil to implement. Looking at potential funding sources. Would be implemented over several phases; first phase is to have potable water.

5. What are the major areas of learning that students can participate in?

A handout was provided (attached) and the website has a full report.

6. What are the primary skill sets of recent graduates? Have these graduates remained in the CNMI or moved elsewhere?

Website has a report.

**5. Open Topic**

Northern Marianas College has been on accreditation sanction for 8 of the last 10 years and have not been able to offer new programs. The school is working towards reaffirmation.

3 primary funding sources:

- Tuition – covers operations except personnel
- Appropriation from CNMI government covers about 30% of total operations, mostly personnel
- Federal funding – about 2/3 is to students through student loans

Additional funding is needed for higher education.

Northern Marianas College does not award student loans but provides student financial aid through Title IV of the U.S. Department of Education. Students can apply for local scholarships (e.g., CNMI Scholarship). These scholarships do have a stipulation -- if the student does not return to the CNMI to work, the scholarship becomes a student loan, which must be repaid to the CNMI.

Pagan Island is a culturally sensitive issue. Many residents have bumper stickers etc. in support of Pagan “Save Pagan Island”. Would want to know the scope of action on Pagan. Pagan is one of the few large land masses that is potentially habitable; suggest looking at other options on islands that are not habitable.

Northern Marianas College has taken a lead role in identifying how to cope with a potential loss of foreign workers. But expectations of what the school can do are too high. The school is focusing on what is ongoing and not trying to change programs to specifically meet this need. Only know of one non-resident foreign worker on faculty.

Lots of residents don't want to work for low wages, this hampers local workforce. There is a sense of entitlement with residents. They don't want to do menial jobs because there is a stigma. Less of a stigma associated with welfare/food stamps. Residents are hardworking people though. In the past, residents would try to learn trades/occupations. There was a shift in 70's/ 80's when contract workers came in. The shift happened and a generation grew up privileged because they had foreign workers to do everything for them.

Number of nurses per class was capped at 10 moved up to 30 and this shows in graduation numbers. May need to reduce cap. Need to maintain a 10:1 student-faculty ratio for clinicals.

N Northern Marianas College MC Natural Resource Management students have taken part/will take part in research cruises (with National Oceanic and Atmospheric Administration) to Pagan. They will help with Marine Debris cleanup – plastic bags wash up on shore.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

# STUDENT SUCCESS

An important measure of student progress and the institution's effectiveness is the rate at which students complete a degree or certificate program. The College awarded 50% more degrees in 2013 as compared to 2012. Table 3 below provides a comparison of degrees and certificates awarded by program. The number of A.S. in Nursing degrees awarded in 2013 increased by 119% over the previous year. For the first time since the programs inception in 2010, the College graduated its first class of 9 students from the B.S. in Education, Rehabilitation & Human Services program. The College also graduated its first class of students with a B.S. Degree in Education: Early Childhood Concentration.

Table 3. NMC Degrees & Certificates Awarded: 2012 & 2013

## DEGREES

	<u>2012</u>	<u>2013</u>
A.A. Business	8	6
A.A. Liberal Arts	47	54
A.A.S. in Business Administration, Accounting Emphasis	6	6
A.A.S. in Business Administration, Business Management Emphasis	9	6
A.A.S. in Business Administration, Computer Application Emphasis	4	9
A.A.S. Criminal Justice	7	7
A.A.S. Hospitality Management	2	9
A.S. Natural Resources management	4	2
A.S. Nursing	16	34
B.S. in Education: Early Childhood Education Concentration	0	4
B.S. in Education: Elementary Education Concentration	14	14
B.S. in Education: Rehabilitation & Human Services Concentration	0	9
<b>Total</b>	<b>117</b>	<b>160</b>

## CERTIFICATES

	2012	2013
C.A. in Hospitality Management:	1	0

The following are the degree programs offered at NMC: Bachelor of Science in Education (BS)-concentration in Elementary Education, Early Childhood Education, Rehabilitation and Human Services, and Special Education; Associate of Arts (AA) degrees in Business and Liberal Arts; Associate in Science (AS) degrees in Nursing and Natural Resources Management (NRM); Association in Applied Science (AAS) Business Administration - Emphasis in Accounting, Business Management, and Computer Applications; Association in Applied Science (AAS) in Hospitality and Criminal Justice; Included also under the Academic Programs and Services (APS), is the Adult Basic Education (ABE) program that offers an Adult School (AS) Diploma and a General Educational Development (GED) Diploma.

*Degree and cert Program*



# STUDENT SUCCESS

to the ongoing success of students. The following services and activities provided to students in FY 2013 highlights the College's comprehensive effort to support ongoing student enrollment and success:

## *Academic Tutoring*

Academic tutorial services are offered to students through Counseling Programs & Services and International Student Services in all subjects, but with special emphasis on math and English. This service is particularly important in the context of retention and course completion as more than 80% of new, first-time freshmen place in one or more remedial course. Through tutors affiliated with these programs, the College provided 1,949 academic tutoring sessions to both college and pre-college students.

## *Educational Workshops*

All student support service programs are engaged in facilitating educational workshops to engage students with tools, strategies, and resources to assist each in navigating the academic, financial, and social demands of student life. 85 workshops were facilitated by program staff during this period.

## *Early Intervention*

The Early Intervention Program (EIP) is designed to aid instructors and academic advisors assist students who may need additional help to succeed in the course. EIP also assists in communicating options to students who are on academic probation and suspension with focus on resolving issues and retaining these students. The College addressed 311 student referrals from faculty during this period.

## *Student Activities & Leadership Development*

NMC's student government, the Associated Students of NMC, works collaboratively with college programs and staff to support registered student groups and activities to "encourage personal and civic responsibility, as well as intellectual, aesthetic, and personal development for all its students (WASC Accreditation Standard II.B.3.b)." These activities are vital to creating a collegial and vibrant college environment in which students develop interpersonal communication skills and a sense of community and self-worth. The College organized 64 student activities and leadership events during this period.

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**Northern Marianas College, Tinian**

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**Agency Name:** Northern Marianas College, Tinian

**Date:** January 28, 2014 at Northern Marianas College-Tinian Campus; 4:00 p.m. to 5:15 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Lawrence Duponcheel	Northern Marianas College-Cooperative Research, Extension and Education Service	Extension Agent	lawrenced@nmcnet.edu	670-287-2855
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe what the Northern Marianas College does. What are your goals and mission?

Northern Marianas College has revisited its mission. Currently it is waiting for reaffirmation of its accreditation. Northern Marianas College provides post-high school education, does capacity building, and improves people's standards of living. It is mainly on Saipan but has a presence on Tinian and Rota. The revised mission emphasizes that those two islands are part of its mission. Northern Marianas College is part of Western Interstate Commission for Higher Education, so individuals from certain islands outside the CNMI are eligible for in-state tuition.

A couple of years ago we went through accreditation. We are really a site, not a campus. We don't have a library, student center, etc.; features that should be present on a campus. The former President was terminated. Tinian and Rota academic programs were cut. Only just

now are we starting to have online courses for people on Tinian and Rota. This is a site for students on Tinian to do online classes. Many homes don't have home computers or home internet. Some houses don't even have phone lines.

The Tinian site is about 16 acres. About 8 acres are for research on fruit trees. The Tinian site only offers adult education, outreach, and some online courses. We have about 20 computers for students to use. Members of the public can also use them when no students are. Similarly, we use the campus for academic and community events.

The funding for Northern Marianas College is about \$3 million. Local funding is going to the Northern Marianas College administration. Funding is down from \$9 million. Funding for Cooperative Research, Extension and Education Service is about \$3 million. About half is research and half extension outreach. The Marianas Grazing Academy is funded by grant from U.S. Department of Agriculture through a team at University of Hawaii.

2. How many students are enrolled?

There are less than 10 students on Tinian enrolled in the online course. They are mainly Chamorro and Filipino residents. There are about 12-15 students in the sewing program, mainly Bangladeshi and Nepalese, who will graduate in March 2014. They show up over and over again for the different continuing education classes. Students from Tinian go over to Saipan for classes. Chamorro and Filipino residents are the main students in Cooperative Research, Extension and Education Service ranching programs. Cooperative Research, Extension and Education Service has no restrictions on who can take classes. I'm not sure if there are any visa/citizenship restrictions for the college.

3. How many faculty do you have?

The Tinian site has five people: L. Duponcheel, a livestock specialist, a food and nutrition expert, an administrative assistant, and a research assistant.

L. Duponcheel works full time as an extension agent, teacher, and coordinator for the Northern Marianas College. Sometimes he does investigations of livestock and vegetables for people to determine what might be affecting them or help them to improve their methods. He did project for youth remediation to give them a good experience of working with adults.

He also works with the Marianas Grazing Academy, out of University of Hawaii.

4. Have there been any recent upgrades to programs, facilities, or technology? Are there any upgrades planned?

The Tinian site installed the 20 new computers. Access to computers and reliable internet service are one of the major services Northern Marianas College provide. We have a polycom system and are trying to get a T1 line.

5. What are the major areas of learning that students can participate in?

Students can earn a two-year degree in natural resource management, general education, and nursing. We also have matriculation agreements with some other universities.

Cooperative Research, Extension and Education Service is separate from the online academic program. We have lots of different programs. We do agricultural education activities such as fruit tree research. Working with the Marianas Grazing Academy, we train ranchers about various issues such as artificial insemination and pastureland. Northern Marianas College-Cooperative Research, Extension and Education Service is also helping the municipality to get a slaughterhouse.

We do aquaculture here, mainly rabbit fish production.

There's also family and consumer sciences, which has an expanded food nutrition and safety program. It does a joint program with University of Hawaii called the Children's Healthy Living in the Pacific.

Cooperative Research, Extension and Education Service is more open access, people just show up, rather than being something someone enrolls in and progresses through a curriculum.

Food safety and nutrition is very important here; e.g., everyone gathers and uses boonie peppers, so we teach them how to handle them better. Kids have learned how to prepare the hot sauce as gifts and fundraisers. We also teach how to make ice cream, wine, and value-added processing for local beef. All these workshops are hands on.

The Tinian site used to do vocational/construction training. There used to be a 2x2 program for high school students to get some college credits but that doesn't happen anymore.

6. What are the primary skill sets of recent graduates? Have these graduates remained on Tinian or moved elsewhere?

Students who get an education leave Tinian. Most kids go off-island or join the military (35% right after high school and maybe another 10% sometime after that join). The biggest employers on the island are the Dynasty and the Mayor's office. We are trying to work with the Dynasty to get gaming-related skill development programs.

## **5. Open Topic**

Tinian has experienced a population reduction from 2000 to 2010. The people who left are mainly local people. Contract workers could not leave for the U.S. because of immigration law issues. If U.S. changes its law, then skilled labor will likely leave the CNMI. It's terribly difficult to find people who are available, interested, and trained to do construction-related work. Usually it is Filipinos, but they are mainly self-taught. One almost always imports the labor. The three biggest stores are all Chinese owned. Most of these Chinese started as farmers, saved their money, and bought stores here on Tinian and Saipan.

People don't like to engage the Environmental Impact Statement (EIS) process by reading and downloading the EIS. Tinian is an oral culture so people don't want to read and write.

They don't go to public hearings. People don't want to speak out, they want to respect their elders. Scoping hearings are intimidating because it's older people in formal contexts.

There is a perception that the military will do what it wants to do anyway, but people are starting to think that it's important to communicate what's important and what the impacts will be. People ask me to translate the EIS contents to the local context, to help people understand the document. The Tinian Cattlemen's Association formed after and in response to the Joint Guam Program Office EIS. At the scoping meeting, there was nothing on Tinian and then the Draft EIS dropped.

It's much more important this time (compared to Joint Guam Program Office EIS), to get the socioeconomic part right. The socioeconomic impact of the impending military buildup began 35 years ago. Post World War II, the people of Tinian were doing better than Saipan. They had a higher standard of living. In the 1950s and 60s, the Central Intelligence Agency was training Chinese nationalists in northern Saipan. Tinian supplied food to them and grew wealthy. Once the Covenant was signed and the Lease signed, people had to leave the area.

The news covering the proposed action is increasing people's awareness of it, but people may not have access to the EIS or respond to it. Northern Marianas College could offer its computers at the Tinian site to help people access and read the document. It would be good to make people more aware that their opinions were being documented and considered. There is the perception that the military only has a public hearing because it has to. At the meetings, people used to have to speak into microphones, which they don't do anymore. One-on-one meetings or smaller groups like coffee klatches would work. For many people here, English is a second language and it's difficult to get one's point across. It would be helpful to have folks willing to translate. More education on the EIS process would be good too.

The central government and Northern Marianas College-Saipan do not stay on top of the EIS. If they think it might not affect them, they won't pay attention to it. There is so much uncertainty. Since the Covenant and the military not building its base after getting the lease, people think nothing will happen. They think that the military is just probing to see what it could do and spend federal money.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Does farming occur on any lands in the Military Lease Back Area? If so, what kind of crops, how many farms and acres, and what areas of the Lease Back Area?



**Northern Marianas Humanities Council**

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**Agency Name:** Northern Marianas Humanities Council

**Date:** February 4, 2014 at the Northern Marianas Humanities Council Office;  
8:00 a.m. to 9:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Scott Russell	Northern Marianas Humanities Council	Executive Director	srussell@pticom.com	670-235-4785
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445

### **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your organization; what are your goals and mission?

Northern Marianas Humanities Council is a 501c3 organization whose mission is to foster awareness, understanding and appreciation of the humanities through support of educational programs that relate the humanities to the indigenous cultures and to the intellectual needs and interests of the people of the CNMI. It receives grants from the National Endowment for the Humanities. In addition to programs conducted by board and staff, the Council also awards matching grants to community groups and organizations to support grassroots humanities projects.

Its programs and educational initiatives focus on history, culture, indigenous languages, literacy, and issues relating to the CNMI's political relationship with the United States. Recently, the Council hosted a lecture that considered the social, cultural and economic implications arising from President Obama's new defense initiative referred to as America's "Pacific Pivot." The Council anticipates developing new programs to explore issues associated with the increased militarization of the islands, as this is an issue that is of great interest and concern to the people of the CNMI. We plan to involve a wide range of knowledgeable people to consider this important topic from a variety of viewpoints.

2. How would you characterize the CNMI community? What are common bonds that keep the community together?

We have a diverse community. About 30 years ago, it was a very homogenous indigenous community. Since the 1980s, tourism and the garment industry brought in a large number of foreign guest workers. Now there are really multiple communities in the CNMI: local and then a series of other communities that sometimes operate in their own spheres. Identity, ethnicity, and citizenship are important issues in the CNMI. The Council has explored these issues through a variety of student projects over the past decade.

3. Do you have concerns or hopes about the character of the Tinian community changing as a result of economic development on the island?

It is my observation that Tinian has generally been supportive of the military over the years. During the Covenant negotiations in the early 1970s, Tinian looked at the military as a much needed job creator as the island had little in the way of economic development in those days. Community sentiment may change as the military increases its presence on Tinian in the coming years.

4. Do fish caught locally or beef raised locally play a part in community events?

Ken Jones tried commercial cattle ranching there in the 60s and 70s. Most indigenous families have ranches and raise cattle. Raising cattle is an important traditional activity. Cattle are used for cultural obligations – weddings, funerals, payment in lieu of money (pay workers with beef). I think that some beef is also sold for cash. Fishing is also a very important subsistence activity for residents of Tinian. Fishing methods includes trolling, bottom fishing, net fishing, and spear fishing. Fish is highly prized as a food source by the indigenous community. There has been some concern that expanded military activities on Tinian will limit areas that local fishermen can utilize.

5. What is the role of Pagan in CNMI, and Chamorro, culture?

The Northern Islands have a different history from Saipan and the other southern islands. In ancient times, these islands were known collectively as “Gani.” In the 1600s, the Spanish moved everyone from the Northern Islands to Saipan. The Gani people were not happy on Saipan and subsequently they returned to their home islands. In 1698 the Spanish went back up and brought them to Guam. Following this forced resettlement, the Northern Islands remained depopulated until the Germans took over. Copra production was the main economic activity during the German period and small groups of Chamorros and Carolinians were sent to some of the Northern Islands to plant coconut trees, tend plantations and produce copra. During this time, there were no permanent populations or private property in the Northern Islands. The Germans treated these islands as an economic extension of Saipan.

During the Japanese period, the Northern Islands were much more intensively utilized. Japanese settlers, primarily Okinawan, were engaged in a variety of economic activities, including copra production and fishing. Carolinians and Chamorros were also brought to Pagan and some of the other Northern Islands to produce copra during the Japanese period.

Pagan was the most important of the northern islands during the Japanese period and had the largest population. It is the most hospitable of the Northern Islands, because of its protected anchorage and substantial areas of flat land that were suitable for cultivation. The Japanese established several villages on Pagan in the pre-war years.

During World War II, Pagan was defended by a Japanese garrison of around 5,000 troops and a military airfield. The U.S. did not invade the island but did bomb it on a regular basis until the end of the war. After Japan surrendered, Pagan's Japanese and indigenous residents were taken to Saipan by U.S. military forces.

The island remained uninhabited until 1948 when Juan M. Ada established copra operations on several of the northern islands, including Pagan. Many of the people brought in by Ada and their descendants remained on Pagan until they were evacuated following the volcanic eruption in 1981. Prior to the eruption, people on Pagan lived a traditional subsistence lifestyle. After the 1950s, copra production was no longer an important economic activity. By then, Northern Island residents secured needed supplies and cash by selling or bartering coconut crabs, fruit bats, livestock and betel nuts on Saipan. Occasionally, they required assistance from Saipan especially in cases of medical emergencies and after typhoons. Supplies had to be brought in from Saipan by boat. Some residents received support from relatives living on Saipan. In the 1960s and early 70s, Peace Corps Volunteers were assigned to some of the Northern Islands, including Pagan. They served mostly as teachers and health workers.

I understand that there are some people currently residing on Agrihan and on Pagan; the other Northern Islands, I believe, are unpopulated.

If there was a market for the pozzolan, ash mining might be a good economic possibility if it could be done without damaging the island. Eco-tourism would also be great. The CNMI should value the Northern Islands as pristine resources. At some point, people will be willing to pay a lot of money to go where they can experience unspoiled natural beauty. There is some type of cruise to Pagan in the works, but I'm not sure of the details. Pagan and the other Northern Islands have become important cultural resources to the indigenous residents of the CNMI particularly in the light of modern development and Westernization.

## **5. Open Topic**

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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## **Northern Marianas Judiciary**

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**Agency Name:** Northern Marianas Judiciary

**Date:** February 7, 2014 at Judge Wiseman's Office; 10:20 a.m. to 11:30 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
David Wiseman	Judiciary	Judge	david@pticom.com	670-236-9752
Kenneth Govendo	Judiciary	Judge		
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the general functions of the Judiciary, what are your goals and mission?

Judge Wiseman and Judge Govendo are trial court judges of the Commonwealth Superior Court. There are five trial court judges and three Supreme Court Justices that are in the commonwealth supreme court. There is no intermediate court. The CNMI is no longer supervised by the 9th Circuit.

The Judiciary was initially set up by statute at the inception of the Commonwealth and later became a constitutional branch of government. Before the CNMI was formed, it was a district of the Trust Territory which had a trust territory high court and subsidiary courts in each district. The Commonwealth Judiciary began with limited jurisdiction and anything beyond its limit would go to an appellate division of the United States District Court, a unique entity and any appeal from there would go to the 9th Circuit of Appeals. This relation and procedure ended when the CNMI Supreme Court was established in 1989.

The Superior Court is a court of general jurisdiction. Each Judge handles an equal share of civil and criminal cases. In addition each Judge handles a specialized court calendar. For

example, Judge Govendo hears the family court calendar and Judge Wiseman handles probate and administrative appeals calendars.

The CNMI is bound to the U.S. Constitution but has unique features. The CNMI has managed its own immigration up until federalization and was exempt from federal minimum wage laws, as well as some banking, labor, and manufacturing regulations.

Saipan, Tinian and Rota each have courthouses. Judge Wiseman goes to Tinian on the second Friday of each month for the criminal calendar. Another judge goes over once a month for civil cases. Usually the public defender and Attorney General have to go to Tinian as well. If there are only a few cases, for budgetary reasons, telephonic conference calls will cover Tinian and Rota issues. We are trying to get the conference call equipment upgraded to have a video monitor.

The Judiciary is not a policy maker. The court, through its judges and justices, decides cases and make rulings upon the applicable law on the cases that come before it.

The Judiciary is funded by the Legislature. It is understaffed and lacks equipment. Last year the budget was about \$4 million. The Judiciary used to have 75 employees but less now, maybe two-thirds of that, with a minimum staff of two each for on the islands Rota and Tinian. The Probation Office comes under our budget; it also handles security in the court. The inadequate budget has prevented employees from getting raises for an extensive period of time.

2. Given the interactions you have with the public, what would you consider some of the larger social problems in the CNMI? What about Tinian in particular?

Some of the larger social problems in the CNMI are family/domestic violence and drugs. The CNMI is a close knit community but there are numerous social circles and families that don't mesh with each other. The Judiciary sees all the real community issues when they come to court. We try to give access to the courts as soon as possible.

The Family Court just instituted mediation. We have trained mediators who help settle problems. We have a Separating Parents Program that started six years ago for married couples or cohabitating couples who are separating. It teaches them about the effects of domestic violence on children. We really need a batterer's intervention program but we don't have money for a psychologist trained in that field. We've looked for grants but can't find any.

