



Draft

Environmental Impact Statement /  
Overseas Environmental Impact Statement

GUAM AND CNMI MILITARY RELOCATION

Relocating Marines from Okinawa,  
Visiting Aircraft Carrier Berthing, and  
Army Air and Missile Defense Task Force

**Volume 9: Appendices**

November 2009

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# Guam and CNMI Military Relocation EIS/OEIS

## Volume 9: Appendices

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## EXECUTIVE SUMMARY

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### INTRODUCTION

This Socioeconomic Impact Assessment Study (SIAS) was prepared as a stand-alone study to the Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) for the proposed military relocation to Guam and the Commonwealth of the Northern Marianas Islands (CNMI). The purpose of the study is to provide reliable estimates of the proposed relocation's potential impact on the social and economic conditions on Guam and within the CNMI.

The analysis in this SIAS addresses the following components of the proposed military relocation action:

- Marine Corps relocation from Okinawa to Guam
- Construction of facilities for training and operations on Tinian in the CNMI
- Aircraft Carrier Berthing at Guam
- Army Air and Missile Defense Task Force facility development
- Various "connected actions" (i.e., utilities and roadways)

This SIAS does not address alternative geographical configurations for any of the action components, cumulative or other impacts unrelated to the proposed action, the significance of impacts, and potential mitigations. Such issues are addressed in the appropriate volumes and sections of the EIS/OEIS.

This SIAS was prepared using the most current and best available data available for relevant issues such as construction conditions, military personnel numbers, and project implementation schedules. However, ongoing planning, scheduling, and federal legislative activities could result in changes to various input assumptions and therefore to the impact conclusions as well.

In response to public concerns voiced during public scoping meetings for the EIS/OEIS, as well as Federal Regional Council (FRC) consultation, the impact analyses conducted for this SIAS were focused on socioeconomic issues in the following four categories:

- Population Change
- Economic Activity
- Public Services
- Sociocultural Issues

Particular attention is given to the years:

- 2014, the peak year of net direct, indirect, and induced population increase from off-island (as influenced by a cumulative peak in project-related construction activity and military personnel relocation); and
- 2020, when peak population effects have subsided to a steady-state population increase attributable to the post-construction, operational phase of the proposed military relocation.

The SIAS analyzes the following two scenarios, reflecting different assumptions about potential constraints on the local economy's response to the economic stimulus effects of the proposed action. The *Unconstrained Scenario* is a maximum-impact approach. This scenario assumes no constraints in the Guam and CNMI economies that might lessen the indirect economic growth potential resulting from the proposed action. The Unconstrained Scenario represents the maximum growth likely to occur. Compared to the *Constrained Scenario*, this scenario assumes that currently unemployed Guam residents will take

fewer jobs, more in-migrants would be needed, and that each worker would have more non-working dependents.

The *Constrained Scenario* is a minimum-impact approach. This scenario assumes there would be aspects in Guam's economy that would block the full realization of potential beneficial indirect growth. This scenario does not explicitly identify all these blockages, but assumes some mix of limitations. It also assumes absorption of currently non-working Guam residents by the job market, less in-migrants, and fewer non-working dependents per in-migrant.

## **POPULATION CHANGE**

Table ES-1 presents the estimated annual population increase from off-island that would result from the proposed action (unconstrained scenario). Project-related construction work is expected to begin in 2010 and reach its peak in 2014. It is also assumed in this analysis that most of the Marines and their families would arrive on Guam in 2014. Since the peak in construction activities and expenditures would coincide with the arrival of Marines and their families, 2014 represents the peak year for population increase. At this peak, the total increase in Guam residents from off-island would be an estimated 79,178 people.

After the 2014 peak, project-related construction expenditures and the associated influx of construction workers would decline rapidly because 2014 is the last year that any new construction begins. By the time construction is completed and military operational spending reaches a steady state, the off-island population increase attributable to the proposed military relocation is projected to level off to an estimated 33,608 persons, approximately 58% below the peak level.

In comparison the constrained scenario, presented below in Table ES-2, indicates a 2014 peak-year total impact of 53,786 additional individuals, falling to 30,209 after construction ends.

**Table ES-1. Estimated Total Population Increase on Guam from Off-Island (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Direct DoD Population<sup>1</sup></b>											
Active Duty Marine Corps	510	1,570	1,570	1,570	10,552	10,552	10,552	10,552	10,552	10,552	10,552
Marine Corps Dependents	537	1,231	1,231	1,231	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Active Duty Navy <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0
Navy Dependents	0	0	0	0	0	0	0	0	0	0	0
Active Duty Army	0	50	50	50	50	630	630	630	630	630	630
Army Dependents	0	0	0	0	0	950	950	950	950	950	950
Civilian Military Workers	102	244	244	244	1,720	1,836	1,836	1,836	1,836	1,836	1,836
Civilian Military Worker Dependents	97	232	232	232	1,634	1,745	1,745	1,745	1,745	1,745	1,745
Off-Island Construction Workers (DoD Projects) <sup>3</sup>	3,238	8,202	14,217	17,834	18,374	12,140	3,785	0	0	0	0
Dependents of Off-Island Construction Workers (DoD Projects)	1,162	2,583	3,800	3,964	4,721	2,832	1,047	0	0	0	0
<b>Direct DoD Subtotal</b>	<b>5,646</b>	<b>14,112</b>	<b>21,344</b>	<b>25,125</b>	<b>46,052</b>	<b>39,685</b>	<b>29,545</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>
<b>Indirect and Induced Population</b>											
Off-Island Workers for Indirect/Induced Jobs <sup>3</sup>	2,766	7,038	11,773	14,077	16,988	12,940	6,346	4,346	4,346	4,482	4,482
Dependents of Off-Island Workers for Indirect/Induced Jobs	2,627	6,685	11,184	13,373	16,138	12,293	6,028	4,372	4,372	4,413	4,413
<b>Indirect/Induced Subtotal</b>	<b>5,393</b>	<b>13,723</b>	<b>22,957</b>	<b>27,450</b>	<b>33,126</b>	<b>25,233</b>	<b>12,374</b>	<b>8,718</b>	<b>8,718</b>	<b>8,895</b>	<b>8,895</b>
<b>Total Population</b>	<b>11,038</b>	<b>27,835</b>	<b>44,301</b>	<b>52,575</b>	<b>79,178</b>	<b>64,918</b>	<b>41,919</b>	<b>33,431</b>	<b>33,431</b>	<b>33,608</b>	<b>33,608</b>

Notes: <sup>1</sup>DoD population includes military personnel, DoD civilian workers and dependents from off-island.

<sup>2</sup>The Navy rows do not include increases from the transient presence of aircraft carrier crew with its carrier strike group (CSG).

<sup