The drug crackdown on marijuana caused people to shift to other drugs. Ice has become more prevalent, and begets money issues. It drives burglary and family strife. Family members take lunch money from kids to purchase ice. As a society, we are on our second generation of people hooked on this stuff. Before ice, the main two drugs were marijuana and alcohol, and alcohol used to cause all the problems (drunk driving, domestic violence). Alcohol though is still a main factor in crime here. Not sure where the ice is coming from, but it's likely some combination of domestic production and smuggling. Crystal meth has been used since World War II by the Japanese to fuel kamikaze fighters. We are trying to establish a Drug Court.

Judge Wiseman along with other staff members have taken training for this purpose and are seeking a possible grant to help establish the Drug Court by helping to fund additional staff.

3. How do you see military activities intersecting with some of these social problems?

From the Court's perspective, a woman who is afraid to go home at night, due to domestic problems, has no opinion about artillery or bombing on Pagan. Women in distress do not think about this. You can apply that to almost everything that goes on in the Superior Court. When people are under that kind of stress, they can't think 25 years in advance; they can't even think a week in advance. They are focused on the problem.

Saipan is a desirable place to accommodate the Navy's Morale, Welfare and Recreation program. The military prefers Saipan to other locations because the people are friendly and island has activities to meet soldiers' recreational needs. Saipan does not have much of an issue with troops committing crimes. The Saipan Chamber of Commerce Military Affairs Committee tracks the comings and goings of troops and merchant marines. Judge Wiseman has records of 153 Navy warships that have visited Saipan since 1997; the ships had more than 54,000 officers and crew that visited Saipan.

The people of the CNMI are very pro-military, many resident serve in the military.

Tinian gave up two-thirds of its land to a military lease. There was hope that there would be a facility that would generate economic activity, but that never happened and the lease restricted other development from taking place. To this day the military does not have a permanent facility on the island.

For Pagan, during the volcano eruption evacuation about 100 people were moved to Saipan. The Paganites are against the military using Pagan, but Pagan is known in name only to 99.99% of the population. The economy would have to be flush to support activity there. It's a logistical nightmare to maintain people up there. Homesteading makes it difficult for Department of Public Lands to lease Pagan to the military.

When the subject of pozzolan was brought up with Judge Wiseman, he could not discuss it due to pending litigation.

4. How do you see military activities intersecting with the Judiciary?

The Judiciary sees the decision on military activity as a policy choice of the administration.

Family court has been dealing with veteran's issues and Post Traumatic Stress Disorder. We have a lot of people who have served in the military and we'll increasingly see the results of Post Traumatic Stress Disorder in our court. In the military, it's always "we" and there's someone around. When you're transitioning back to civilian life, it's just "I" and there's no one around anymore.

CNMI has the national program Troops to Teachers to help transition veterans into civilian life as school teachers. Also, other programs to assist veterans are being perused.

**5. Open Topic**

**6. Conclusion & Action Items**

No additional follow-up information requested.

# **Pagan Socioeconomic Development Conference**

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**Agency Name:** Pagan Socioeconomic Development Conference

**Date:** February 4, 2014 at J's Restaurant; 4:04 p.m. to 5:00 p.m.

**Attendees List:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Jerome Aldan	Northern Islands Mayor's Office	Chief of Staff	Jayzway11@hotmail.com	670-664-6466
Herman Cabrera	Herman B. Cabrera & Associates	Architect	hbcabrera@gmail.com	
Bill Torres	Socio-Economic Consultant	Non-Government Office	c/o jayzway11@hotmail.com	664-6466
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynnh.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of the Conference, what are your goals and mission?

The overarching agenda in convening the historic 1<sup>st</sup> Northern Frontier Summit which was held at Fiesta Resort on Saipan in September 2012 was to organize and plan a meaningful and actionable return of the indigenous inhabitants of Gani Islands (in the 3<sup>rd</sup> Senatorial District) back to their ancestral homeland north of Saipan, by examining re-settlement and re-development objectives, activities, timetable and strategies. For over 30 years since the forced relocation and dislocation of Gani residents on Saipan in 1981 following the eruption of Mount Pagan in 1981 (the first recorded eruption in 1925), Gani residents were treated as wards of the state or exiles on Saipan waiting for their repatriation to their native homeland where they left their valuable belongings at the behest of their government during the Pagan evacuation.

Part and parcel of redevelopment is obviously resettlement: that is, it goes without saying that there can hardly be re-development, or any development for that matter, without the local labor pool or the resident population to support the desired socio-economic development and help nurture such developments and make them sustainable.

The summit generated heightened awareness and renewed interests in Gani Islands generally and Pagan in particular, where participants were engaged with and participated in panel discussions, which highlighted issues and contributed in problem-solving sessions to find meaningful solutions to the overriding summit objectives for the resettlement and redevelopment of Gani Islands.

The conference covered natural events (volcano eruption) that happened in the Northern Islands prompting the governor at the time to relocate people. Relocation is reminiscent of forced relocation of residents back in the Spanish era. The people had to leave the Northern Islands for Saipan and then Guam. Relocation and volcano threats are a thing of the past. Forced relocation has kept people living here on Saipan but people keep going back to Pagan because they want to return to their homes

A little over 100 people were in attendance: summit planners had expected anywhere from 60 to 75 attendees, but the actual participation far exceeded our expectation. Stakeholders from different professions were among the participants, including residents of Pagan, government and business representatives, Northern Islands Mayor's Office staff, and lawmakers. There was obviously heightened interest in and about the Northern Islands today as a result of the summit, just as in the past with "guests", or pseudo discoverers of the islands, such as Magellan in the 1500s. Magellan's discovery was predated by the earliest carbon-dated settlement in the eastern coastline of Pagan in 1325 A.D.

The summit, to a large extent, was inspired by the local government's apparent inaction and lackluster in taking the initiative for the repatriation of Gani Islanders to their native islands north of Saipan. The summit fits with Gani Islands Mayor Tobias Aldan's vision for the resettlement and redevelopment of Gani Islands as well.

With Mayor Aldan's leadership, his socio-economic summit planners were compelled to make public the plight of the Gani Islands residents to serve as an educational forum too, that would not only highlight the history of Gani Islands, but also the predicament of the Gani residents, in being perpetually exiled on Saipan due to their own local government's inaction in initiating their return back to their native homeland. Summit planners felt that the best approach is to conduct a forum in public setting, where the public is welcomed to participate in a town hall discussion together with Gani residents, and in the process, not only would the Gani residents be better informed of their resettlement and redevelopment options, but so too would the Commonwealth as a whole, and particularly policy makers and affected local government agencies responsible for taking action in enabling the residents receive their long awaited homestead lots vested the residents in both the local constitution and various local statutes. If anything, the summit heightened the resettlement and redevelopment agenda, by making them transparent that enabled the residents and other interested parties to query local government officials on their responsibilities in executing their duties pursuant to law.



2. What potential development opportunities are there on Pagan?

The Northern Islands Mayor's Office has a lot of plans to do socioeconomic development:

- Eco-tourism/heritage tourism – something like Hawaii's Big Island eco-lodge or Niihau. We want to preserve the ecology as much as possible for future generations of indigenous people and for scientific research and other practical applications to help mankind deal with its precious and fragile environment.
- Construct ancient Chamorro architecture type (tourists don't want to see concrete – they want to see culture) and prehistoric resources (*latte* stone, pictograms).
- Aquaculture: seaweed farming is a potential including caged fishing for big eye tuna, pacific salmon, shrimp, etc.
- Agriculture – Northern Marianas College-Cooperative Research, Extensions and Education Service has an agriculture master plan for the Northern Islands ready to be implemented. The plan provided an historic overview of farming in Gani Islands during the Spanish, German, Japanese and US era. The plan lists fruits and vegetables tested to be good for production there. Sugarcane, sweet potato, watermelon, pineapple, and cotton productions were staples during the Japanese era while coconut for copra was during the German period. The Spanish administration was more interested in evangelical conversions through its policy of *reduc'cion* or the removal of the inhabitants to a centralized location on Saipan and eventually to Guam, where they integrated with the Guamanians or otherwise unaccounted for. The Japanese did sugarcane, pineapple, sweet potato, watermelon, cotton, and tobacco, among others. Post-war industry that brought prosperity to the islanders was the copra industry. So successful was the singular industry, that copra helped jumpstart what later became a Micronesia-wide development engine in the United Micronesian Development Association, the largest non-government development group in Micronesia. United Micronesian Development Association once owned Nikko hotel and a major stock owner in Continental Air Micronesia, Lao Lao golf, among other major investments.
- Fishing – Learning from the experience in Alamagan, Pagan will soon see a fishing community funded by the Marine Conservation Plan. Transportation options are available by water and air that would make periodic trips up north to pick up fish they catch and bring supplies, gear, and equipment. Part of the fishing community is setting up cold storage facility, both projects of Mayor Aldan being approved for funding, but pending release of funds by the Secretary of the CNMI Department of Lands and Natural Resources.
- Fishery – the water off the coast of Gani is pure and crystal clean, and excellent for ocean farming, like what's done off coast of Kona, Hawaii, or the Marshall Islands in Micronesia. Though an economic prospect ocean floor mining is another distinct potential exploration, owing to the seamounts lining from Saipan all the way up to

Farallon de Pajaros (Uracas), where a civilian resident of Gani accompanied an undisclosed Army exploratory team where the exploratory team observed gas bubbling on the ocean surface in Uracas.

- Black pearl and black coral cultivation similar to the Marshall Islands are highly feasible due to the pristine waters in Gani Islands.
- Adventure island – Pagan, Maug, Guguan, Asuncion, and others could easily be the Africa of the Marianas wildlife preserves, where herds of roaming wild pigs, goats, boars, and cows, chickens, coconut crabs, giant lizards, snails, etc. are common on *land*; towering fruit bats, indigenous land and sea birds, rainbow of butterflies, etc. can be seen on *trees*; dolphins, green turtles, lobsters, pelagic reef fish, sea shells, deep ocean prized pelagic wonder woman fish, and migratory big eyed tuna, etc. feeding on healthy planktons and algae where they abound in *waters* surrounding the islands; and ocean sea crabs, clams, sea snails, and crustaceans or sea shells, etc. which feed on the *reefs, corals or seaweeds*. The Survival T.V. series, for instance, could be filmed in Pagan or any other islands in Gani.
- Geotourism – Tourists can visit the active and dormant volcanoes, the twin inner-lake and outer-lake hot springs, the long stretches of black sand beach, the early settlements, and other historic properties or assets, or even the geology of the islands.
- Diving-The pristine waters of Gani Islands is unsurpassed in the Marianas Archipelago or in the Pacific Region.
- Scientific research laboratory – It could support research of the Marianas Marine Monument and be a staging area for scientists traveling between the Monument and Saipan.
- Geothermal energy production – Not only could the geothermal energy be applied and used in splitting water molecules or atoms (H<sub>2</sub>O) for production of portable hydrogen fuel for export, oxygen for health use, and distilled water for human use and consumption (if not also export like the water production off the coast of Kona in Hawaii), but also for production of sapphire jewelry. The geothermal energy could also source the power needed for deep ocean tourism and scientific exploration and research in the depths of the Marianas Trench.
- H. B. Cabrera retains a permit from Department of Public Lands to go to Pagan to landscape selected areas in preparation for the Silver Explorer cruise ship visit in 2014.
- Mayor Tobias Aldan’s Discover Pagan 2014 collaborative group consisting of government and private business is another venue facilitating redevelopment in Gani Islands particularly in Pagan.

3. What stages of planning are these potential developments in at present?

The summit report just got off the press in February this year and subsequently disseminated to Gani residents and various other stakeholders in the community, including policy makers and local government agencies. The summit planners have also been meeting to further map out targeted implementation stages and timetable. The report is the basic framework in mapping out any socio-economic development discussions, serving as official references in inter-island and overseas trade missions to be conducted by the Mayor of the Northern Islands Office. Key to implementation is the government's action in complying with all applicable statutes regarding homesteads and free trade zone designations, among others. Continuing government inaction through a practice of benign neglect policy will only hasten and be the basis for a class action lawsuit against the Department of Public Lands in particular and the CNMI government in general this year. Short of that, the residents of Gani will relocate to Gani.

4. In what stage of planning is homesteading for Pagan?

You have to understand the history of the area since the Spanish period to properly understand it. First recorded settlement on Pagan was in the 1300s, on the eastern coastline where the military plans to do amphibious landings. In the Japanese era, the Northern Islands, including Pagan, had a major copra industry. There were about 8,000 people who lived there. Pagan was command base supporting soldiers on Saipan.

In 1981, the governor relocated people and refused to send them back because of the volcano. That was just a reason to keep people off the island. The history of volcanic eruption on Pagan is that volcanic activity has been happening continuously since at least 1925. The first modern eruption was recorded in 1925, then in 1950, and then in 1981, but 1981 was the pivot. People were scared. There is no decree, law, or court order preventing people from going back to Pagan.

The people who were evacuated were put into an area known as "Paganville." People were given housing on Saipan. The children of the evacuees moved out of the neighborhood, but there are still Pagan descendants living there in Paganville. The area was reserved for Pagan people because the government had to come up with something.

Military planners are under a misconception that the Northern Islands are uninhabited. People live on Pagan now, even though the census says there is zero population. No one went to Pagan to ask or count people. The Census just asked the Mayor's office. The actual population on any given day ranges from 10 to 100 people. The major limitation is the cost of transportation, not the desire to be there.

The question of population is not a question of the present day. It's a historical question still affecting us today. The test voyage we are planning to Pagan will bring up about 100 people. If only one person is there, there is still a person there. For us, Pagan is home. I'm on Saipan because that's where the employment and education are, but my plan is to return to Pagan and live the rest of my life.

In the Pagan 1978 Physical Development Master Plan, the planners premised the entire island belonging to the government while it recognized that people there have been living off public land. That is, notwithstanding the lack of formal fee simple ownership document indicative of private ownership, Gani residents, since the early 1300 A.D. have occupied, used, developed, and lived off the land, water, and air space of Gani Islands.

Eight years (8) prior to the publication of the above-referenced master plan, the Trust Territory Government commissioned the Mariana Islands District Land Management Office on Saipan a Land Use Proposal for Pagan Island published on September, 1970.

This seminal land use proposal covered a wide spectrum of contextual features of Pagan, wherein it provided an excellent description of the island history, land features, soil, vegetation, animal life, beaches, water resources and the life of the residents. The wide array of background information on Pagan provided the necessary context in profiling a “proposed land use” plan, which included agriculture, forestry, “urban” area, public beach and park, public utility area, resort and recreation, handicraft village, wilderness and recreation reserve, school area, harbor, and airfield extension. This profile then served as the backdrop in the recommendations for action to be taken on Pagan.

The 1978 Plan at first appeared the best plan available for Pagan, but the recent discovery of the 1970 study by the local government provided the basis in understanding the 1978 plan, the 1980 land use plan, the 2005 airfield master plan and the 2013 Department of Public Lands land use plan that has not been shared with Gani Islands Mayor Tobias Aldan, much less consulted with as required by law and as a matter of proper protocol and respect to Gani residents. The Legislature, though, passed a series of laws (based on the local constitution) in 1979, 1981, 1993, 1999, 2005, 2009, 2010, and 2014 on Gani Islands homesteading, including Pagan. Residents are vested with rights to homestead. The process of resettlement is laid out in public laws pursuant to the local constitution which refers to a requirement of continuous residence for 15 years prior to the effective date of the local constitution, for instance.

Department of Public Lands (and its previous incarnations) failed to implement the constitution and the enabling laws on homesteads in the CNMI including Gani Islands. It doesn't engage this issue enough and claims it still needs guidance from the Legislature, even though there's plenty of guidance already. Department of Public Lands has that data but won't examine it. Department of Public Lands has homestead lands marked out on maps.

Really, though, people don't need a piece of paper to claim their land because they were vested already. They are beneficiaries. We estimate about more than 100 people were constitutionally and lawfully vested as beneficially interested parties, but the residents continue to face discriminatory and unfair treatment at the hands of their own local government that invites the legal process to be invoked sooner rather than later.

5. Are there any infrastructure improvements planned for Pagan?

This is a chicken-or-the-egg type of query, especially when placed in the context of homesteading and infrastructure. Department of Public Lands said it can't give deeds because there is no infrastructure, but that's an excuse. People don't need infrastructure. The annals of CNMI homesteads in Rota, Tinian, and Saipan are replete with examples where village and agriculture homesteads were identified and issued to residents without water, power, sewer, recreation facility, school, church, harbor, air strip, solid waste disposal site, etc.

Anyway, there was infrastructure before the volcano. Pre-war settlements in Pagan, for instance, recorded over 1200 Chamorros in the early 1500s and in the early 1920s-1940s, over 8000 Japanese, Okinawans, Chamorros, and Carolinians inhabited the island. Known Japanese-constructed infrastructure in Pagan included water catchment, airstrip, harbor, fishing and farming, among other infrastructures. Therefore, the axiom, "if you build it, they will come" appropriately applies in the instant case: resettlement can and will happen with or without development, but to make it sustainable, as in the Copra era in Pagan, there needs to be development—those development activities highlighted earlier. The conference highlighted the twin objective of resettlement and redevelopment as doable and complementary and not one occurring first over the other or vice versa. In other words, resettlement and redevelopment are intertwined and not one requiring the other to occur but feeds instead on each other, just as infrastructure will be developed over time when people resettled the land—examples being the history of homesteads in Rota, Tinian and Saipan, where the designation of surveyed homestead property has taken place (e.g., Lot No. 001 S 03 at 731,464 square meters in Pagan) followed by a drawing of lots or issuance of lots (which has taken place up until today) prior to occupancy and use by the permit holders who will, upon compliance of all requirements, receive their quit claim deeds indicating ownership in fee eventually.

A lot of homestead developments on Rota and Tinian do not have infrastructure but they still issue the homesteads. The people of Pagan are being discriminated against. People not from Pagan, such as B. Torres, support the residents in their quest to return home to Pagan or elsewhere in Gani Islands. Qualified residents and the people of Rota, Tinian and Saipan have routinely received their homesteads since 1979 (if not earlier), but not the residents of Pagan, for instance, or, for that matter, the residents of Gani Islands.

There is even internet connection in Pagan installed by U.S. Geological Survey and CNMI Homeland Security Office in 2013, a project that is part of U.S. Geological Survey and Homeland Security volcano monitoring activities through fiber optic real time high resolution transmission, or the Pagan internet of 2013.

**5. Open Topic**

Pagan is a beautiful island with delicate and sensitive ecology. Live fire military training and activities on land, ocean, and air will definitely degrade, deface, contaminate and otherwise destroy the physical landscape, resource, treasure, and asset of Pagan ecosystem.

In addition, live-fire exchanges from the air, the ocean, and on land will completely obliterate and not simply degrade the quality of the pozzolan on land, rendering the natural minerals worthless and un-usable. Farallon de Medinilla live-fire bombardment is enough evidence on the destruction, contamination, and obliteration of an island, where the once whole island is gradually disintegrating into separate parts until they fall into the Pacific Ocean. That the Pagan live-fire militarization will suffer the same fate is a bit off the cuff, if not an outright lie!

Not only is the Discover Pagan 2014 bringing awareness to Pagan through its maiden voyage and the September cruise liner stopover, but also the planned Chamorro conference will be held on Pagan this year, where over 100 people are expected to attend. Other developments will occur this year on eco-tourism related activities for healing, wellness, respite, adventure tourism, filming, energy exploration, etc.

## **6. Conclusion & Action Items**

No additional follow-up information requested by the interviewers.

# **Saipan Chamber of Commerce**

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**Agency Name:** Saipan Chamber of Commerce

**Date:** February 6, 2014 at the Saipan Chamber of Commerce Conference Room;  
1:10 p.m. to 3:20 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Patrick Deleon Guerrero	Saipan Chamber of Commerce	Executive Director	Pdlg48@yahoo.com	670-233-7150
Alex Sablan	Saipan Chamber of Commerce	President	Alex_sablan@tanholdings.com	670-233- 8080/81
Velma Palacios	Saipan Chamber of Commerce	Vice President	Velma.palacios@itehq.net	670-682-2090
Rosemond Santos	Saipan Chamber of Commerce	Director	Rosemond.kkmp@gmail.com	670-233-1441
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On- site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Can you describe how the CNMI economy has been trending lately? And what are some of the reasons for this?

CNMI is at the beginning of economic recovery. It is still in the early stages. Any growth in any part of the market improves opportunities for Chamber members. The cost of living here is high. Prices are high. A lot of people do subsistence farming and fishing.

CNMI has infrastructure in place but not enough hotel rooms. The Nikko Hotel (Palms) is gearing back up. Coral Ocean Point has 100 rooms opening up. Department of Public Lands issued a Request for Proposals last year to build a hotel at Marpi, north of Pau Pau beach and another hotel in San Antonio. The San Antonio proposal is under DPL review and we are waiting for Department of Public Lands to announce the winner. Tan Holdings won the Marpi bid. It is planning about 544 rooms for a hotel next to Pau Pau beach. Tan Holdings won the contract about three weeks ago and expects to break ground in the next few months. It has already hired contractors for environmental and due diligence and is now getting through the initial permitting process. The hotel should be operational in 3 years. It anticipates a soft opening in December 2016. It will probably build it first and then renovate to meet a name brand specification. Other hotels are also trying to get a branded name, like the Sheraton and Hilton. All hotels in the CNMI are not built to modern 4- and 5- star hotel standards. The San Antonio Request for Proposal is in determination and the lease requirement is for a minimum 200-room hotel.

There also could be a condo-hotel development in the Marpi area on private land. It would be built out over several phases.

We want to see theme parks. Hyatt doesn't have room to put in an expansion. Department of Public Lands has land nearby that a theme park could be on and could work a deal with leaseholders.

2. What are other activities hotel owners are doing to promote tourism in the CNMI?

Our airport is pretty vacant. The China visitor market is growing because of charter flights. The Dynasty and Tan Holdings/Century Tours bring in charter flights. More cities were added recently and more are planned for early next year. We get 14 flights from China per week; 17 a week from Korea; and 3 daily from Japan. Russian charters come in one time a week and will be increasing to two flights a week soon. Asiana is looking at daily Busan flights to Saipan.

Tan Holdings has the largest tour company in the CNMI now (Century Tour Co.). It has maybe 80% penetration of market. Last year it handled about 80,000 tourists, about 48,000 of which were on tours and maybe 85% on charter flights.

Tan Holdings/Century Tours does not have tour operations on Tinian because its revenue generating activity is on Saipan. It does not want to compete with Dynasty.

3. What is the labor pool? Is there skilled labor available for these development projects?

The workforce is a constraint to developing the economy. We have garment industry workers that did not have skills in tourism so transition was slow. We need people who can speak the languages of our visitors. We have people who can speak Japanese, but we need people who can speak Chinese, Russian, and Korean. The local schools don't teach those. Small businesses lose business opportunities because they cannot speak those languages to sell goods directly to the visitors.

The construction workforce is aging. It's been 20 years since the last construction boom. We maybe have another 5 to 10 years with this workforce before we have to bring more foreign workers. The people who are here have been here since the last boom. The people who had to leave will not return because of a lack of business confidence.

Some of the hotels are starting to look at doing workforce development by doing training in the tourism industry. People want to be trained. We are working on developing a legitimate training curriculum.

First, training needs to focus on accounting and vocational trades. Training for low- and high-level professionals has gone well, but many who receive the training do not stay in the CNMI. Depending on the training, people who get trained tend to stay; e.g., nursing academy people have left, but the public sector has done a great job of training teachers. All the teachers are U.S. nationals or have the right to work in the U.S.

4. Are there plans for tourism in the Northern Islands? Specifically, for Pagan?

Until Pagan is developed and the airfield is more than a grass strip, it is too risky. The cost, safety, and liability are obstacles, but there is a growing interest in eco-tourism, among younger Chinese, too. At the Guam-U.S.-Asia Security Alliance conference, it was discussed that Guam-U.S.-Asia Security Alliance cannot recommend what is economically feasible for the CNMI, especially islands north of Saipan. Joint-military use is not an option!

Volcano tourism is a growing phenomenon throughout the world. Pagan is also ideal for backpackers, nature hunters, and folks who look to go back in time. We have local entrepreneurs who are gearing up for a visiting cruise liner to Pagan this coming September. He is also gearing up to build bungalows for eco-tourism on Pagan.

5. How has the investment climate been?

More of the smaller businesses are getting into the ancillary industries for tourism. Russian investors are getting involved. There are maybe six or seven true investors putting money into businesses here.

Article 12 is a challenge. If you're an investor, why put \$10 million into Saipan to lease when you can own in Guam?

The federalization of immigration has affected the CNMI's ability to attract investors in positive and negative ways. The EB-5 immigration option (for investors of more than \$500,000 into U.S. business) helps bring in investors for fledging projects. Investors could get a green card down the road. Bob Jones has been successful using this approach. Tan Holdings is currently exploring investment through development. No one has tried to bring in an investor under the CNMI-Only Transitional Worker visa. Tan Holdings believes it will have to bring in a large workforce (maybe 100 to 150 workers), and is still figuring out what it thinks the impact will be. The vast majority of small businesses have not been adversely affected, but some have because they could not bring in a particular person that they wanted to hire.

It is not uncommon for fly-by-night developers to get a lease for a property and then try to find funding. Some have used it to defraud people on the premise that the investor will get a green card for investing in that property.

6. Has increased federalization of immigration and minimum wage laws had the effects that were expected; or, has it been moving at a slow enough pace for the economy to adjust?

Due to a 12 year recession the minimum wage will cause a reduction for hourly employees to below full time, in turn reducing their benefits. A tiered implementation schedule may be the best way to align with U.S. The U.S. Department of Labor should leave the CNMI alone because the market will drive up wages from the high demand for labor. People who employ domestic help do not have the financial capacity to absorb the wage increase. On the commercial side, the cost of groceries and services will rise.

We've lobbied to keep getting it deferred at \$7.25 until 2018. This certainty helps business planning. Many big businesses already pay well above the minimum wage. For example, Tan Holdings has 600 employees and only the most entry level employees are paid the minimum wage. Some Mom and pop businesses probably pay the minimum wage and stay there. Larger organizations might start there but move people up so they are paid more. The Chamber is pretty much arguing on behalf of small businesses, most of whom aren't even members, because most of the Chamber membership (maybe 80%) already pays above the minimum wage.

We believe we will get a workforce extension, so we have six years to push workforce development. Our population would plateau with local workers only.

With federalization, it costs about \$1,600 upfront in applications fees to bring someone in (on an H2 Visa). It is too much money to take a chance. But, we will be like Guam to hire an H-2 workforce and pay \$1,600 per worker to bring them in.

The implementation of the federal minimum wage and immigration is making it extraordinarily difficult to for the people of the CNMI to sustain a healthy economic livelihood. Coupled with the threat of military activities on Tinian, Saipan, Farallon de Medinilla, and Pagan, the federal and military governments of the United States might as well drop an atomic bomb on the people, resources and islands of the Northern Mariana Islands.

7. Has there been progress in efforts to relax rules/laws restricting property ownership by those not of CNMI heritage?

Article 11 will hopefully not be a challenge for existing hotels. Department of Public Lands is very accommodating of big landholders. We think extensions will come through for just about anyone with a serious project. Lease payments get extended so the money goes to Department of Public Lands.

Land ownership is a very sensitive topic among the people of the CNMI. However, there is a growing trend to realistically address this issue. Legislative Initiatives have been introduced

in both the House and Senate to relax the restrictions. However, the question has yet to be presented to the people in the form of a ballot.

8. Are there any plans for casino, or other non-hotel development in the CNMI? What stages of planning are these development plans in? Are any planning documents available?

The business community in Saipan wants a casino here. The local community does not. A group is pushing for it but it will likely not pass. Poker electronic games have proliferated throughout the villages and led to social problems like gambling, drugs (ice), and burglaries. Most families on island have one or two members who have stolen from the family to pay for their gambling or drug addiction. The government has not been good at regulating industry. Tinian and Rota have not been able to regulate those well and those are small jurisdictions with only one casino. Initially, the proposal was for poker to be in hotels only, but it spread out to the villages. At one point, there was a moratorium on poker, but five people were denied, so they asked that the moratorium be lifted, and as a result the machines proliferated again. Poker places tend to be next to laundromats and other places that lower socioeconomic classes frequent.

There is not much non-hotel development. Something like the K-Mart on Guam would be great.

Casinos are now legal in the CNMI.

9. What is the Chamber's perspective on the proposed action?

The Chamber supports completely the Department of Defense using the Marianas region for training needs to enhance our armed forces. But, the Department of Defense announced this proposed action without following through immediately on what it wanted to do, so it's allowed the opposition to fester and misinformation to spread.

There is a history of the federal government taking without giving back. The Marine Monument had a lack of consultation from President Bush. The federalization of immigration was a loss of sovereignty. We experience a loss of water and land, and then what are we left with? Nothing has been given back. Pagan residents were displaced, not by choice, and they still want to go back.

It would be good if the military could look at joint use to help the people of Pagan return and live on the southern tip. The military could use the northern tip.

It doesn't seem like the Governor knows what the people want. Tinian never got the economic development it was promised and the CNMI is just getting scraps. Guam has a lot of money being spent outside the fence. What about the CNMI?

The military has not been providing studies on Farallon de Medinilla about contamination. The Farallon de Medinilla bridge is getting blown away by military targeting. It could fall apart at any time. We see this evidence and are supposed to believe the military's assurances on how it will conduct itself on Tinian and Pagan?

Guam has two sectors for its economy. Saipan never got the military economy. The CNMI does not have consensus on an acceptable level of military presence, but there is a growing sense that there should be no more militarization of the CNMI, much less letting Pagan be used. People are even talking about reclaiming Tinian.

The community hates agreements made behind closed doors. The military should do village meetings, talk show appearances, and other outreach. There needs to be a significant campaign to get the message out. The opposition is doing grassroots mobilization. All the talk shows are saying no to militarization. Need to offer better a quid pro quo that's better than what's been proposed so far.

We support the presence of the military within the CNMI. There are existing lease agreements for military use on Tinian and Farallon de Medinilla. Department of Defense should make use with what has been provided for in the lease agreements without further expansion of its activities.

**5. Open Topic**

**6. Conclusion & Action Items**

No additional follow-up information requested.

**Saipan Shipping Co.**

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**Agency Name:** Saipan Shipping Co.

**Date:** February 3, 2014 at the Saipan Shipping Office; 9:00 a.m. to 10:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Juan Tenorio	Saipan Shipping Company	President/Managing Director	jtenorio@saiship.com	670-322-9706
Darlene Cabrera	Saipan Shipping Company	General Manager	Darlene_cabrera@saipanshipping.com	670-322-9706
Jose Quan	Saipan Shipping Company	Logistics	Jose_quan@saipanshipping.com	670-322-9706
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.Lynch.ctr@usmc.mil	808-477-8480
David Kiernan	TEC JV	Socioeconomic Team	David.kiernan@cardnotec.com	850-765-5678

### **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please broadly describe your company's operations in the CNMI.

Saipan Shipping Co. has been operating here for 58 years. Major route is Guam to Saipan to Tinian to Rota. In 1974, the company entered a joint venture with Kyowa Shipping Company to ship to Micronesia (Marshall Islands, Federated States of Micronesia, Palau). Since the early 90s, Saipan Shipping has not shipped to Micronesia.

2. Company is an agent for Matson and does everything on Matson's behalf. It handles Matson cargo and distribution. Matson brings freight to Guam (via ports from U.S.) then loads freight onto Saipan Shipping Co. barge for transit to Saipan.
3. Please describe a typical interisland trip (Saipan-Tinian), how long does it take, what are approximate costs and factors that influence costs?

A barge is used. Time depends on type of cargo, usually about 4-5 hours. Most cargo is containerized but some is break bulk.

Rates provided in data sheet (attached). The rate of any cargo is based on the weight or measurement of the cargo. Rates are governed by the tariff.

From Guam to Saipan, it takes the tug and barge 18-20 hours from Guam to Saipan.

Used to use a super-shuttle by charter for Saipan to Tinian trips but no longer do. Not sure what happened to the super-shuttle, it went to dry dock and never came back. In its place, Saipan Shipping Company currently uses the Tug and Barge to transport containers and break bulk.

Company used to ship to Tinian 2-3 times/month in the past when the Dynasty was going up. Now it's only about once per month, averaging about 5 containers. If need be, an extra sail is added.

4. Who are your clients – private business, individuals, government?

Government including military = 30%. All else 70% private businesses.

5. What are the major products that your company ships to and from the CNMI, as well as products shipped interisland?

Saipan Shipping Co. only focuses on the transportation of containers and break bulk. It is up to the consignee with what items they want to ship. Majority of the cargo shipped into the CNMI is 75% food items. The company has been keeping up with demand and has delivered cargo in rough conditions to satisfy the needs of the consignees and public.

6. How would you categorize the current condition of the Tinian harbor, in terms of how well it facilitates imports/exports?

OK if using the barge. If swell is more than 5 feet (depending on weather), the channel into Tinian harbor is narrow and has been filled with debris. At times, the Coast Guard will recommend to stop transit due to debris. Some dredging would help this – deterioration has taken place over the past 15years.

Commonwealth Ports Authority has been looking into rehabilitating the port. There is a need to put a fire hydrant there, which is a Coast Guard requirement.

No other problems as far as the company is concerned.

7. At present, does the condition of the harbor limit or slow the quantity of goods that are imported/exported to Tinian?

No.

8. Are you aware of a ports master plan? Are there CNMI plans to expand the Tinian port?

About 5 or 6 master plans. Plans get done but nothing gets built.

## 5. Open Topic

Saipan Stevedore just came back and will be putting in more equipment on Tinian.

There is currently no known problem with the weight that can be supported by the wharf at Tinian harbor.

The company may stop by Tinian to deliver goods for food supply (even if company loses money on that trip).

In 2012, the port of Tinian was closed for about 8 to 9 months; Coast Guard wanted to condemn the port. Commonwealth Ports Authority did a study to convince Coast Guard to let port re-open.

SN-5 uses landing craft to bring commodities from Saipan-Tinian.

The capacity of the barge is 120 20-foot containers or 60 40-foot containers.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. What would the approximate cost be to transport an empty barge from Saipan to Pagan and then return the barge, loaded with break bulk (sand for instance), from Pagan to Saipan?
- b. What would the approximate cost be to transport an empty barge from Saipan to Pagan and then return the barge, loaded with break bulk (sand for instance), from Pagan to Guam?
- c. What would the approximate cost be to transport an empty barge from Saipan to Pagan and then return the barge, loaded with break bulk (sand for instance), from Pagan to China?
- d. What would the approximate cost be to transport an empty barge from Saipan to Pagan and then return the barge, loaded with break bulk (sand for instance), from Pagan to Japan?
- e. Can the costs be broken out on a per metric ton basis?
- f. What price would be charged to a customer for these trips (total or per metric ton)?

This information can be provided later.

# Saipan Shipping Company, Inc.

## Company Overview

**Saipan Shipping Company, Inc.** provides freight transportation via water operations and other shipping services to and from the Northern Mariana Islands. Saipan Shipping Company, Inc. was founded in 1956 and has evolved from being a "principal agent" to becoming an actual operating partner for other large ocean transportation service providers such as Matson Navigation Company, Inc. and Kyowa Shipping Co., LTD.

## Contact Information

P.O. Box 500008  
Saipan, Northern Mariana Islands, 96950-0008  
Tel: (670) 322-9707 Fax: (670) 322-3183





**Matson Navigation Company, Inc. ("Carrier")**, a common carrier by water operation a container ship service between the West Coast of the United States, and Hawaii, Guam and certain Pacific Island territories and **Saipan Shipping Company, Inc. ("Agent")**, a company duly organized and existing under the laws of the Commonwealth of the Northern Marianas Islands, entered into an agency agreement in 1996. Its modern, efficient and reliable operations provide regular weekly service from all four west coast port areas (Seattle/Portland/Oakland/Long Beach) Hawaii to Guam.

Services to Guam features:

- Fast transit times and same day arrivals every week.
- Shipping from any city or point in the U.S.
- Port-to-port or door-to-door service
- All types of container equipment: 20', 40', 45', drys, reefers, flatracks.

## **Dry containers**

Restrictions: NO 45' containers to Palau, Yap, Chuuk, Pohnpei, Kosrae, Kwajalein, Majuro, and Ebeye

 <p><b>20' Dry Standard</b></p>	 <p><b>40' Dry Standard</b></p>	 <p><b>40' Dry High-Cube</b></p>	 <p><b>45' Dry High-Cube</b></p>
Inside Length: 19'4" Inside Width: 7'8" Inside Height: 7'10" Door Opening: 7'8"W x 7'5"H Empty Weight: 4,870 lbs. Cubic Capacity: 1,170 ft. Outside Length: 20' Outside Width: 8' Outside Height: 8'6"	Inside Length: 39'5" Inside Width: 7'8" Inside Height: 7'10" Door Opening: 7'8"W x 7'5"H Empty Weight: 7,800 lbs. Cubic Capacity: 2,390 ft. Outside Length: 40' Outside Width: 8' Outside Height: 8'6"	Inside Length: 39'5" Inside Width: 7'8" Inside Height: 8'10" Door Opening: 7'8"W x 8'5"H Empty Weight: 8,110 lbs. Cubic Capacity: 2,700 ft. Outside Length: 40' Outside Width: 8' Outside Height: 8'6"	Inside Length: 44'5" Inside Width: 7'8" Inside Height: 8'10" Door Opening: 7'8"W x 8'5"H Empty Weight: 10,000 lbs. Cubic Capacity: 3,040 ft. Outside Length: 45' Outside Width: 8' Outside Height: 9'6"

## **Temperature Controlled Containers – Refrigerated**

Restrictions: R20's can only be used for transportation to Saipan, Palau, Yap, Chuuk, Pohnpei, Kosrae, Kwajalein, Majuro, and Ebeye. NO R20's to Guam, and Rota

**Star Marianas Airlines, Inc.**

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**Agency Name:** Star Marianas Airlines, Inc.

**Date:** January 30, 2014 at Star Marianas; 8:00 a.m. to 9:00 a.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
Shaun Christian	Star Marianas	Chief Operating Officer	schristian@starmarianasair.com	670-433-9899
Donna Cabrera	Star Marianas	Dispatch Manager	Cabrera.donna@gmail.com	670-433-9987/9997
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineer Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the services Star Marianas provides. Do you provide both cargo and passenger services?

Star Marianas is a Tinian-based “on-demand” air carrier that provides both passenger and cargo services. Star Marianas has about 115-120 employees most of whom (65%) are U.S. residents. 70% of employees are Tinian-based, 28% are Saipan-based, and 2% are Rota-based.

Star Marianas is in the process of moving away from an on-demand model to a schedule model. This change should be complete by mid-February.

Star Marianas has 7 piper Cherokee Sixes, which are single engine airplanes. And 3 twin engine Navajo aircraft. Recently bought one more Navajo that is on its way out here – the twin engine craft are used for flights to Rota.

Passenger service – Provide passenger services mainly Saipan-Tinian route. About 30% of customers are local (locals offered a discount) and 70% tourist (rough estimate). Tourists are primarily Chinese visitors on tours organized through the Dynasty. Tinian airport is not

equipped for direct international service so Star Marianas bring Dynasty tours over to Tinian from Saipan.

Cargo services – Tinian-Saipan is primarily bread and perishables for stores and schools. Star Marianas is working on an agreement to transport specimens for the Tinian Health Center to Saipan hospital. Cargo to Rota comes from Guam or Saipan and is primarily to keep markets stocked with goods, the last time the barge was able to access Rota port was 1.5 months ago, and prior to that 3 months; we take everything for the stores there, there is a group of store owners organizing the cargo shipments, we charter the airplane to them and they determine what gets put on it – primarily frozen goods and perishables, beer etc. Out of Rota, outbound cargo is increasing, store owners realize they are able to cover inbound costs by offering farmers \$0.20/pounds to send produce to Guam (primarily) and Saipan.

2. How many flights per day/year does Star Marianas provides? How many are inter-island, within the CNMI?

48,000 flights last year; about 90% were Tinian-Saipan; number of passengers – Commonwealth Ports Authority has all the reports on it. Averaging about 4,000 flights per month this year. The Tinian-Saipan route is most popular; non-Saipan/Tinian transport is primarily cargo.

3. About how much fuel is used for an interisland flight (between Tinian and Saipan)? How much of this is used at takeoff and to get to altitude?

About 6 gallons for Cherokee for flight round trip/ 2-3 gallons per leg; about 10.3 miles point to point one leg; project using 10 gallons for twin engine per leg.

All piston-engine fuel, so all planes use Avgas (100 Octane LL) fuel; twin engines are turbo-charged so consume more fuel/hour than single-engine; budget 15 gallons/hour for single engine and 50 gallons/hour for twin engine.

4. What has been the average price you have paid for a gallon of fuel lately?

Cost of fuel delivered to Saipan is \$10/gallon.

5. Who is your customer base? Do you distinguish between CNMI resident and non-resident (tourist) customers? Do you know an approximate breakdown of local vs. visitors?

About 30% of customers are local (locals offered a discount) and 70% tourist (rough estimate). Typical package tour has a couple of people on Saipan for a few days and on Tinian for a few days.

6. When military operations have occurred on Tinian, has there been any effect on your business?

Military is like bulls in china shop when they come out here; military shuts down taxiway; Federal Aviation Administration said military is no longer able to refuel in the apron area (because military did it during Geiger Fury by offloading fuel bladders and ended up shutting



down Charlie taxiway); Federal Aviation Administration stuck them out at west end of the airport, which effectively blocks the parallel taxiway, which requires planes to back taxi on the runway against oncoming traffic, which creates big logistical issue, safety concerns, and additional costs; there is a plan to put in a high-speed taxiway; until that happens there is an operational burden.

Airspace – We tend to blend ok. The military understands this is a civilian airport and commercial aircraft have the right away. The military might ask to shut down airport for an hour, then is not ready for the window and delays, and then asks to move the window, which cannot be done. This is not consistent with lease agreement, which says the military will not adversely affect civilian operations; the military does occasionally adversely affect the civilian use of the airport.

Star Marianas has been contracted to fly for military, and has done ration pickups, passenger services, and have done flight to test merchant marine responses.

7. How does the number of flights and length of each flight figure into your business model? (Note: discussion quickly turned to how the proposed 3-mile surface danger zone would affect operations).

14 Code of Federal Regulations 135.183 titled Performance Requirements: Land Aircraft Operated Over Water States: No person may operate a land aircraft carrying passengers over water unless- a.) It is operated at an altitude that allows it to reach land in the case of engine failure; b) It is necessary for takeoff or landing; c) It is a multiengine aircraft operated at a weight that will allow it to climb with the critical engine inoperative, at least 50 feet per minute, at an altitude of 1,000 feet above the surface; or d) It is a helicopter equipped with helicopter flotation devices. This basically means that a single engine aircraft must be within gliding distance of shore at all times, except for the purposes of taking off and landing. For us, given the current flight path, glide distance can be achieved with 1,500 feet of altitude, but if have to go 3 miles out, would have to go up to 5,000 feet (altitude) (estimated) to be at glide distance. Star Marianas single engine aircraft are not equipped to operate under instrument flight rules therefore the 14 Code of Federal Regulations 135 visual flight rule regulation apply which require cloud clearances of 500 feet below, 1000 feet above, and 2000 feet horizontal from clouds. As a general rule cloud ceilings sit at around 2,000 feet above ground level so would have to fly around and avoid clouds. Extra distance and altitude requires much more fuel time and the risk is much greater for cancellations (e.g., yesterday would have been no flights at all). The current flight path is optimal but if we need to go three miles out the problems would be so great that we would not be able to operate our current fleet of single engine aircraft.

Twin engine planes could still theoretically do an on-demand model; Star Marianas has slowly been adding twin-engine planes. The cost structure is different though. They require more fuel per engine and have greater maintenance requirements - there are hourly limits to how long you can operate an engine before needing to do maintenance; so double maintenance requirements. Federal Aviation Administration prefers there to be two pilots in a twin engine plane and insurance premiums are higher. With Cherokee (single-engine), the

break-even point is 3 passengers so will need to wait longer for more people to fill seats or charge for the extra empty seats. With Navajo (twin-engine), we need 5 passengers to break even. If there is a switch to twin-engine then there would be fewer flights and costs would be much greater. Would need to increase prices by a third or double them.

Chinese tourists might not care if the price of a ticket to Tinian doubled, but locals would be impacted. There is a chance though that the price increase could greatly affect tourism visits. The Dynasty/Tour Company protested an increased cost of only \$5, so a large increase would create problems with the tour companies. They might look elsewhere.

Trips to Tinian are not totally dependent on air cost, but the quality of the environment may affect visits. Hardly any of the tourists to Tinian gamble, 90% of tourists are not coming to utilize the casino, they are coming because they are from Shanghai, Chengdu (full of smog) and want to experience pristine tropical destination that is as close to America as they can get without a U.S. visa; live-fire/bomb dropping would deter these tourists causing them to go somewhere else. Dynasty used to market Tinian as a lower-cost destination to go after lower end/budget tourist market; certainly upper scale come over and mainly go to Saipan; new investment group that bought Dynasty is trying to upgrade image to that of like Hyatt; Tinian is competing with other tropical destinations in a four-hour flight radius from mainland China to Tinian.

8. What changes to air transportation in the CNMI do you see occurring if direct flights from Asia to Tinian are initiated?

Tinian International airport is not equipped to receive international flights. "Not equipped" means there are Transportation Security Administration, immigration, hospital limitations (because hospital not equipped to take care of large jet accident), there is no jet fuel, fire trucks are capable of supporting large aircraft but the position of the fire building is not in the correct location because it should be able to see entire runway operations and access entire airport in 2 minutes; there are design factors for international flight requirements (International Civil Aviation Organization Annex 9).

Some private charter jets from China fly to Saipan, clear customs and quarantine, fly over to Tinian, then do another Saipan leg before going back to China to refuel.

## 5. Open Topic

Trying to switch to scheduled flights from charter/on-demand flights. There is concern that Department of Transportation and Federal Aviation Administration have different interpretations. We want to post notices that we have flights at 2 a.m. (for instance) and can catch empty legs at reduce price on the way back. Federal Aviation Administration says that constitutes publishing a schedule; we don't see that changing our current operations.

If turn back over the airport for military use it would effectively put a giant net up between the airports on Tinian and Saipan rendering the Tinian airport useless (based on economics) for the majority of its intended use; we feel strongly there needs to be a reevaluation.

Rates for other routes are affected by cost of Tinian-Saipan; passenger service covers management cost to help reduce cost of other cargo to Rota (i.e., flights from Tinian-Saipan subsidize cargo flights to Rota).

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Can you provide passenger data? How many are residents versus tourists? We do not have a reliable method of tracking the difference between the tourists and local customers. Commonwealth Ports Authority has all of the total passenger counts that would include Star and Freedom Air Totals.
- b. What is the Federal Aviation Administration regulation on glide distance? 14 Code of Federal Regulations 135.183...modified in question 7.
- c. What is the International Civil Aviation Organization Annex on flight requirement design standards? International Civil Aviation Organization Annex 9 (Facilitation).

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## **Tinian Casino Gaming Control Commission**

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**Agency Name:** Tinian Casino Gaming Control Commission

**Date:** January 29, 2014 at the Tinian Mayor's Office; 2:00 p.m. to 3:00 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Mathew Masga	Tinian Casino Gaming Control Commission	Chairperson	Masga.tcgcc@gmail.com	
Lydia Barcinas	Tinian Casino Gaming Control Commission	Commissioner		670-433-9292
Lucy Blanco-Maratita	Tinian Casino Gaming Control Commission	Executive Director	Tiniangaming.ed@gmail.com	670-433-9288
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Would you please describe the general functions of your department? What are your goals and mission?

The primary function of the Tinian Casino Gaming Control Commission is to regulate the casinos on Tinian. There is only one casino now, but there are many applicants. The Commission has five commissioners who do the regulations and an Executive Director who is in charge of the Commission and enforcement of the rules of the Revised Gaming Casino Control Act.

The Commissioner has 13 employees, 4 of whom are inspectors that cover 24 hours on site at the Dynasty. Commissioners are appointed by the Mayor and confirmed by the Municipal Council.

Commissioners approve new casinos and regulate the games in the casino by being in accordance with the Gaming Act. The Gaming Act requires certain suitability findings (integrity, honesty, expertise, and compliant).

The regulations pertain to the conduct of games, employees, suppliers, and security, among other things. It is intended to make sure casinos are law-abiding and operate with integrity and contribute to the economy of Tinian.

2. Do funds collected stay on Tinian or do they go to the CNMI government? How are Casino related revenues distributed – do they go to the general fund or are they targeted for a specific purpose?

The Department of Finance receives revenue from poker parlors and that money goes to CNMI central government. The Gaming Commission collects from casinos on Tinian. The amount collected is set by law as a percentage of the casino's gross revenue. The Gaming Commission gives revenue to local municipal funds, it stays on Tinian. The money is used to support the Commission and some other public service and scholarships, and salaries for Treasury employees. "Treasury" means the Tinian Municipal Treasury, which receives funds from fees, but primarily casino revenue funds. It was created to handle local municipal funds (again, primarily Casino related funds).

Tinian has three "pots" of money of government revenues:

- 1) CNMI central government money – the source of the money is from the CNMI government and some collected revenues go to the CNMI central government (e.g., hotel tax). Money distributed to Tinian by CNMI government.
- 2) Casino local municipal money – the source is from casinos (i.e., the Dynasty) and the money goes to fund the Tinian Casino Gaming Control Commission and other local government programs; and
- 3) Local money - collected locally through Tinian regulations and goes into the Tinian General Fund.

To see the Tinian budget, look at the local budget act passed by the Tinian Municipal Council. This is online. The budget ranges from \$3-4 million a year. It helps but is not enough to even pay for roads.

Casino revenue has been declining over the past few years. The market has ups and downs. Federal immigration control has impacted the flow of tourists. We are seeking to get a tourist waiver for Chinese and Russian tourists. The Dynasty has a difficult market. If Saipan has a boom, the benefits do not necessarily trickle down to Tinian. The biggest hindrance to market the Dynasty is flying tourists directly from China because of immigration restrictions and the lack of a fuel farm.

The CNMI collects 5% of gross revenue receipts through a hotel tax. Federal tax is also collected from the Dynasty.



3. Are there any plans for future casino development on Tinian? If so, what stage are these plans in (i.e., have permits been requested?), and are any planning documents available?

There is a lot of potential for more casinos here. There are two active applicants for casinos and three with conditional licenses. The statute authorizes up to 5 casinos. There are challenges, but they are not insurmountable. We cannot say that there won't be another casino in the next decade.

There is a lot of interest in gaming on Tinian. The Gaming Commission would like to just focus on the licenses and be regulators. We're not deaf to community concerns. We also must act in the best interests of Tinian.

The U.S. Citizenship and Immigration Services is a big hindrance to expanding the market to build a new hotel. You need about 1,000 workers to build the casino. Where will you find them? Only if we get direct flights with the immigration set up then we could do it.

The main obstacle to other casinos coming to Tinian is the possibility of casinos on Saipan. Saipan doesn't support Tinian's casino and Tinian doesn't support Saipan casinos because people would then have less reason to come to Tinian.

Currently, only Tinian and Rota are authorized for casinos, and Tinian only has one. The Dynasty does all of their own marketing without help from the Marianas Visitors Authority. The Marianas Visitors Authority focuses on Korea and Japan. The Dynasty is trying to expand into those markets as a backup for Chinese tourists when in case the federal government stops the visa waiver program.

CNMI should look at an integrated approach to tourism where each island offers something unique and branded. The islands should not be competing against each other. CNMI should be like the Gulf Coast states that work together to promote tourism.

Dynasty brings in six charter flights a week from China to Saipan, even if those tourists don't come to Tinian. Dynasty subsidizes Star Marianas to bring tourists over to Tinian.

Without the casino, life on Tinian would be harder.

## **5. Open Topic**

Military training affects the casinos because people don't want to come over here and see the military everywhere. All these projects are interrelated – the dump affects the airport, which affects our economic development. Access affects our economic development. There's only one Long Beach. The potential casino locations would be near the airport and the military area because there's not a lot of land available down here.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

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## **Tinian Cattlemen's Association**

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**Agency Name:** Tinian Cattlemen's Association

**Date:** January 31, 2014 at the Cattle Insemination Station; 8:08 a.m. to 10:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Joe Dela Cruz	Tinian Cattlemen's Association	President	tiniancattlemen@gmail.com	
Lawrence Duponcheel	Tinian Cattlemen's Association	Secretary	tiniancattlemen@gmail.com	670-287-2855
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe what the Cattlemen's Association does. What are your goals and mission?

The Tinian Cattlemen's Association formed as a direct result of the Guam Military Buildup in 2010. Our mission is to advocate for ranching and farming on the island of Tinian. We approach this through different objectives: encourage people to be involved in ranching, lobby and promote the concept of Tinian beef to the resident population and others, fundraise, support ranchers support (e.g., help repair fence lines), and work with the military to find mutually beneficial arrangements.

Our primary goal is to market U.S. Department of Agriculture-certified beef. The meat at stores is not local beef because it's not legal to sell local beef without U.S. Department of Agriculture certification. Tinian has done this in the past, slaughtering 15-25 animals a day (hogs and cattle). To produce U.S. Department of Agriculture-certified beef on Tinian a U.S. Department of Agriculture-certified slaughterhouse is needed.

2. Please describe the cattle/beef market on Tinian. Is Tinian beef consumed locally or exported (if so, to where)?

Most beef is consumed on Tinian. It is slaughtered on ranches and eaten in households and at cultural events (e.g., weddings). The Mayor's Office has a slicer that it loans to people. Many people rely on Tinian Beef as their main source of protein. Meat from a slaughtered cow will be given to many households who keep it in family freezers. One slaughtered cow ends up spread throughout the community. One cow can provide about 250 dinners. Local residents consume virtually all parts of the cow carcass, leaving little waste. Cow feet are the first thing people ask for.

People are pretty much subsistence producers because they cannot retail it. Cow meat is also used for barter and trade, such as trading beef for fish. Once in a while we are able to sell a cow or bull. Once we have a U.S. Department of Agriculture-certified slaughterhouse, the market will open up.

We also ship beef (live and slaughtered) off island. People in Saipan buy young heifers as breeding stock. They occasionally buy a bull. It is legal to sell and no permit is needed because the cows are not going to retail. We do not currently keep statistics on that, but intend to start. Sometimes cows are stolen and sent to Saipan. We also send some cows to Palau, Yap, and Guam.

The major challenge to ranching on Tinian is that permits in leaseback area are for one year, so permit holders do not want to invest in infrastructure or the land. Federal agencies are reluctant to give loans to ranchers in the Military Lease Area because they don't have long-term rights and so there is little certainty that the investment will pay off. We are trying to work with Department of Public Lands and Department of Defense on this. Department of Defense has not given a clear timeline on its intentions with the land so we are asking Department of Public Lands to issue permits for 5-year increments. Sometimes Department of Defense is receptive to our suggestions but Department of Public Lands is reluctant. We worked with Department of Public Lands to issue permits for larger than 5-hectares.

The Northern Marianas College-Cooperative Research, Extension, and Education Service and the Mayor's Office worked together to construct an insemination station to improve the genetic stock of the cattle.

Beef production on the island is community capital. We have about 60% of the Lease Back Area in production. The Tinian herd approximate value is \$547,550. Based on animals slaughtered by people with permits, the value of beef sold in 2013 is approximately \$97,350, but about double that count is actually slaughtered every year.

Estimating conservatively, the replacement value of fencing using all new material would be about \$2 million, not including labor.

Ranchers have received about \$3 million in U.S. Department of Agriculture grants in the past couple of years. Tinian is the only place in the U.S. where people who do not own the land can get such grants. Leaseholders (i.e., on public non-Military Lease Area lands) can get the

grants, but it's still difficult because the U.S. Department of Agriculture wants longer leases than year-to-year to make its investments worthwhile.

3. A presentation by the Cattlemen indicates that 742 hectares in production, 37 Cattle Operations, all cattle and calves-1,043, approximately 177 animals sold. Is this information still accurate? (Other info provided recently indicates that there are 46 ranches on Tinian, as per the most recent Department of Public Lands permit department).

That information is accurate. Animals "sold" were slaughtered for which a permit was obtained. There is a permit to slaughter, but this is not an accurate number of animals slaughtered because some ranchers don't go through the permitting process. The real number is probably more than double. Department of Land and Natural Resources issues the slaughter permit for \$2.50.

4. Of the hectares, ranches and cattle mentioned above, how much is in the Military Lease Area compared to outside the Military Lease Area? (Other information provided to our colleagues indicates 32 of 39 (37ish) ranches are within the Military Lease Area).

About 32 ranches are in the Military Lease Area and about 46 ranchers in total. Each ranch has individual family members who own individual cattle in the family herd. Individuals outside the family can also own cows in a herd. The ranchers are talking about forming a co-op for marketing to get outside investors to help build a slaughterhouse and purchase cows for marketing.

5. Given the number of cattle currently grazing and the fact that there had been up to 14,000 cattle on Tinian at one point in time – would you consider the space available adequate, more than adequate, or less than adequate? Is there a Tinian-specific optimal ratio of acres per head of cattle?

During the Micronesian Development Corp. era around the mid-1960s, Micronesian Development Corp. had about 14,000 head of cattle. The Micronesian Development Corp. continued to shrink the herd until it was no longer profitable to continue operations circa 2008.

We estimate that we need a minimum of 2,500 cattle for a slaughterhouse to be viable (though we still expect it to need some level of subsidy). Currently, we need about 1 hectare per cow, which would mean we would need about 2,500 hectares.

Thanks to our collaboration with the Marianas Grazing Academy and others, we are learning how to improve our efficiency. The Marianas Grazing Academy did a study on pasture management, incorporating improved pasture legumes for grazing, and good rainwater management that estimated an ideal of 2.5 cows per hectare (0.4 hectares per cow). This efficiency also depends on the season (rainy or dry).

Some ranchers are already reaching 2 cows per hectare (0.5 hectares per cow) based on better ranching techniques learned through training and pasture improvements. Some pasture management techniques are rotating cattle, breeding good grass varieties, and creating a 3-D

pasture of grass with high-protein shrubs. We look to Australian practice where they can put 6 times as many cattle on the same land, after planting hedgerows of improved legumes for grazing.

We can maximize use of our land without expanding. If we can increase our efficiency to about 2.5 cows per hectare, then perhaps we would need between 1,000 and 2,500 hectares.

6. Is there other available land, that is not currently used, that could be used on Tinian for grazing activities?

The island is small to begin with. Two-thirds of it is controlled by the military, so we're talking about the remaining one-third. Of that one-third, the plateau area is the only property available and the plateau is planned to have homesteads and tourism industry amenities.

There is still about 1,200 hectares available in Lease Back Area that are not being used, such as the "Old Village" in middle of the island. That entire block is good land. The Municipality and the Natural Resources Conservation Service were trying to build an agricultural park, but this area was selected as a mitigation area for the Tinian Monarch. Originally, the mitigation was to be somewhere else, but Department of Defense selected that area. Ironically and unfortunately, that area is not a good mitigation area for the bird because it's not good habitat for bird. Some people believe the Department of Defense manipulated the situation to get it designated as mitigation habitat to reserve the land and keep us from using it. We want to negotiate with Department of Defense to move our ranchers to that area or any other areas that might be available. It is our hope that the Department of Defense coordinate with our local agencies and farmers in developing strategies and identify funding in order to facilitate the long-term viability of shared use the lands in the northern part of the island for both military and agricultural operations that also serve our Department of Defense interests and missions, such as humanitarian efforts.

The land south of the Military Lease Area is reserved for homesteads, which is public land. A small amount of land in the south is available for anything. There are maybe 750-800 hectares. It is not politically possible to move ranchers into the southern area because if you want to use public land over 5 hectares, you have to go through the CNMI Legislature, which makes it politically challenging.

By law 50% of that public land in the south is going to homesteads. The rest of the land is going to private investment. A casino is looking at the plateau. An investor is looking to build a hotel and golf course. Department of Public Lands wants to use the land for a commercial purpose, not for ranching or farming. Even if that investor pulls out, it would mean about 300 hectares become available, which is small and still needed for future commercial development. We cannot take the herd down south.

There is a concern that asking these kinds of questions is the military's way of preparing us for the military to gate off the northern two-thirds of the island. Closing off all the land will kill the industry and our way of life on the island. Everything we are trying to do is on hold while the military figures out what it wants to do.



For a historical perspective, after World War II, people were farming and there were large leases. Then the military lease happened so the whole northern two-thirds were locked down. People and farms were forced to move south, but nothing happened in the Military Lease Area. Similarly, in the southern areas, ranchers got evicted to make way for future development that didn't happen.

Ranchers probably wouldn't agree to being relocated because they are used to being burned by Department of Public Lands. Decision makers on Saipan will override ranchers' desire use of the land to get a "higher and better use" and increase their tax base. We pay \$5 per hectare for ranching. A golf course pays \$10 per hectare. Tinian will get a golf course; it's just a matter of time and figuring out location.

7. What are some of the factors that make up the cost of raising cattle on Tinian?

Costs of production – everyday haul water to animals – fuel, water, resources to keep truck maintained; barbwire is \$130/roll; steel poles are not always readily available, but probably \$21/pole (galvanized steel); if use wood have to replace it almost every year; people got started by buying cows and materials from when Micronesian Development Corp. went out of business; a lot of cost is labor (rancher's time) and fuel.

8. On average, about how much does it cost to raise a head of cattle? Does the average cost change based on the number of cattle owned?

It is difficult to estimate the cost of average cost of production per cow. J. Dela Cruz keeps receipts for fuel now to start developing that estimate. The cost of fuel drives everything and is a good proxy. He never writes down the hours he spends at the ranch, but he goes there every day. Daily access is needed at least to provide water. J. Dela Cruz provides about 400 gallons of water for 80 cattle. Some ranchers, though, have water catchment so may need daily access during certain portions of the year. Daily access is also needed to do regular grass maintenance. On the weekends, ranchers occasionally hire hands to catch up.

9. How much of the cost of raising cattle is unpaid labor (i.e. the time and effort of ranchers)?

This is not tracked currently. But it is a lot of the cost. Need to do work every single day.

10. When cattle from Tinian are sold, what is the approximate sale price (per head, or by the pound)? (Cattlemen's presentation indicates Pounds sold = 88,500 Valued at \$97,350, or \$1.10 /pound).

Selling a cow to Saipan is about \$0.60-0.75 per pound live-weight. The Marianas Grazing Academy provided us measuring tapes for estimating animal weights for more accurate pricing. Before we had the scale, ranchers eye-balled it and it turns out they consistently underestimated the weight. They thought it was 250 pounds and turned out to be closer to 500 pounds. The highest price so far was \$1,500 for a live bull. Usually people buy a live heifer that sells for about \$500-600. The shipping cost is \$200 to Saipan. The buyer pays shipping cost.

If a rancher were to sell the beef now without the slaughterhouse (i.e., underground market), he would probably get around \$2.50 per pound and up to \$3.00 per pound.

11. How many people are employed in the cattle ranching industry? Where did people get cattle ranching skills?

About 150 people are involved in ranching at any point in time. Of those, probably about 70 people are constantly involved on a daily basis. The number varies based on weather and what's going on. When animals are slaughtered, many more people are involved in the processing of the carcass.

12. What are current beef processing procedures? Is there an existing beef processing facility?

Current beef processing is to slaughter a cow the traditional way – hang it from a tree and cut it up. We are trying to start a U.S. Department of Agriculture-certified slaughtering facility. That is the biggest obstacle currently to having a beef industry here. Sell a live animal loses money compared to selling it as food, so a slaughterhouse would be good for our industry.

The U.S. Department of Agriculture has stringent facility requirements, but recently it has created new regulations for small-scale facilities to promote small-scale food production. Our approach has two phases. Phase 1 is to build a “kill unit” where someone can bring a cow, have it slaughtered and certified by the U.S. Department of Agriculture, and the meat goes directly to a store or person's freezer. Basically, it is wholesale. The Municipality and Legislature support it. There is a draft design under review by the Department of Public Works and soon will go out as a Request for Proposals. We hope to have that up by the end of 2014. The cost estimate is about \$100,000-250,000, including the corral, kill unit, and septic system. Phase 2 would add a processing facility, but that is limbo pending what the military decides to do.

Right now we're asking ranchers to build herds in support of the future slaughterhouse. Beef production has “heifer lag” which is two years from when heifer is born to when it can produce. We're hoping in 5 years to have the herd size be two or three times larger, somewhere around 2,400-5,000 cattle. About 2,500 cattle would sustain the slaughterhouse at a financial break-even point.

It's a challenge to increase the herd because the ranchers are in limbo about the military lease. People don't want to expand the herd not knowing what the military will do in a few years. People worry and don't want to waste effort and financial resources.

A meat processing facility would likely make local meat more expensive for local people, but people are willing to pay up to \$3.00 per pound for fresh local beef already.

Marketing the beef from a processing facility will increase profits and marketing options. Inputs would increase a bit as you would then have to prepare all the meat – clean, cut, store, and package it. But, people on Guam consume about 30,000 cattle a year, so we could supply that market and other niche markets, such as the Guam Natural Foods Cooperative or the commissaries.

13. What is the cultural relevance of cattle ranching and the beef industry to Tinian?

Cattle ranching is modern Chamorro culture. Ranching is a wonderful way of life. A lot of local people grew up working on the Ken Jones farm (which became Micronesian Development Corp.), so people got the skills and started doing it at the same time as the MDC. Some of these ranches are already into third generation. Ranches are family-owned. Children are interested and help out with the business because tropical beef production is easy: build fence, cut grass, bring water; there are not as many challenges as raising beef in other places.

The worst thing that is happening on our island is that people have limited access to fresh, healthy foods, unless they grow their own. Much of what is in the stores is frozen, canned, and processed foods, all of which are imported at a great cost to the consumer. The Marianas Grazing Academy did a cattle ranching feasibility study and examined why meat in the store is so cheap for us here on Tinian. They discovered that some of the meats have been frozen for more than two years in the stores, since the time the animal was slaughtered. Meat that is overstocked or expired gets sent to Tinian. The meat we get from Colorado is 27% fat. Everyone eats the frozen food because there's no choice.

Tinian cows already meet Whole Foods quality. We raise them in the open, feed them grass, and don't use hormones or other treatments. We couldn't afford it even if we wanted to do it.

Cattle ranching is also about us becoming more self-sufficient and sustainable. Our families and economy are too dependent on tourism, which will be affected by what the military decides. When the Japanese economy went bad a few years ago, it was catastrophic for us and we had no control over that. The beef initiative is a key way to diversify the economy, feed the people, and have food security. Our generation is pushing for diversification of the economy and food sources.

Tinian's pastures are completely different from the U.S. mainland and Hawaii. On the mainland, everything is corn-fed. Hawaii doesn't have enough pasture to grow cattle from birth to slaughter, so cattle go off island for slaughter. Tinian has extremely fertile soil. Grass can grow up to 4 inches per day. Cattle can withstand storms; no one lost animals in typhoons. For sustainable food production, almost nothing can beat tropical pasture-fed beef. Our animals are well-adapted to the heat and we are actively improving their suitability to here through a genetic breeding program.

14. What are concerns about the military and the proposed CNMI Joint Military Training (CJMT) action?

During Forager Fury II, the jet flyovers had no real effect on cattle. The cattle were not even bothered to move.

Dealing with Department of Defense is difficult because the decision makers at Department of Defense are always changing, so we have to keep educating Department of Defense representatives, when new ones come along.

Overall, the opinion is that the federal agencies need to integrate better. The Spanish and Japanese developed Tinian to have three economies: tourism, agriculture, and military. Why can't the Americans do that? U.S. Agency for International Development does initiatives in foreign countries for agriculture, but we cannot access that because we are U.S. citizens. We expect our own federal agencies to support us but they don't unless they are pushed. The Department of Defense could help with that, but the fear is that the Department of Defense will use its influence over other federal agencies to restrict federal aid to ranchers. We hope that the Department of Defense will see the great potential in developing our agricultural production systems (cattle, crops, and others) to support military and civilian populations on the island. The island of Tinian has supported regional military operations for many centuries beginning with the Spanish, then German, Japanese, and American forces. Tinian is the only island in the Pacific region that has extremely fertile and porous soils, large underwater aquifers, flat lands that can grow food and fuel for troops and civilians alike.

## **5. Open Topic**

We have research plots around the island at different farms where we test different varieties. There is concern about invasive species, such as scale insects, that might affect the productive capacity of our grasses. Our main grass is invasive and already covers most of the farms out here. All the seeds we bring to test are treated to reduce the risk of introducing invasive species. The testing varieties are bred to stay short and produce minimal seeds. We are working with Natural Resources Conservation Service about funding for planting grasses or to take down some of the forest to give the cows a chance to eat it. Trees are important for food security. When Tinian becomes really dry, we cut trees down as emergency food.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. How many U.S. Department of Agriculture grants do Tinian cattlemen have? What is the total value of the grants?
- b. Can you provide a copy of the PowerPoint presentation?
- c. Does the Commonwealth Utilities Corporation have different rates for cattle ranching compared to other water users? If so, what are the rates?

## **Tinian Department of Finance**

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**Agency Name:** Tinian Department of Finance

**Date:** January 29, 2014 at the Tinian Mayor's Conference Room; 8:00 a.m. to 8:42 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Edward DLC Shai	Department of Finance	Resident Director	Edwarddlcshai@gmail.com	287-2474/433-6625
Natasha Pascua	Office of the Mayor of Tinian and Aguigan	Assistant Chief of Staff	Natasha.pascua@outlook.com	670-789-4955
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department.

Provides services for eight Tinian agencies and the public. The Department takes care of expenditures - purchase requests have to be approved by Finance. The Department checks to make sure there are funds in the business unit fund. The CNMI government has money, they give it to Office of Management and Budget (Saipan Finance), and Office of Management and Budget disburses money to Tinian business units at the beginning of the month. The department also collects revenue.

Budgets: \$123 million for CNMI, of which \$5 million for Tinian for fiscal year 2014 for all Tinian agencies. \$270,000 is for monthly operations, and of that the Tinian Mayor's office gets \$78,000 monthly.

2. Are revenues garnered from activities on Tinian kept by the Tinian government, or are they remitted to the CNMI government? How does the process work?

Once money is collected, it is deposited at the bank and goes into the CNMI General Fund.

3. What are some of the major tax revenue generators for Tinian (i.e., what taxes bring in the most revenue)?

Finance collects revenues daily from different sources – court fees (7 types); business license fee; business gross revenue tax, hotel occupancy tax. The biggest revenue source is gambling (jackpot tax) at small poker places like Cha Cha. The Gambling Commission collects funds from Dynasty; this is out of the department of Finance jurisdiction.

4. What has the recent trend been for CNMI government expenditures on Tinian – have expenditures been increasing, decreasing or remaining stable?

Revenues were insufficient, falling to \$500,000-600,000, so people worked 80 hours but were only paid for 64 hours in 2011. This was a CNMI-wide requirement from the central government. Around 2012, revenues increased so people were paid for 80 hours.

5. What revenues are used to fund Tinian’s government employees?

\$5.9 million includes everything, total budget allocated by CNMI.

\$4.5 million for salaries.

\$738,000 for operations.

6. What revenues are used to fund Tinian government equipment purchases and capital projects?

Provided budget information (attached).

7. About what portion of Tinian expenditures go towards schools, police, fire, etc. (public services) as compared to capital improvements?

Provided budget information (attached).

8. What is the real estate tax rate for agricultural land (including cattle grazing) on and off the Military Lease Area?

There is no real property tax in the CNMI.

## **5. Open Topic**

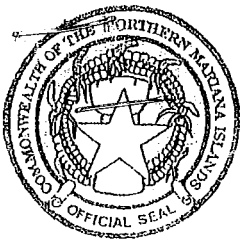
The department needs more funding for investigators because there are illegal Chinese businesses that are not paying taxes.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Can you provide a list of all types of business licenses and business on Tinian?





18<sup>th</sup> LEGISLATURE  
NORTHERN MARIANAS COMMONWEALTH LEGISLATURE  
P.O. BOX 500586  
SAIPAN, MP 96950

CONFERENCE COMMITTEE REPORT NO. 18-98

September 09, 2013

RE: H.B. No. 18-98, HD6, SS1

Honorable Ralph DLG. Torres  
President of the Senate  
Eighteenth Northern Marianas  
Commonwealth Legislature  
Capitol Hill  
Saipan, MP 96950

and

Honorable Joseph P. Deleon Guerrero  
Speaker of the House  
Eighteenth Northern Marianas  
Commonwealth Legislature  
Capitol Hill  
Saipan, MP 96950

Dear Mr. President and Mr. Speaker:

The Conference Committee to which House Bill No. 18-98; HD6, SS1 was referred, entitled:

“To make appropriations for the operations and activities of the Government of the Commonwealth of the Northern Mariana Islands, its agencies, instrumentalities, and independent programs, and to provide budget authority for government corporations for Fiscal Year 2014.”

begs leave to report as follows:

**I. LEGISLATIVE HISTORY:**

A. House Bill No. 18-98, the Appropriations and Budget Authority Act of 2014, was



# DEPARTMENT OF FINANCE

## DIVISION OF REVENUE AND TAXATION

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

SAN JOSE VILLAGE, TINIAN, MP 96952

TEL. (670) 433-1600/1606/1630

FAX: (670) 433-1615



### REVENUE COLLECTION REPORT FROM JANUARY 2013 TO DECEMBER 2013

JANUARY	\$457,131.36
FEBUARY	\$76,054.06
MARCH	\$10,456.59
APRIL	\$259,533.42
MAY	\$103,804.60
JUNE	\$119,640.28
JULY	\$458,693.83
AUGUST	\$197,514.03
SEPTEMBER	\$284,951.71
OCTOBER	\$545,653.67
NOVEMBER	\$183,171.61
DECEMBER	\$305,953.33
<b>TOTAL:</b>	<b>\$3,002,558.49</b>

### DAILY REVENUE

ANNUAL CORPORATION REPORT	COURT FEES:
ABC LICENSE FEE	
ANNUAL CORPORATION REPORT	COURT ASSESSMENT FEE
BAR TAX	POLICE CLEARANCE
BGRT	TRAFFIC CLEARANCE
BUSINESS LICENSE	TRAFFIC HISTORY
COASTAL RESOURCE FEE	PROBATION FEE
DRIVERS LICENSE	REPRODUCTION FEE
EMPLOYER'S QUARTERLY WITHHOLDING TAX RETURN	CRIMINAL FINE
HOTEL TAX	
JACKPOT	
PENALTY FOR DRIVERS LIC	
VEHICLE, BOAT, HEAVY EQUIPMENT, AND MOPED REGISTRATAION	

Edward D.L.C. Shai, RDH

Resident Department Head

Department of Finance

**Tinian Department of Labor and Employment Training**

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**Agency Name:** Department of Labor and Employment Training

**Date:** January 29, 2014 at the Tinian Mayor's Office; 9:04 a.m. to 10:00 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Jasper Borja	Department of Labor	Resident Director	jasperisa@yahoo.com	670-433-3700
Wendy Manglona	Department of Labor	Deputy Director	Wmanglona.tiqdol@gmail.com	670-433-3700
Sabina DLG San Nicholas	Department of Labor			670-433-3700
Anthony Barcinas	Department of Labor	Administrative Officer		670-433-3700
Natasha Pascua	Office of the Mayor of Tinian and Aguigan	Assistant Chief of Staff	Natasha.pascua@outlook.com	789-4955
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department, what are your goals and mission?

CNMI Department of Labor has an office on each island. There are two sections: labor enforcement, which enforces the laws, and employment training services section, which handles registration of workers and helps supply employers who need U.S. workers.

U.S. citizens and resident workers are our service population.

Every year we get the same budget, no matter what we request. Employment services is our focus so we ask for more funding of that to provide internet access and other services. We use a lot of budget for paper and ink.

We need career counseling. We have clients who work for a few weeks and then stop and then come back.

We do outreach to schools and job fairs to get students interested. We need to do a better job of reaching out to them when they are younger, not waiting until 10<sup>th</sup> grade or so. We also help people obtain their General Educational Development.

2. What type of employment training services does the Tinian Department of Labor and Employment Training Services offer?

We do not provide training services. Instead, we refer people for training services, such as to a non-profit or Northern Marianas College-Tinian.

3. About how many people per year do you provide employment training to?

The fundamental issue is employment training and funding for that training.

The business community does not appear to support training and prefers to hire foreign workers. Business owners see giving other local people those skills as a threat to their businesses. We need something like the Marianas Training Institute here on Tinian (Note: Marianas Training Institute is a Saipan-based organization that does training and skill development).

For example, the Dynasty has a welder position open. The Department referred a person to that job but that person doesn't have that skill. No one on island has that skill or is able to get training for that skill on island. And it's too expensive to commute or relocate to Saipan for the Marianas Training Institute.

Foreign workers are more focused on protecting their jobs than training local people to get the skills. We have to be humble to get training. If someone does get training, they often leave for Guam, Hawaii, or the mainland, because they do not have promotional opportunities or chances to improve their skills or grow.

Gaming training would be good opportunity, but can our people do it? You have to have good math skills to be a dealer.

Cost of getting educated also limits people who might otherwise apply for a skilled wage job, but a local job doesn't pay enough to cover the cost of education.

4. Census data from 2010 showed that there were 143 unemployed on Tinian. Is this number about the same now? What would you say the available labor pool on Tinian is?

The Tinian Department of Labor did a comprehensive survey in 2011 on unemployment and are trying to update it. The 2011 report has not been certified by the Census department so we cannot release the report. The number in the 2011 report is 142, which is about the same. We want to find out though if there has been an increase or decrease.

In our effort to update that report, it is difficult to get responses. People didn't want to respond and we have no way to follow up or make them respond. The best way to get

answers is to talk with them or get people with relationships to them to help out. It doesn't really capture underemployed as the federal government defines it. The survey doesn't really count people who don't want to work.

We are not aware of a trend. Unemployment is a problem anywhere and affects everyone, including businesses. Unemployment is not an individual problem, it is a community issue.

Employment services will try to identify why there is unemployment. Even if we are able to identify the issues and make a 5-year plan to address them, we don't have the funds to implement it. It is an impossible task. There are a variety of issues that prevent you from going out and getting a job – giving birth, becoming a home caregiver, etc. The Department needs to address those issues to provide people the services they need.

There are 895 workers on Tinian. Of these, 717 are foreign nationals, who mainly work at the Dynasty. The Dynasty hires local people. For the currently unemployed, the easiest jobs to fill are entry level; the hardest to fill are accountants and other high skilled jobs. There are some high skill positions available, but we don't have qualified people. Also, there are not enough positions to train people up from entry-level to high skilled.

We do not know the number of illegal workers here, who or how many. There is no U.S. representative here, so the Department works alone. The Departments of Finance and Commerce should work together on this.

5. Are there people on Tinian that are available and willing to do construction work? Would you be able to make an estimate of how many?

Locals do not do much construction work. Some have carpentry and masonry skills, but not really construction. The Department is trying to get Northern Marianas College and the central government to provide those skills so local people can compete.

6. Do you provide employment training to non-resident guest workers? Are any of these folks unemployed?

The department does not focus on foreign workers. A different department is responsible for them. Foreign contract workers are always tied to a job, so they have no unemployment. Tinian residents have difficulty competing with them because of the lack of skills.

7. To what degree do local businesses comply with the 30% local hire law?

We enforce the law that 30% of workers should be local. This law is being gradually implemented. There are positions, but local people aren't skilled enough to meet the legal requirement to do the job. The Dynasty puts out notices for positions and have hired about 100 local people so far. They are moving toward meeting the requirement. Those positions are mainly for security, cleaning, and the restaurant.

8. What is the relationship between subsistence activity and employment?

People practice fishing, hunting, and gathering to supplement their income or provide for themselves and others if unemployed. Local people pick and sell peppers as supplemental income. The Department doesn't have the means or even the jurisdiction to get involved with pepper industry.

If the northern two-thirds of the island were closed, locals would have to look for more work, which would increase unemployment rolls. People depend on gathering/subsistence to supplement their income. Loss of access to peppers would hurt people and push people into unemployment on the margin.

Loss of access to peppers would also hurt our culture and tradition. One response would be to try to farm it. It grows wild and is spread by birds. Farming doesn't have the taste and excitement/atmosphere, the efficiency of gathering. Also, farming is labor intensive. Tinian doesn't have the infrastructure and machinery to cultivate the land at scale to replace what would be lost from gathering in the Military Lease Area.

**5. Open Topic**

**6. Conclusion & Action Items**

No additional follow-up information requested.



**Tinian Department of Land and Natural Resources**

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**Agency Name:** Tinian Department of Land and Natural Resources

**Date:** January 28, 2014 at the Mayor's Conference Room; 10:24 a.m. to 11:30 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Richard Farrell	Tinian Department of Land and Natural Resources	Resident Director	tiniandlnr@gmail.com	670-433-1400
Zania Fleming	Tinian Department of Land and Natural Resources	Deputy Director	flemingzania@gmail.com	670-285-3312
Joseph Dela Cruz	Office of the Mayor of Tinian and Aguigan	Acting Chief of Staff		670-285-4818
Natasha Pascua	Office of the Mayor of Tinian and Aguigan	Assistant Chief of Staff	Natasha.pascua@outlook.com	670-789-4955
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department, what are your goals and mission?

Department of Land and Natural Resources has three divisions – 1) Agriculture Division, which has an administrative section, a heavy equipment operations section, a repair and maintenance section, a quarantine [border] section, a forestry section, and an animal husbandry section; 2) Fish and Wildlife Division, which consists of enforcement and data collection sections; and 3) Parks and Recreation Division, which maintains historical landmarks and beach sites for the public and tourists.

2. What are your major sources of funding, the CNMI government? Federal money?

Funding is from federal grants and from CNMI central government. CNMI government funds employees. Federal grants are processed out of grant clearing house on Saipan; if we qualify for a grant and the grant meets our needs, then we would apply for it. The Fish and Wildlife coral reef initiative is funded by a grant to CNMI government in Saipan and some money filters here to Tinian. Other grants are related to forestry, which are the Urban and Community Forestry Program and the Forest Stewardship Program. The Natural Resources Conservation Service (part of U.S. Department of Agriculture) provides grants and the money goes directly to farmers and ranchers (Environmental Quality Incentive Program).

3. Where does money used to fund employees come from?

CNMI central government funds most of the employees positions there are some positions that are federally funded (Brown Treesnake).

4. Where does money used to fund facilities and equipment come from?

From both Federal funds (grants) and CNMI funds.

5. How many full-time equivalent staff were employed at the Tinian Department of Land and Natural Resources Parks and Recreation in fiscal year 2012? There are three full time employees with the Division of Parks and Recreation.

Division of Fish and Wildlife

Two employees for Fish and Wildlife for data collection and enforcement.

- Division of Agriculture
  - has 9 total employees: Civil Service Positions
  - Three are quarantine inspectors who inspect the airport, seaport, post office, and North Field (Animal and Plant Health Inspection Service and Plant Protection and Quarantine certified). They get equipment and training from U.S. Department of Agriculture.
  - One employee in animal health who is a Para-vet for animal husbandry.
  - One repair and maintenance staff
  - Three Heavy Equipment Operators
  - One Admin Officer

Additionally, staff members from the Mayor's office work in Department of Land and Natural Resources through a memorandum of understanding.

#### 6. Fish/Fishing

Department of Land and Natural Resources provides fishing permits. Gill/throw net permits (on shore fishing along reef). These are ministerial permits – if the nets meet criteria, then one can get the permit.

The entire island is a fishing/hunting ground. Where you go depends on what you want to do. The entire upper two-thirds of Tinian are all spear fishing, cast line, gill net, and throw net places.

The Tinian fishing grounds are healthy, but if fishermen are limited to only 1/3 of the island's coastal waters, it would decimate that 1/3 of the fishing waters.

The Fish and Wildlife coral reef study is a survey of fishermen on Saipan. Despite its focus on Saipan, it reflects commonalities with Tinian concerns, such as increasing the Marine Protected Area, closing the northern 2/3 off for 40 weeks; it consequently impacts to the fishing lifestyle. A recent public meeting on the Marine Protected Area was cancelled and is on hold for the time being. There is discussion of the Marine Protected Area expansion process resuming in March/April 2014. The focus on that area is to help create a tourist attraction for diving and snorkeling, but there is not enough funding to maintain the Marine Protected Area, no study was done to determine the right area for an Marine Protected Area, and there wasn't any public input on whether an Marine Protected Area was even appropriate. The whole thing could have been done more properly. The legislature did not take into account the CNMI Joint Military Training (CJMT) when they passed the Marine Protected Area law.

The coral study also expressed cultural values that we share here on Tinian. People go fishing to catch food for funerals, weddings, and other important events. Those values applies to us on Tinian. We have some boat fishermen who only sell to the Dynasty; but they also do favors as family or community members to catch bottom and trolling fishing.

#### 7. Hunting

People hunt turtle doves (seasonal), coconut crabs (seasonal), sea crabs (not seasonal), and goats (not seasonal) and wild chicken (not seasonal).

The entire island is a fishing/hunting ground. Again, where you go depends on what you want to do. During the season for coconut crab, anywhere on the island (north/south) is prime. If you set a good trap, then you can get the crabs. The best hunting is in the Military Lease Area.

One is not permitted to discharge firearms in or near residential areas, so everyone goes up north to hunt during bird season. Wild goats and chickens are also hunted up north.

#### 8. Where are some of the major on-shore fishing areas that people on Tinian use?

- Puntan Masalog – eastern shore – people go cliff/ spear fishing.
- Long beach – favored area for spear fishing, cast net, and gill net.
- Puntan Asiga – great area for casting and spear fishing, when the water is calm.
- Chiget to White Cross – great for sea crab, throw net, gill net, rod and reel.
- White Cross to Puntan Diablo – prime spear/cliff fishing and casting.
- Southwest to southern point – great trolling fish and bottom fishing.
- Eastern side – all spear or cliff fishing.
- Kammer Beach/Taga Beach – all recreational beaches.

9. Are any on-shore fishing areas currently considered crowded?

A lot of fishers and hunters are concerned about crowding. If we lose those northern areas to military training, then it will put pressure on the southern end and deplete fish stocks there. The whole western side of Tinian is good fishing. There is no real pressure right now, but will be once the military closes of the northern 2/3.

10. Subsistence

Young people learn fishing and hunting skills at an early age. Everyone does some subsistence activity, makes some living off the land. Everyone goes to the beach on weekends. Each family does some type of fishing – spear, rod and reel, or nets. Everyone does this as a supplement to help make ends meet. It's a cultural value.

During the season for little goat fish and little rabbit fish, everyone follows the tides and when they are right goes out as a community to harvest the fish.

Southern tip, eastern side there is an area to go hunting. As far as fishing, people go up north. Fishermen rotate themselves with their own conservation approach. Some fishermen are subsistence/commercial. They sell to pay for their trip.

Every weekend families pick peppers. Retirees go up every day; employees and other people go on weekends. The Military Lease Area has greater overall use on the weekends. The Pika (“hot”) Festival is in two weeks (February 15), so people are harvesting peppers now. There's a daily increase. The festival is usually the second weekend of February. It is set for that date to spread it out from the May festival and get some overlap with the triathlon.

We have seasonal yams up north in November and December. People don't grow yams because they are tastier when collected from the wild, same for the hot peppers.

Medicinal plant collection – there is a grant coming out from U.S. Forestry to identify plants and publish it. There are medicinal plants, citrus plants, wild fruits that are pest resistant.

#### 11. Condition of parks?

Department of Land and Natural Resources staff members are doing their jobs, but resources are tight, so people are not able to be as efficient. We need more staff and equipment. A lot of sites are in North Field. We have three guys clearing these sites by hand. Equipment failure and lack of replacement parts means the jungle grows back and can get out of control. The guys work hard and do the best job they can. Many staff members have used their personal equipment to perform government duties.

#### 12. Cattle ranching

Cattle have plenty of room to graze and help reduce the incidence of disease. We had problems with drought that wiped out some of the herds. Drought season starts in March and can lead to forest fires.

Department of Land and Natural Resources has an equipment rental service run by the heavy equipment operations section. We provide equipment to cattle ranchers to help control invasive plants. We charge \$12.00 per hour for mower and disc service and \$20.00 per hour for bull dozer. The funds that are collected are used for the repair and maintenance of the equipment. This is a way to get some funding but there is high demand and access to replacement parts has been a challenge in providing reliable service to farmers and ranchers.

There is one para-veterinarian worker who inspects cattle slaughtered traditionally. Cattle and Swine farmers have learned proper management techniques about disease prevention/treatment and have taken steps to manage their herds better.

#### 13. Produce

We are looking at introducing a new breadfruit species, trials have begun on Saipan and will be brought to Tinian later this year. The new species is being used to make flour. Traditional uses of the fruit can still be done with this new species.

A lot of produce is being farmed by contract workers. Foreign farmers are bringing seeds from Asia; local farmers can't compete and are no longer in business.

Tinian has some commercial produce farms that supply stores here and on Saipan. They are outside the Military Lease Area; the farms are owned by foreign nationals who are leasing residential land. Non-U.S. residents cannot qualify for a permit in the Military Lease Area.

#### 14. Wildlife

People do see a need to do conservation and protect the coral reefs. Most visitors go scuba diving and snorkeling, which is good for the economy. This mostly takes place in the southern, leeward side.

Tinian has quite a bit of green sea turtles that live and feed off our coastline. On a given day on the southern end turtles can be sighted. All of the beaches on Tinian are turtle nesting sites. Department of Land and Natural Resources Fish and Wildlife (Tammy Summers from

Saipan) and a Navy representative (Paul Wenninger) from Guam come over every month or so to do a survey of nesting sites. All signs of a nesting site are removed or covered to prevent identification of a nest and to prevent poaching.

Migratory birds/Turtles – The tracking of birds and turtles is informal. We don't have resources to do that. Federal funds dictate how many biologists we can have in the CNMI and all are stationed in Saipan.

#### 15. Cumulative projects

Currently, the Department of Land and Natural Resources Parks and Recreation division is responsible for the maintenance of several sites with-in the North Field area that has been designated as a National Historical Landmark. In 1984 the people of Tinian petitioned the federal government to make North Field a National Park. It was then denied by the Department of Defense due to the lease agreement that was signed prior to the petition. This has created some barriers on the maintenance and development of current sites and other sites that have not been opened up that have significant historical value.

#### 16. Biosecurity

Quarantine Inspectors for the Department of Land and Natural Resources inspect all in bound cargo that is brought to the island. For the amount of cargo coming in, the staff is adequate. If there is a big increase in cargo, then staff would not be adequate.

Inspectors are civil service staff that is funded by the CNMI government; training is provided by U.S. Department of Agriculture. For Quarantine, the inspectors receive assistance from U.S. Department of Agriculture some of the assistance may include a vehicle to conduct inspections at the seaport, airport, post office and at North Field when military flights are being conducted. All of the inspectors are certified by the U.S. Department of Agriculture Animal and Plant Health Inspection Service-Plant Protection and Quarantine to conduct inspections on inbound flights, vessels, passengers, passenger baggage and cargo. They also have had first-hand training with the Brown Treesnake and most recently the Coconut Rhinoceros Beetle on Guam.

The bio-security (Brown Treesnake) facility is adequate for current throughput. The facility was built because of the International Broadcasting Bureau construction. International Broadcasting Bureau paid for a containment facility that was located on the eastern end of the commercial port dock. A typhoon destroyed half of the facility by washing out the asphalt and concrete. Federal funds from U.S. Fish and Wildlife were used in 2006 to build the current bio-security (Brown Treesnake) facility. The facility can currently hold about 10 40-foot containers. There is no bio-security (Brown Treesnake) facility at the airport currently, but one is needed. Our present concern is that there has been an increase in the amount of air and sea traffic for military training. The chances of an invasive species establishing itself here on Tinian have greatly increased and with other allied countries training here as well, this will increase the chances even further. A bio-security plan needs to be in place prior to the record of decision, that way standard operating procedures can be put in place prior to the



buildup. We have one Brown Treesnake detector dog currently on Tinian. The canine can only be used for a certain amount of time for inspection, once the canine has reach that time period the effectiveness starts to decrease, then the handler and the Quarantine Inspectors will have to do visual inspections.

We have a biosecurity strategic plan since the Joint Guam Program Office study was done, that we've shared with local and federal agencies (handouts distributed).

## **5. Open Topic**

The way we get our information from fisherman and hunters is not a traditional survey. We don't give them a survey and ask them to fill it out. We know through verbal transmission and guidance. Surveys that you read about, such as the one on the Marine Protect Area, can have different outcomes when you sit down to talk to people. A lot of fisherman/hunters tend to be more vocal. To do a survey, you have to sit down with fisherman at the beach and talk; then they say that they are afraid to give something in writing because it might be used against them. People are worried about what will happen to their fishing and harvest grounds. If you do a survey and give it to them, they feel threatened. Those who fish, hunt, ranch, and farm are doing it for subsistence due to the high cost of utilities and commodities.

Chiget has not been cleaned up, which is a sore spot for people. People go there for fishing because it's a good spot. If we bring in more ranges, how can we ensure the military will clean up after themselves, when they haven't done so in the past?

The Annual White Cross event is held on All Souls Day in November at the White Cross. The White Cross or Cross Point commemorates when in 1974 eight (8) people perished there on boating accident going to Saipan. (Note: 1974 was when Freedom Air was established).

June 2014 will be the 70th anniversary of the atomic bomb. Veterans and/or their families come out, stay at the Dynasty, and do daily tours. The veterans help identify where historical landmarks were. There is also a Veteran's Day ceremony and Memorial Day ceremony.

Military training notifies Commonwealth Ports Authority before it comes to Tinian for training, but sometimes quarantine officers only get an hour's notice. If training is conducted after hours, then inspectors will charge an overtime fee. We had a standard operating procedure 10 years ago that we would be given 24 hours' notice; now sometimes it's only 15 minutes. We want some type of communication protocol to know the number of people on board, the cargo, cargo origination and destination, and contact info. The U.S. Department of Agriculture Airport Maritime Operations has a standard operating procedure with military protocol in there. The document is online.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Where does taro production occur?

There is some taro being raised within the Military Lease Area and the southern 1/3 of the island. Production is mainly for subsistence use.

- b. Does farming occur on any lands in the Military Lease Back Area? If so, what kind of crops, how many farms and acres, and what areas of the Lease Back Area?

Yes there is some farming with-in the Military Lease Area. Most of the cattle ranchers, if not all, grow some type of crop for family food subsistence. This may include but not limited to citrus, yams, bananas. The size of the farming area is usually small.

# **Tinian Department of Public Safety**

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**Agency Name:** Tinian Department of Public Safety

**Date:** January 29, 2014 at the Tinian Mayor's office; 12:30 p.m. to 1:45 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Ray Pangelinan	Tinian Department of Public Safety	Resident Department Head	tdpsrp@hotmail.com	671-888-4727
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

**Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe the general functions of your department, what are your goals and mission?

Written description provided (attached)

2. What are your major sources of funding from the CNMI government? Federal money?

Written description provided (attached)

3. How many employees, by type of employee?

Written answer provided (attached).

4. What is the condition of Tinian Public Safety facilities?

Written description provided (attached).

There are 3 cells for males and a single room with 2 bunks for females; rule is only detain for 48 hours; will detain longer than 48 hours pending judge approval in writing.

5. What equipment does Tinian Department of Public Safety have?

Written answer provided (attached).

6. Are there any improvements planned for Department of Public Safety?

The Facilities Office houses both Police and Fire divisions; there was a shovel-ready project to move the fire station up the hill but the money was reprogrammed, may be another 4 years before getting it approved and funded again.

A boating safety facility will be operational by end of February 2014. Also will exchange current 22-foot boat for a 24-foot zodiac boat with twin 150 engines. Department of Public Safety is looking to merge other enforcement doing water activities (like Fish and Wildlife) into that boating safety facility to increase manpower there; fire department on Saipan got a new boat that is multipurpose and can be used for Tinian and Rota. Department of Public Safety is working with U.S. Coast Guard to get decommissioned boat, Department of Public Safety acts on behalf of U.S. Coast Guard, doing search and rescue.

7. What are some of the most common crimes or social problems? How do you deal with these?

Burglary, followed by domestic violence. These are driven by economic problems; people either need quick cash (burglary) or are frustrated by economic situation and get into fights (domestic violence). Drugs and alcohol are also causes of these crimes. Ice is becoming an issue since marijuana trees were cut down.

Trend is probably that crime overall is going down; we have been tough and getting convictions; we have a stern judge as well, which helps. Being a small community, there is a balance of arresting people and recognizing the social impact that arrests will have on others because a person won't be there to do a job (e.g., no mechanic); community tends to be forgiving of those who get arrested, especially if convicted and served time.

8. Do non-resident (foreign) workers seem to commit more or less crime than residents?

Foreign workers tend to do less criminal activity; they know that if they are convicted of a felony they are automatically deported. Could also be deported for an accumulation of misdemeanors; people don't get automatically deported now, they serve their time, then get deported.

9. Have you had experiences with military personnel visiting Tinian or spending time at local restaurants/bars? Have there been problems, and how have those been dealt with?

Overall, most people don't seem to have comments/opinions on military training; cattle people are upset; cattle get disturbed by military activity and run into the road – happened a couple of times during last training.

Unexploded ordnance – haven't had accidental detonation recently. Two Tinian officers are Explosive Ordnance techs (experience since 1992); never responded to case of explosion. Have responded to cases of accidental discharge due to individuals clearing their property and unexploded ordnance under buried debris explodes. Mobile Unit 5 from Guam comes to take care of unexploded ordnance; any time accumulate 500 pounds of TNT, request Mobile Unit

5 to come; don't do any unexploded ordnance removal in north field area, focus is on removal in San Jose area.

Cooperation with military – the Marines have been good about advance notice; Department of Public Safety gets a notice of how many Marines will be on liberty for how long, then Department of Public Safety assigns staff and restricts access to certain areas (keep them out of residential areas); also have non-commissioned officers attached with local officers to help with community relations and provide equal representation for parties; if drunk and disorderly marine, then a call is made to both non-commissioned officer and officer and both come to the scene; example of dynasty two marines fought; these issues are rare; military tends to issue limited liberty with strict monitoring and in a limited area; e.g., at Long Beach; military liberty limitation has tradeoffs – potential for crime, but also economic benefit.

Goals in working with the military: 1) Try to make sure that communication is not an issue; 2) there is an ability to respond to a given situation; 3) ability to have someone answer or look into a situation.

For firefighting, cooperation with military – military already puts their fire trucks and medical units on scene first as pre-staging; their trucks situated at 3 points on island and it becomes a multi-agency response; we give our radios to military points of contact so they can communicate directly with us.

Potential Issues with the CNMI Joint Military Training (CJMT) project:

- 3-mile water safety zone – who will be responsible for enforcing restrictions and responding for safety measures; most common route of travel by sea is along western coast, so vendors will increase prices to cover extra travel cost; military may ask Department of Public Safety to do the enforcement out further, and Department of Public Safety will have to go out there anyway because of public safety; either way Department of Public Safety will still have to go out there; there is no source of funding identified to cover this additional expense.
- Round trip by boat – 30 miles, burn 40 gallons in 96-gallon boat, fill up boat costs \$400; doing search and rescue for people outside the 3-mile boundary will cost more resources and therefore lessen our ability to respond
- There are communication gaps in water outside 3-mile boundary as well because of how communication antennae are placed between Guam, Saipan, and Tinian.
- Fishing/coastal areas – 3-mile boundary pushes people out further, which increases risk; best dive spots are on the west side, pushing people further out. Normal distance people go out currently, west of proposed landfill for scuba diving and trolling; most common area for fishing is between Tinian and Saipan, situated between NE of Tinian and southwest side of Saipan.
- A lot of boaters rely on line of site as navigational tool; three miles out can't see well, especially in bad weather, people can get lost at sea.
- Road closures – Department of Public Safety established choke points on 8<sup>th</sup> Avenue and Broadway. Who is going to man the posts and make sure people are not going

beyond the barriers when live fire training is going on? If live fire training is going on during an event, then Department of Public Safety officers will be working the events and not ensuring safety at the choke points. Economy will be hurt by the closing of roads into the Military Lease Area – restricting access.

## **5. Open Topic**

Department of Public Safety also runs the motor vehicle administration section, which is considered non-essential, but it's a major revenue source because that's where people go to get licenses (driver, firearm, etc.).

Department of Public Safety does not have a dedicated dispatcher.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Can you provide data on the following?
  1. Crimes
  2. Domestic violence
  3. Juvenile crime
  4. Numbers of fire calls per year
  5. Ambulance runs





**Department of Public Safety**  
Commonwealth of the Northern Mariana Islands  
P.O. Box 911 • Tinian, MP 96952  
Telephone: (670) 433-7383 • Fax: (670) 433-2391



The Honorable Ramon M. Dela Cruz,  
Mayor of Tinian & Aguiguan

Ray S. Pangelinan,  
Resident Department Head

Subject: Response to CNMI Joint Military Training EIS/OEIS Socioeconomic Study Data Collection letter addressed to the Hon. Ramon M. Dela Cruz, Mayor of Tinian and Aguiguan under Discussion Topics Department of Public Safety Police and Fire Services.

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The Tinian Department of Public Safety (DPS) under the general supervision and direction of an appointed Resident Dept. Head by the Mayor of Tinian and Aguiguan for municipal public safety issues and a division of the CNMI DPS under the general supervision and direction of the Commissioner appointed by the Governor for law enforcement issues is tasked with the following general responsibilities:

1. Police and Fire Public Safety Services;
  - a. POLICE DIVISION:
    - i. Traffic
    - ii. Patrol
    - iii. Criminal Investigations
    - iv. Boating Safety
  - b. FIRE DIVISION:
    - i. Fire Suppression and Prevention
    - ii. Emergency Medical
    - iii. Search and Rescue
    - iv. HazMat Response

Tinian DPS receives its funds through the central (CNMI) government in an approved Fiscal Year Budget given to the Mayor of Tinian and Aguiguan as the expenditure authority and managed by a Mayor's appointee as the Resident Department Head (RDH).

Tinian DPS also receives competitive and limited federal grant funds through the central coordination and an expenditure authority of the DPS Commissioner.

Currently, Tinian DPS has the following staffing status:

1. POLICE DIVISION: 17 Officers
  - a. 1 Police Operations Commander/ Criminal Investigations OIC
  - b. 1 Traffic Commander with 2 Traffic Investigators
  - c. 1 Patrol Commander with 7 Patrol Officers

- d. 3 Criminal Investigator; 1 Domestic Violence OIC, 1 Violent/General Crimes OIC, and 1 Juvenile Prevention OIC
- e. 1 Boating Safety OIC with 1 Boating Safety Officer

2. FIRE DIVISION: 11 Fire Fighters
  - a. 1 Fire Administrator
  - b. 1 Fire/EMS Operations Commander
  - c. 1 Fire/EMS Supervisor
  - d. 8 Fire/EMS/SARU/HazMat Responders

Currently, All DPS Divisions, Sections, and Units are housed in the only Police/Fire Station located in central San Jose Village. Current conditions of the building are fair and are able to accommodate personnel and operations.

Response Capabilities (Typical/ Multi Agency Response):

1. POLICE DIVISION:
  - a. 1 Marked Sedan
  - b. 3 Marked SUV
  - c. 1 Un Marked SUZ
  - d. 3 Marked Pickup Trucks
  - e. 1 22 Footer Zodiac with twin 90 HP
  - f. 1 2-Seat Jet Ski
2. FIRE DIVISION:
  - a. 1 2,000 Gallons Tanker/ Pumper Truck Fire Apparatus
  - b. 1 Ambulance
  - c. 1 Rescue Utility Truck
  - d. 1 HazMat Crew Pickup Truck

#### **PRIOR EXPERIENCE WITH US MARINES**

During previous Marine Aircraft Group 12 operations, Point of Contacts were established between US Marines and DPS Personnel such as:

- Traffic for major movements on highways;
- Patrol for liberty hours;
- EOD for explosive storage and detonation operations;
- Fire for Fire Response, and;
- EMS for Medical Response.

This provided a clear approach in ensuring public safety during military operations with the community.

#### **POTENTIAL ISSUES:**

- 3-mile Safety Zone:
- Fishing/Coastal areas:
- *Road Closures :*

# **Tinian Dynasty Hotel**

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**Agency Name:** Tinian Dynasty Hotel

**Date:** January 30, 2013 at Dynasty Executive Office; 3:44 p.m. to 5:00 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Tom Liu	Tinian Dynasty	General Manager	Tdh.gm@pticom.com	670-433-9294
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Please describe your current operations; what services do you provide to your guests, what sort of experience do you offer your guests?

The Dynasty is the major economic driver on Tinian. Everything on Tinian revolves around the Dynasty. Star Marianas exists because of the Dynasty; it flies visitors from Saipan to Tinian and those visitors all stay at the Dynasty. The local economy is supported by the Dynasty, for instance, local supermarkets serve Dynasty staff and guests.

The casino is only one of the facilities in the hotel; there are also souvenir shops, and restaurants. Local folks use Dynasty restaurants; outside there are only a few choices for food - JC Café and Queens.

The Dynasty works with travel agencies and tour companies that arrange vacation activities such as all-terrain vehicle rides, diving, snorkeling, marine sports, fishing, etc. These companies are small businesses owned by foreigners. Bus tours are part of the package tour provided by the travel agency, the other activities are (cost) additive. On average, tourists participate in two activities while on Tinian.

2. The following data was provided by the Dynasty in 2008, is there more recent data available?

### Tinian Dynasty Hotel & Casino National Markets and Occupancy Levels

	2002	2003	2004	2005	2006	2007	2008
<b>Tinian Dynasty Markets:</b>							
China %	24%	39%	55%	58%	65%	63%	56%
Japan %	33%	30%	24%	22%	20%	18%	24%
Korea %	19%	13%	10%	7%	5%	8%	10%
Guam, Other U.S. %	8%	2%	1%	1%	1%	1%	2%
All Else:	17%	16%	10%	12%	9%	10%	9%
<b>Tinian Dynasty Average Occupancy Levels:</b>	<b>51%</b>	<b>45%</b>	<b>58%</b>	<b>62%</b>	<b>63%</b>	<b>54%</b>	<b>43%</b>

Occupancies calculated using data and/or assumptions vetted with the casino – total number of guests per year, 400 rooms, 1.75 average persons per room, average three-night stay.

Data on monthly visitors to the Dynasty, by place of origin, was provided for years 2009-2013 (attached).

Looking at the handout, China has decreased percentage of total guests, Korea has grown, and Japan has decreased.

Average length of stay is 2.5 nights, pretty consistent year over year.

USA guests are basically the military.

Hong Kong and Taiwan – no flights coming so basically 0.

99% of visitors to Tinian stay at Dynasty; a few stay at Fleming.

### Tinian Average Daily Visitor Count

	2002	2003	2004	2005	2006	2007	2008
Tinian Dynasty	418	369	477	504	512	437	350
Day Trippers	12	11	14	14	15	12	10
<b>Total</b>	<b>430</b>	<b>379</b>	<b>491</b>	<b>519</b>	<b>526</b>	<b>450</b>	<b>360</b>

Additional visitors (Day Trippers) equal to 10% of Dynasty numbers; average length of stay 3.5 days...e.g.,  $((418 * 10\%) / 3.5) = 12$

3. What is your target market currently?

Main target market is Chinese. Also Japan, Korea, and to some degree, Russia. Want to expand the Japanese market, but that is influenced because of larger issues – especially the two Star Marianas crashes – tour wholesalers stopped selling.

Mostly aimed at family travel. The demographic in China is changed and people there have more money for vacations. China is basically a one-child family, so many adults are spoiling the kids and taking them on vacation. When kids go on trip, it puts pressure on other families' kids to go on trips because the kids brag to each other of what they did, kids take pictures and post them online publicizing the hotel to kids' friends back in China. During holiday periods, we get tons of kids and that has been an increasing market.

Down the road, want to target higher end guests. The Dynasty is doing renovation to draw in higher end guests. The fifth floor is currently being renovated. Renovation is taking longer than expected because of other obstacles; e.g., slow transportation of materials from Saipan to Tinian (the barge only comes once per month). Have been using the SN-5 landing craft but this is expensive - \$3,500 for a 40' container from Saipan to Tinian. There are 11 containers in Saipan waiting to get here. Using contractors from Saipan to do renovation. Want to add a waterpark – finalizing deal with DPL because the park would use public land. Also submitted a plan for a 500 room additional hotel to be built on currently leased property.

4. Do your guests tend to stay on Tinian or visit other islands in the CNMI? What is a typical vacation offered by the Dynasty? Is it the same for high rollers?

Typical package visit is 2 nights in Saipan and 2 nights in Tinian. High rollers stay here in Tinian, maybe 1 night in Saipan, if they go to Saipan.

More than 90% of guests are just tourists, not casino players, they don't even go into the casino. People come to Tinian for history and to escape the cold weather. Tinian is close to Asian countries and visa-free for Chinese. People also come here for a serene experience, it's quiet, tranquil, all nature out there.

5. From where do you procure most of your supplies, do you procure food from Tinian suppliers? Has there ever been difficulties obtaining food from Tinian producers?

The Dynasty does get local produce, but the supply is inconsistent - may have a food one day, but not the next. Dynasty buys whatever people grow or catch but usually has to beg people to get things for them. The inconsistency is really hard for planning.

6. What sources of revenue do you provide to the Tinian/CNMI governments?

Gaming tax goes to Tinian municipality; since Nov of 2013, there is 2-tier tax system. For high rollers, there is a 5% tax and for non-high rollers 15% goes to the municipality.

Occupancy tax = 15% of room revenue that goes to CNMI government - some portion of this goes to the Marianas Visitors Authority but Dynasty hasn't seen this breakdown.

Also there is Business Gross Receipts Tax.

7. What have been your previous experiences with military operations on Tinian? Has your business been affected?

Inconvenient because military occasionally closes off North Field because it is a tourism area. If the military is based here for longer exercise periods, that would have an effect due to reduced access to tourism areas.

Forager Fury II – Just noticed the noise, we can hear the planes take off and landing, it happens non-stop for an hour or more.

Tourists love to take pictures with the soldiers in their uniforms; in China, people cannot approach soldiers.

8. Reports have long suggested that there is potential for other hotel resort casinos to open on Tinian. Is this something you consider likely or unlikely?

Dynasty has been here since 1998, 10 years. Other companies have gotten permission to build, but only made it to the ground breaking ceremony. There has been no actual development.

Two Korean companies do this - they lease public land but don't do anything with it; the potential project at Matua Bay for casino and 36-hole golf course, they are still paying the lease, but the plan is in default; we figure that these people are brokers, they secure the license, and then try to find investors.

9. Is your primary source of labor from off-island? If so, why? Are there Tinian residents that would like to work here? Would that be cost prohibitive?

Labor (workforce) is the biggest challenge here. The Dynasty gets accused of not using locals but really can't find enough local people to fill the 30% requirement. Turnover among locals is high, people don't want to work, and people don't have the skills. Last month hired 15 employees and had 13 resignations/terminations already. We've pretty much gone through the whole island population already. Can't get high school graduates to come work.

Use recruitment agencies in other countries (highly reputable ones) to help identify foreign workers; people who have worked on a cruise ship, in the Middle East, in the hospitality industry, and English speaking capable; people come initially for a year, and end up staying. About 60% of staff have been for 10 years or more, often marrying locally.

U.S. Citizenship and Immigration Services immigration – by end of 2014, all contract workers have to leave the CNMI; Congressman is trying to get a 5-year extension; without foreign workers, nothing will operate here, not even the airport.

Visa – if someone resigns or gets terminated, then a contract worker can look for another employer; before 2009, CNMI was doing its own immigration, very easy to hire someone, process took about a month, now it takes 6-12 months to get through the process; we haven't hired someone in about 3 years; last October was the last time we went overseas to recruit.

10. Cumulative

- Ferry system: Dynasty Hotel is proposing ferry service between Tinian and Saipan. This would be smaller than that proposed by Department of Transportation and would not include a terminal building. Service to begin by end of 2015.
- Major Improvements: include upgrades to hotel rooms and a \$15M water park.
- 1998 Improvements. Completed. 14-story addition to accommodate 412 rooms at current facility.



## 5. Open Topics

There is a general perception on Tinian that the Marianas Visitors Authority does not market Tinian or Rota, even Marianas Visitors Authority's logo shows it. Gaming Commission opinion was that islands compete against each other instead of cooperating and specializing- Mr. Liu agreed with this.

New things at the Dynasty:

New Dynasty investors want to get Tinian airport opened up for international flights. The airport is designated as international, so if flights come in, then Transportation Safety Administration and Customs and Border Protection have to staff it: it is their responsibility. There are some logistic issues at foreign airports, the new terminal needs to be brought up to code. After getting the terminal set up, next is ground equipment that is needed, about \$4M, the new Dynasty investors are willing to buy that equipment. Another issue is jet fuel; military may designate Tinian airport as part of the Divert, if that happens the military will build a fuel farm that will be shared with commercial purpose; Dynasty not wanting to wait for that and is exploring other ways to do that for 3-4 years or more; plan to bring own jet fuel in from west coast in ISO container in 6,000 gallon tanks, dock at harbor, then drive it up the hill to the airport. Dynasty has solutions for all the airport issues; because been in Tinian for a long time; know how to deal with these issues. Airlines are willing to fly here direct so long as everything is in place; airline concern is hospital facility because insufficient medical coverage if there is an accident.

The Dynasty can meet additional visitor demand from new international flights with its current 400 rooms and building the additional 500-room hotel that is planned.

Tinian has only two tourist buses. When we are running full, the buses are scheduled all day. A bus holds about 80 people. Each bus trip is about 2 to 3 hours. The buses do back-to-back tours.

All-terrain vehicle rides are in the Long Beach area, drive from main road through back roads.

Fishing and diving are outside of town; fishing is at marina as well.

There is a new boat at the harbor. It is 42-feet long and is the biggest boat on Tinian. It is a Tinian Fishing Tour Boat, owned by Dynasty's other investors.

Don Power is building a dune buggy track up by the airport, on private land (Dynasty land), Dynasty partnered with him.

Once Department of Public Lands agrees to lease Tachonga beach, Dynasty will build a beach center and do maintenance of toilets and facilities, open to anyone.

Dynasty gets water and power from Commonwealth Utilities Corporation, not allowed to use own generator; hotels in Saipan are allowed to use own generators; Tinian has sufficient power so hotel has to use Commonwealth Utilities Corporation power; Dynasty has its own

wastewater treatment plant and leach field (for 30 days then goes out to the ocean); Department of Environmental Quality and Coastal Resources Management are very strict and monitor this; solid waste is treated, stored, then shipped out; farmers want solid waste for fertilizer but Department of Environmental Quality does not allow it, so is dumped at dump site; trash goes to the dump site as well; leftover food is given to pig farmers, at end of the year, each farm gives one pig for staff Christmas farm; farmers pick up pig food at 10 a.m. and 5 p.m.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

## Yearly Geographic Production Report(No. of guests)

Year 2009													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
China	2610	1715	1184	1235	893	111	1928	3106	2035	2915	2447	1060	21239
Guam	15	25	20	13	60	11	22	9	25	18	24	20	262
Hongkong	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	905	637	550	403	579	475	373	312	490	294	209	395	5622
Korea	298	187	214	220	256	132	270	174	145	208	346	420	2870
Others	25	0	0	6	20	0	3	0	0	0	5	0	59
Saipan	183	623	416	450	238	122	111	165	161	150	149	131	2899
Taiwan	0	0	0	0	0	0	0	0	21	0	0	0	21
Tinian	19	22	12	18	29	11	20	41	0	393	30	35	630
USA	13	22	32	23	19	19	13	23	11	20	15	11	221
Total # of Guest	4068	3231	2428	2368	2094	881	2740	3830	2888	3998	3225	2072	33823

Year 2010													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
China	2274	3966	2160	2497	1820	887	2283	1765	0	1232	936	804	20624
Guam	83	32	33	14	15	17	8	58	281	15	9	50	615
Hongkong	0	0	0	0	0	0	0	0	18	0	0	0	18
Japan	499	223	384	178	233	436	405	293	33	280	130	318	3412
Korea	243	248	314	228	291	333	218	167	0	275	302	233	2852
Others	4	6	0	0	0	40	0	0	75	0	0	3	128
Saipan	169	186	187	151	328	181	157	122	32	125	227	135	2000
Taiwan	0	0	0	0	0	0	0	0	17	0	0	0	17
Tinian	47	56	14	33	80	83	62	26	13	49	44	57	564
USA	22	13	4	6	16	24	17	18	1314	14	13	9	1470
Total # of Guest	3341	4730	3096	3107	2783	2001	3150	2449	1783	1990	1661	1609	31700

Year 2011													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
China	1174	1407	908	885	2173	2563	2989	3054	2632	2964	3624	3591	27964
Guam	13	11	14	9	6	63	19	8	12	18	39	20	232
Hongkong	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	383	359	307	139	222	302	247	295	300	263	220	393	3430
Korea	302	184	363	334	360	281	193	184	234	294	474	358	3561
Others	6	4	2	1	5	2	6	5	2	3	0	0	36
Saipan	67	135	84	91	92	92	72	70	150	113	106	106	1178
Taiwan	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinian	73	51	43	96	97	51	33	45	66	71	65	107	798
USA	11	11	6	15	12	19	6	6	18	26	7	15	152
Total # of Guest	2029	2162	1727	1570	2967	3373	3565	3667	3414	3752	4535	4590	37351



## Yearly Geographic Production Report(No. of guests)

Year 2012													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
China	4032	3748	4060	4084	4151	3660	4627	4750	3,578	3959	3610	3457	47,716
Guam	14	22	34	25	24	40	12	21	30	10	71	13	316
Hongkong	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	380	232	247	166	329	241	240	238	206	136	157	235	2,807
Korea	286	542	389	386	247	341	556	613	281	380	428	489	4,938
Others	22	11	1	0	9	0	0	0	0	0	0	0	43
Saipan	140	319	148	139	184	78	107	81	42	75	104	47	1,464
Taiwan	0	0	0	0	0	0	0	0	0	0	0	4	4
Tinian	69	131	46	106	84	103	70	85	79	66	95	58	992
USA	8	10	10	22	74	57	16	16	29	8	32	104	386
Total # of Guests	4951	5015	4935	4928	5102	4520	5628	5804	4245	4634	4497	4407	58,666

Year 2013													
	January	February	March	April	May	June	July	August	September	October	November	December	Total
China	3232	3970	3681	3941	3842	3606	4838	5663	3,775	2987	2260	3179	44,974
Guam	13	34	22	18	13	27	13	12	3	3	42	67	267
Hongkong	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	166	153	184	170	212	191	139	211	150	84	84	152	1,896
Korea	883	584	614	318	349	379	602	544	217	313	356	528	5,687
Others	0	4	5	4	5	2	8	0	0	0	0	0	28
Saipan	96	133	113	81	97	150	108	170	36	89	139	178	1,390
Taiwan	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinian	76	123	83	69	137	50	104	51	67	49	74	88	971
USA	10	15	14	86	18	30	3	9	12	0	76	299	572
Total # of Guests	4476	5016	4716	4687	4673	4435	5815	6660	4260	3525	3031	4491	55,785

## **Tinian Health Center**

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**Agency Name:** Tinian Health Center

**Date:** January 29, 2013 at Tinian Health Center; 3:00 p.m. to 4:00 p.m.

**Attendees:**

Attendee Name	Organization	Title	Email	Telephone
William Cing	Tinian Health Center	Resident Director		670-433-9233
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

### Meeting Record

1. Introduction
2. Overview of SIAS
3. Interview Method
4. Questions

1. Please describe the general functions of the Health Center, what are your goals and mission?

Tinian Health Center provides health services as part of the Commonwealth Healthcare Corporation; mission is to provide short-term and long-term health care needs for the population, imported labor, and tourists. There are 3,200 residents, 1,000 imported labor, and about 55,000 tourists a year. Health center has two operations – outpatient client 7:30-4:30; urgent care 24-7. This is the only health care on Tinian. Try to stabilize, treat, and medevac to Saipan; Tinian Health Center pays for medevac to Saipan; send patients by plane or chopper.

Tinian Health Center used to be part of the CNMI health care system as a line department and budgeted by the CNMI government; in Oct 2011, CNMI passed a law separating it as a stand-alone autonomous public corporation (Commonwealth Health Corporation). Do not receive a budget from CNMI government.

2. What are your major sources of funding, the CNMI government? Federal money?

Funding comes from Health Services Administration for public health items such as prevention, tuberculosis, sexually transmitted infections, pre-natal, immunization, hospital preparedness. Medical side is supported completely by revenue generated from providing services. Tinian Health Center accepts Medicare, Medicaid and private insurance. The center

runs about 20% indigent right now; a lot of people don't have health care. Get funds from CNMI Capital Improvement Project money for improvements. Operations money comes from fees and local municipality money helps with medevac.

3. Previous studies reported that the Tinian Health Center had no permanent physician and was staffed by two rotating physicians in 2012. Is that information still correct?

That changed; September 2013, got one permanent physician and a nurse practitioner mid-level. The challenge is to keep the person. A doctor usually comes for 1-2 years and the current doctor has been in CNMI for 14 years. He was in Rota and moved to Tinian begrudgingly.

There is no pharmacist; there is a physician supervised dispensary. If medicine cannot be dispensed on Tinian, then patients need to go to Saipan to fill prescriptions. Tinian Health Center helps people get medicine by having Saipan pharmacy's ship medicine to Tinian.

4. Previous studies reported that the Tinian Health Center had 15 nurses in 2012. Is that information still correct?

4 Registered Nurses and 5 Licensed Practical Nurses and 1 nurse assistant.

5. Were there any other full-time equivalent employees at the Tinian Health Center in 2012 (e.g., physicians' assistants, pharmacists, administrative staff, or other employees)?

One immunization clerk and an additional Licensed Practical Nurse on public health side.

6. Previous studies reported that approximately 50 patients were treated per day in 2012; is that number still about right?

For 2013, treat average 8,000 visits on outpatient side a year; urgent care about 1,600 visits.

7. Previous studies reported that the Tinian Health Center had two holding beds, is that still true?

Tinian Health Center has a 5-bed capacity; trying to turn unused office space into patient rooms; trying to add two more beds; renovation starts in next couple of weeks; by end of 2014 should have 7-bed capacity.

8. What is the condition of the Tinian Health Center facility (e.g., can the current space accommodate existing staff and service population)?

Tinian Health Center is a 30-year old building.

9. What is the condition of the equipment used at the Tinian Health Center? Is the equipment adequate for current operations?

Brand new digital x-ray machine; brand new ultrasound with complete probes; autoclave to treat bio-waste material. Equipment is slowly being updated. The corporation cannot afford improvements right now so get funds from Capital Improvement Project money comes from



CNMI govt. Operations money comes from fees and local municipality money helps with medevac.

10. Are there any improvements planned for the Tinian Health Center? If there are planned improvements, how far along are the plans?

Doing a \$500,000 makeover; waiting for NTP to begin in first week of February; do Americans with Disabilities Act and fire/safety improvements; it's addressing lots of issues – bathrooms, give it a 21<sup>st</sup> century make over; money from Capital Improvement Project funds.

Have \$1M in Capital Improvement Project funds to build a second building to house admin and public health. Right now using a lot of clinic space for admin needs. Cannot add on this building directly because of building code issues, so building a new building with a covered walkway connecting them.

## 5. Open Topic

Tinian: Health Center Interior Improvements. Minor upgrades to address ADA compliance and maintenance.

Cancer rate is high, send cancer patients to Guam, Hawaii, and the mainland; if there is no hope, then one of the rooms at Tinian Health Center becomes a hospice room.

CNMI – non-communicable disease is a big problem here in Tinian and all over the CNMI. Diabetes, hypertension, result from lifestyle and some traditional food served at parties and from canned foods and other processed foods that are in the stores. These things are preventable and people just do not know how to do that.

Canned goods started showing up in markets in the 1960s. Tinian used to be self-sufficient and eat organic local food that was grown here. Tinian has the ability to produce food, so there's no reason to not eat healthy. We have to get people to exercise more; we used to be a farming community, producing all meat for the CNMI and military in Guam and the community was healthier then.

Bill Cing has seen transformation from a healthy agricultural community to an unhealthy community with jobs in government services.

The trend of patients for our dialysis machine is growing younger, not older.

Tinian Health Center expects to see an increase in accidents and Emergency Room use with the training ranges; when the military is here, usually we get assistance from them; military will station a doctor here who helps out while waiting for troops; during Forager Fury II, a doctor was here and helped look at local patients, but did no dental service; military patients pay for use of equipment, but Tinian Health Center doesn't charge the facility fee.

Tinian does not have dental service. There used to be a dentist when Tinian Health Center was a government entity; there is a dentist stationed at the main hospital and services the outer island clinics.

If Tinian Health Center cannot provide a service, then it does a medical referral for a patient and sends them to a specialist on Saipan, then Saipan specialist will decide where to refer to next; it's a lot of hassle for people; people with money will just go to Hawaii or elsewhere to see a doctor.

People don't have anything against the military, but now they're hearing about the bigger guns and ranges, they're concerned about the noise and transportation; initially there was support but now people are having second thoughts on the bigger ranges, especially the mortars; would rather that the military pay to move us out of here and they take the island; the 2/3 and 1/3 arrangement isn't working for everyone.

Tinian waited 30 years for military development; now that Tinian is trying to develop itself, the military now wants to do something; it's bad timing by the military; it is why no one wants to let the military use Pagan; people think that the military didn't want it before, military never built its basecamp, people came to think military didn't want it and now military is trying to grab everything.

The island cannot support many people without the northern two-thirds. There is a lot of agriculture use to be on the northern/middle side of the island that provides food.

## **6. Conclusion & Action Items**

Additional Follow-up Information:

- a. When will the second building to house the administrative and public health services be completed?

## **Tinian Mayor's Office**

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**Agency Name:** Tinian Mayor's Office

**Date:** January 28, 2014 at the Tinian Mayor's Office; 8:16 a.m. to 9:53 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Ramon Dela Cruz	Office of the Mayor of Tinian and Aguigan	Mayor	mayordelacruzray@gmail.com	670-433-1800
Joseph Dela Cruz	Office of the Mayor of Tinian and Aguigan	Acting Chief of Staff		
Natasha Pascua	Office of the Mayor of Tinian and Aguigan	Assistant Chief of Staff	Natasha.pascua@outlook.com	670-789-4955
Meagan Ostrem	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Meagan.ostrem.ctr@usmc.mil	808-477-8983
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Can you provide an overview of how the Tinian economy has been doing recently?

The economy in the region has been sluggish. Tourism and gaming continue to be the main industries, but there is also agriculture production and subsistence fishing, collecting, and hunting. Currently, Tinian's economy is almost 100% import and 0% export. Income from tourism goes to import goods, including food.

Agriculture, mainly cattle ranching, is the third largest sector. Tinian has about 1,000 head of cattle and is projected to have about 2,000 head in six months (mid-2014). Tinian's goal is to diversify its economy by producing quality beef for visitors and the local community. Under the current land use arrangement, ranchers project they can produce enough beef to meet

demand for Tinian and export it to the rest of the CNMI and Guam. Local production and consumption would improve the economy through the multiplier effect.

The current arrangement of permits to graze and farm in the Lease Back Area is good for the cattlemen but does create issues for the industry. Ranchers do not have an incentive to invest in their herds or the property because the permit is only year-to-year, so there is too much uncertainty to know if an investment will be recouped. Also, federal grants, subsidies, and programs, such as from the U.S. Department of Agriculture, often require land ownership, certain lease rights, or at least permits/leases for longer periods of time than a year. Ranchers outside the Lease Back Area can access these federal benefits but ranchers inside the Lease Back Area cannot.

The Legislature appropriates funds to agencies, not to the Mayor's Office. Public safety and schools are most of the budget. The distribution of federal grants generally follows the same path. Federal grants tend to be concentrated on Saipan. Tinian receives very little funding from the CNMI central government and what little it does receive continuously decreases. The Legislature allocates the budget based on population so Tinian gets a small amount, Saipan gets the most. Whenever government collections increase, Tinian receives an increase.

On Tinian, the Mayor is responsible for running all the public agencies on the island. The casino also helps generate revenues. If the casino does not make money, then public staff working hours have to be cut back. The Dynasty has new investors from China called Megastar. They are introducing a new business unit to make the Dynasty more profitable.

Unemployment is high. If there is a military operation, employment may become available, but the type of work likely available to local people would be limited because Tinian does not have a skilled workforce.

Tinian people practice subsistence living when they are unemployed or even when they are employed, to supplement their income - through hunting, gathering, and fishing. The tiny red pepper has a big economic impact. People go into the Military Lease Area to pick peppers, do shore fishing, and hunt coconut crab and wild chicken. Because the Department of Defense leases two-thirds of the island, of course the majority of those resources are in the Military Lease Area.

2. Can you provide an overview of social issues that have been important on Tinian recently?

Tinian has a lot of challenges. Funding is the fundamental need. With funding, Tinian can address many of its social challenges. There is limited funding even for public health. Someone who gets sick has to go to Saipan. One has to go to Saipan even for procedures like childbirth because federal regulations classify the Tinian Health Center as a "clinic," which prevents physicians from doing certain procedures, such as childbirth. To make matters worse, a lot of people are not covered by health insurance.

Public safety is an issue. The economy is tourism-based, which means there are a lot of people coming and going from the island. The Department of Public Safety does not have

enough funding. Employees and individuals from the community help them to buy and repair equipment with their own personal funds.

In Tinian, even though the economy is not that good, people still enjoy themselves and practice their culture. Families go to beach and barbeque. Fathers and sons go fish, mothers and daughters pick peppers, and small boys catch coconut crabs. Retention of the beaches and jungle on the northern part of the island is very important to community. This is why people insist the military provide access so that people can pass on culture to the next generation.

If there were employment on the ranges, that would introduce changes to the culture. If there is military development that is consistent with the community, it will work and be beneficial for both. On the other hand, if the military went ahead and did things not conducive to the community, there would be uproar and opposition. Tinian is so small. If the military restricts access, where will people go?

3. Can you describe previous experiences with military operations on Tinian? How have these operations interacted with the Tinian economy and society?

Tinian has had a bad experience when the military, but people want to support and work with the military to co-exist and have the military's presence be beneficial for the residents of Tinian. Past activities like the Chiget range and road deterioration from military use led people to doubt the military. Chiget range was used and still hasn't been cleaned up; only now the Marines are promising to clean it up so they can build support for this current project. What will be different with these proposed training ranges? The military will eventually leave, but generations of Chamorro will continue to live here.

Tinian wants to improve ranching by engaging with the military to set the training range footprint so that it minimizes impact to cattle ranching. The only impediment to a successful cattle industry is the military's proposed action. People want a mechanism to co-exist and are confident there is a way. If we cannot coexist and the military decides to remove the ranchers, then the beef initiative would collapse. We want dialogue to work it out so that both initiatives can go forward. Cattle ranching is a multi-faceted benefit to the community. It will improve diet and perpetuate our culture. Food is expensive here and getting more expensive. Also, the loss of cattle ranching would mean the loss of federal benefits flowing into the community through cattle ranching grants.

Tinian also tries to learn from Guam's experience. In Guam, it is very difficult. When I first came into office in 2010, I was visited by a lot of commanders from Guam. Guam is having a lot of demonstration and opposition. Guam doesn't want it. When Guam does not want something, then the military looks to put it in the CNMI. I told the commanders that if the Guamanians don't want them, bring the military base to Tinian. Then they did the first Environmental Impact Statement (EIS) for rifle and pistol training on Tinian and we endorsed it.

Now the military is proposing mortar and artillery on Tinian. That changes everything. I saw the mortar and artillery on Hawaii. I thought, "Oh my God, you cannot bring this to Tinian."

Tinian is so small. This is something different.” Now we’ve turned the table and cannot support something like that. The artillery is too big. Tinian is too small for a safety zone around artillery and mortar. The size of the safety zone would increase the cost of fuel, which would increase the cost of flights, which would trickle down to local people. It would hurt tourism here. Artillery and mortar have enormous noise impacts also. I was assured by Ed Lynch that the military will do sound testing on North Field.

Last week, I met with Mr. Whelden and Mr. Wood, who said they can lower the trajectory when the range is hot. I asked if it is possible to co-exist with the artillery and mortar firing, and their training expert said no. That is why we do not support it. You can shoot Capitol Hill on Saipan from Tinian with that artillery. They should do that training on Guam.

On the other hand, if the military comes in, public services should improve. During Geiger Fury training, the military provided medical services. However, there is concern about this. During Forager Fury, they said they could not provide public medical services any longer. During Forager Fury II, they were supposed to help do some projects like paint a gym.

Similarly for economic impact, one would think that would improve with the military here, but there are concerns about that, too. The Marines in North Field could not come down because of fuel restrictions. The people of Tinian had to purchase fuel and give it to them so that the troops could come down to the community on their break time. Some of the businesses on Tinian sponsored the fuel requirements also because it was worth it for those businesses, but that is not good public relations for the military and is not how helping local businesses is supposed to work.

The biggest concern about the proposed action is transportation restrictions that might impede people coming to the island. Tourists fly into Saipan and are shuttled over here by commuter flights. There is a lot of travel between Saipan and Tinian. Currently, the tourist traffic between the islands subsidizes the travel of local people. Some people travel daily or weekly. There is a concern that Freedom Air might close, leaving only Star Marianas. People also travel to Saipan by boat to go shopping. If the range is hot, people have to go three miles out of their way. That requires more gas, better transportation vehicles, and more time for travel. This will hurt them economically.

Another transportation and tourism concern is access to sites in the northern end of the island. The atomic bomb pit is the largest attraction. About 100 people a day visit there.

Another concern is public safety and security. In other locations, people sneak onto the ranges to steal the brass right after the training finishes. If we have ranges here, people will sneak on to the range to steal the brass. If you give those people employment, it’s good for the economy and can help reduce the incentive to steal. Fences can be built, but people will cut through the fence anyway – they already do for Chiget to collect medicinal plants, peppers, and cliff fish.

There is no military liaison anymore for the local government on Tinian. There used to be one in 2008. The military should coordinate with the local government. It is disrespectful to not



communicate; we deserve some type of courtesy. We need someone at Military Integration Management Committee to help us understand all the EISs. Office of Environmental Affairs refused to give us money. When the military shows up in helicopters and machine guns unannounced, local people freak out.

We always worry about introduced species coming with the choppers from Saipan or elsewhere. If the Mayor knows the military is coming, he can deploy Department of Public Safety to seal off areas so the public does not get hurt and he can warn people to be careful. In today's society, the local government owes that to the population.

During the recent Forager Fury II training, only North Field was restricted, but access to the atomic bomb pits remained open. About a hundred people a day go to the bomb pits. There are always people in North Field gathering something, for example peppers or medicinal plants. All of the beaches are popular: Chulu (White) Beach, Unai Babui, Unai Dankulo (Long Beach), and Masalok are the top four beaches for locals. Lamlam beach is popular with fisherman. The military is talking about putting fences on Broadway and 8<sup>th</sup> Avenue. People will likely jump the fence just like they do at Chiget now.

I recommended that Riverside be improved as a main artery; if a range is hot, then one side of the island is still open. I also recommended to the Army Corps of Engineers to cut a channel on the west side so that local boaters can use the harbor if the military is using the east side of the harbor; these would make sure the military and local community can co-exist. I would like these things fine-tuned.

It is commonly regarded that if the military does build its projects, it will bring a lot of contractors. A lot of our local people are abroad as contractors and they would like to be able to come back. We would like to train our youth to go to Northern Marianas College to get a skill and work with the military. If the military comes in immediately after the Record of Decision, a lot of the work will be done by contractors from Hawaii. We think, though, that economic activity will create a virtuous loop. The Marine Corps are now looking at building barracks for 1,000 personnel. Every day the talks improve.

However, when I was young, during the Covenant approval period, Tinian was promised to have a \$300 million military base. We waited 40 years and it never came. Now we are doing our own economic development. We will be here generations. Military personnel will leave in 6 months. I insist that the military clean up Chiget. We did the EIS on the landfill with the Admiral's go ahead. Then the military told us that the landfill is not consistent with the military footprint. That was \$2 million of limited Capital Improvement Project funds.

Local people will oppose Divert on Saipan, mortar and artillery on Tinian, and any military use of Pagan. There is no way one can just train on the north side of Pagan; the island is too small. If the military tries to use eminent domain, the people of the CNMI will fight that.

## **5. Open Topic**

Currently, people slaughter cattle for local uses like weddings. Ranchers need a U.S. Department of Agriculture-certified slaughterhouse, direct trade with Guam to sell fresh meat

and livestock, and shipping infrastructure. The slaughterhouse would process about 10-15 cattle a week. This will provide fresh meat and bring the cost down, making meat more affordable especially to retired or low-income individuals. Tinian received an appropriation of about \$200,000 for it. The proposed site is either by the present farmer's market or the agricultural station, which is an insemination facility. At the agricultural station, Tinian ranchers are working with the University of Hawaii and the University of Virgin Islands to improve the quality of cattle. Ranchers are producing high breed of cattle and improving the pastureland. U.S. Department of Agriculture certification is an obstacle to selling Tinian beef, even at local restaurants. The Governors of CNMI and Guam are working on an agreement to open up trade. CNMI Senators are looking into transportation options. Also, Tinian cattlemen are looking into water self-sufficiency measures. They received permits for two wells and are learning how to build and maintain water catchment systems.

Other topics briefly discussed:

- American Memorial Park, Tinian Historical Interpretative Center – No approval has been issued yet. The Mayor's Office is working with Congressman Sablan for a Congressional resolution. Tinian deserves some type of recognition for the important role it played in World War II. We would like to market that to the U.S. mainland and do more to educate people so they better understand and feel the significance of the site.
- Health Center Improvements – The Mayor's Office allocates funds to improve the Health Center to bring in better equipment. A new physician was finally brought in. This will reduce expenses for local residents so that they don't have to go to Saipan as much for routine care. Trauma cases are put on Star Marianas or Freedom Air to Saipan. If it is very critical, the U.S. Coast Guard or Air Force can help. They are normally restricted in how they can help though. Otherwise, we have to charter Jet Care to Manila at \$65,000 per trip. If military have a larger presence on Tinian, it will improve the medical care and perhaps bring in people with more medical care knowledge who can offer assistance.
- Ferry between Tinian and Saipan – The Commonwealth Ports Authority and the Dynasty are each looking at bringing a ferry that can carry cars. The Dynasty used to have one that catered mainly to Japanese tourists, who do not like to fly in small planes.
- Hotels – The new Dynasty owners are also proposing to build a 500-room hotel near the Suicide Cliffs, a horse academy, 4-wheeler riding course, and possibly a 36-hole golf course. We want to make sure that the military proposal does not impede them.
- Water Park – The new owners of the Dynasty are proposing a \$15 million water park and intend to break ground in the middle of this year.
- The Dynasty is trying to bring in direct charter flights from Asia, primarily China, to Tinian.

## **6. Conclusion & Action Items**

No additional follow-up information requested.

**Tinian Marine Stevedores Inc.**

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**Agency Name:** Tinian Marine Stevedores Inc.

**Date:** February 1, 2014 at the Saipan Stevedore Co. Conference Room; 9:30 a.m. to 10:30 a.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Michael Demapan	Saipan Stevedore Co.; Tinian Marine Stevedores Inc.	General Manager	demapan@gmail.com	670-898-8944
Fred Lagason	Saipan Stevedore Co.			670-888-3066
Gregory M. Villagomez	Saipan Stevedore Co.	Operations Supervisor	gvillagomez.operation@saisteve.com	670-888-3045
John Vianney Tutiy	Saipan Stevedore Co.		j.tutiy.operation@saisteve.com	670-888-3044
Joe Villagomez	Saipan Stevedore Co.			670-888-3054
Pelander J. Benjamin	Saipan Stevedore Co.			670-888-3038
Willard Erungel	Saipan Stevedore Co.		Willarderungel.safety@saisteve.com	670-888-3017
Mike Tenorio	Tinian Marine Stevedores Inc.	Board Member	miketeno@gmail.com	670-234-6676
Norman Tenorio	Saipan Stevedore Co.	Board Member		670-287-0751
Clarence Tenorio	Saipan Stevedore Co.	Board Member		670-483-0102
Gerardo Panegsagan	Saipan Stevedore Co.	Board Member		670-233-4121
Benjamin Grsticia Sr.	Saipan Stevedore Co.			670-888-3088
Juan Domingo	Saipan Stevedore Co.			670-322-9741
Zenaida F. Agda	Saipan Stevedore Co.			670-322-9240
Gloria Balila	Saipan Stevedore Co.			670-322-9240
Deborah Fleming	Tinian Marine Stevedores Inc.		tinianmf@pticom.com	670-483-0174
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## **Meeting Record**

- 1. Introduction**
- 2. Overview of SIAS**
- 3. Interview Method**
- 4. Questions**

1. Operations at Tinian Harbor

The Tinian port does not receive many shipments, about one barge per month lately.

Tinian used to have two stevedore operators: the Tinian Stevedores and the Tinian Marine Stevedores. After the tuna industry collapsed, Tinian no longer had enough business to support two stevedore companies. Tinian Marine Stevedores Inc. stopped operations in the 1990s, leaving the Tinian Stevedores. However, the Tinian Stevedores closed in the late 2000s, so Tinian Marine Stevedores Inc. came back in 2011 as the sole stevedore company for the Port of Tinian.

Tinian Marine Stevedores Inc. does all of the cargo moving at the Port of Tinian. It is the only company certified by the U.S. Coast Guard to handle hazardous materials originating from seaport facilities on Tinian. Saipan Stevedore is a shareholder of Tinian Marine Stevedores Inc. and provides expertise and support to Tinian Marine Stevedores Inc.

Tinian Marine Stevedores Inc. has a tariff fee structure that is regulated by the U.S. Maritime Administration.

Saipan Shipping is the major company that goes to Tinian. Charter vessels also go there. Most cargo is commodities for business. Typical barge capacity is about 70 tons. Shipping generally goes between Guam and Saipan and only diverts course to Tinian or Rota if there is a reason to do so. Shipments from Tinian to Saipan travel via Guam because that is the set route. This adds to the cost to ship to Saipan.

2. Employees

Tinian Marine Stevedores Inc. has nine employees who are based on Tinian including one crane operator. For major projects, Tinian Marine Stevedores Inc. supplements its

work crew with employees from Saipan Stevedores, who travel over to Tinian for the length of the project and then return to Saipan. Saipan Stevedores has approximately 40 employees ready to mobilize for a project on Tinian, although usually no more than 27 are sent.

### 3. Condition of Tinian Harbor

Three bottlenecks exist at the Port of Tinian: lighting, wharf strength, and truck delivery. A major bottleneck for throughput at the Port of Tinian is the lack of lighting. The port has limited lighting so work is only performed between 6:00 a.m. and 6:00 p.m. (when it is daytime) because of safety concerns. Night lighting would improve the capacity of the port to more quickly load and unload cargo. The Commonwealth Ports Authority so far has not invested in lighting, though Tinian Marine Stevedores Inc. is exploring ways to get lighting there.

Another bottleneck is crane lift weight limitations. Currently, there is an on-site crane capable of lifting about 50-60 tons. It is unclear if the wharves could support heavier cranes capable of lifting more weight. There are two ship-based cranes that can be brought over from Saipan to help with unloading heavier weights, such as when the military brings heavy cargo in. The military also stages its equipment using roll-on/roll-off barges.

The narrow road and limited routes create a bottleneck for trucking cargo from the port to the Military Lease Area. There is a chassis that is still in good working condition to help with unloading to the trucks.

Tinian port development: The Commonwealth Ports Authority received an application to develop a full-scale replica of the Titanic Hotel on the property where Tinian Marine Stevedores Inc. is located now. We might have to relocate because of this. This area is also critical to military use because that is where the military stages equipment. It's crazy to hamper the port with a hotel; there are other places to put a hotel.

There are concerns about the depth of the channel and the harbor. Part of the wharf and riprap broke off into the harbor water, making it shallower. The Army Corps of Engineers is doing a study of the deterioration of the breakwater. This is a big safety concern for everyone.

### 5. Open Topic

Michael Demapan gave a presentation on Tinian Marine Stevedores Inc. He later sent a copy of the PowerPoint to the Team.

### 6. Conclusion & Action Items

Additional Follow-up Information:

- a. What additional equipment does Saipan Stevedore intend to install at Tinian Harbor?

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# **Western Pacific Regional Fishery Management Council**

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**Agency Name:** Western Pacific Regional Fishery Management Council

**Date:** February 6, 2014 at the Hyatt Lobby; 4:00 p.m. to 5:00 p.m.

**Attendees:**

<b>Attendee Name</b>	<b>Organization</b>	<b>Title</b>	<b>Email</b>	<b>Telephone</b>
John Gourley	Western Pacific Regional Fishery Management Council	Chair, Plan Team	John.e.gourley@gmail.com	
Jack Ogunoro	Western Pacific Regional Fishery Management Council	Fishery Coordinator	jacko@lava.net	
Todd Miller	Western Pacific Regional Fishery Management Council	Supervisor of Fisheries (DFW)	Tmiller.dfw@gmail.com	
Sean Mcduff	Western Pacific Regional Fishery Management Council	Plan Team Member	Macduff.cnmidfw@gmail.com	
Wesley Bogdan	Office of the Lt. Governor	Legal Counsel	Ltgov.counsel@gmail.com	
Richard Seman	Western Pacific Regional Fishery Management Council; CNMI Legislature	Western Pacific Regional Fishery Management Council Councilmember, Education and Outreach Specialist; CNMI Representative	rbseman@gmail.com	
Edward Lynch	Marine Corps Forces, Pacific	National Environmental Policy Act Specialist	Edward.lynch.ctr@usmc.mil	808-477-8480
Elisse Takara	Naval Facilities Engineering Command Pacific	National Environmental Policy Act Planner	Elisse.takara@navy.mil	808-472-1253
Brenda Tenorio	BYT Consulting	Socioecon Team On-site	bytenorio@pticom.com	670-483-9873
Scott Glenn	TEC JV	Socioecon Team	Scott.glenn@cardnotec.com	808-528-1445
David Kiernan	TEC JV	Socioecon Team	David.kiernan@cardnotec.com	850-765-5678

## Meeting Record

1. **Introduction**
2. **Overview of SIAS**
3. **Interview Method**
4. **Questions**

1. Please describe what your organization does. What are your goals and mission?

Western Pacific Regional Fishery Management Council is quasi-governmental organization, which is funded by Congress. Its purpose is to set U.S. fisheries policy within U.S. Exclusive Economic Zone surrounding the CNMI. Fisheries policy is established under authority of the Magnuson-Stevens Act. Western Pacific Regional Fishery Management Council recommendations do not immediately become regulations; Western Pacific Regional Fishery Management Council makes policy recommendations to the National Marine Fisheries Service. National Marine Fisheries Service can accept the recommendation making it a regulation, it can accept the recommendation with modification, or it can reject the recommendation. Often Western Pacific Regional Fishery Management Council and National Marine Fisheries Service can be at odds and the structure works well to create a system of checks and balances.

2. How does Western Pacific Regional Fishery Management Council geographically define CNMI fishing waters?

Between zero and 200 miles from shore is CNMI fishing waters.

3. What primary areas in the CNMI does commercial fishing take place?

Reef fishing primarily occurs off of Tinian; near the White Cross is a prime area. Saipan fishermen go fish off of Tinian.

Bottom-fishing can take place anywhere depending on weather. When conditions are rougher, West Tinian is better than East Tinian. Also there are seamounts to the west of Tinian 5, 11, and 19 miles out, these are good for bottom-fishing.

Pelagic fishing occurs everywhere; all the way from Farallon de Medinilla to Rota. Occurs near-shore, off of Tinian. Boats used are typically 16 to 23 feet. Fishermen follow the birds to know where good spots are.

Crabs can be caught on-shore. They are good tasting – very tender.

4. What primary areas in the CNMI does recreational fishing take place?

Fishing in the CNMI is rarely recreational. There is subsistence, artisan (sell fish to cover cost of fishing excursion), and commercial.

5. What are some important issues in the region?

The areas that cannot be fished around Farallon de Medinilla are increasing. The military has safety zones that extend off the shore of Farallon de Medinilla that boats are not allowed to enter. The safety zone recently got bigger. This reduced the amount of area that people can use for fishing.

The Merchant Marine ships off the coast of Saipan also reduce the amount of fishing area because fishing boats cannot get too close to them. These Merchant Marine ships also damage the environment as their anchors destroy the reef.

6. Marine Conservation Plan

The Marine Conservation Plan describes planned projects. Illegal foreign fishing activity gets fined and that fine money goes to pay for Marine Conservation Plan projects - \$500,000 has been received so far.

7. What about fishing near Pagan?

Pagan is a good area for bottom-fishing and reef fishing. Fishermen will take 4-7 day excursions to Pagan.

Pagan is important for the strategic development of fishing in the CNMI; it will play a critical role in the future. Fishing areas will eventually need to extend north of Farallon de Medinilla and Pagan will be important as a staging area for emergency situations, processing, and fuel supply and storage.

8. Aquaculture

The Marine Conservation Plan includes an aquaculture project that has funding. There is also private investment interest.

Pagan is a good place for open ocean aquaculture. It has the right topography – can have cages 100 to 200 feet down in an area that has strong current (that keeps the water clean) and is not too rough to maintain equipment and harvest fish.

Profitability of aquaculture is unknown but there is a market for sure (Guam and CNMI). Guam has a shortage of certain bottom fish; the hotels there want the fish.

9. A survey of Saipan fishermen was conducted for the paper: *The Economic Value of the Coral Reefs of Saipan, Commonwealth of the Northern Mariana Islands*. If you are familiar with this paper and survey, can you comment on whether the results of that survey would be generally consistent with results from a similar survey, if it were taken on Tinian?

Information was specific to Saipan. It would not be a good idea to generalize that information for Tinian. The markets for fish are very different on Saipan and Tinian. On Saipan there are a lot of places that will buy fish and fewer buyers on Tinian.

**5. Open Topic**

**6. Conclusion & Action Items**

Additional Follow-up Information:

- a. Can you provide a copy of the Marine Conservation Plan?
- b. Can you provide further detail on aquaculture projects identified in the Marine Conservation Plan?
- c. Would there be an aquaculture project off the coast of Pagan? Can you provide a general description of this operation?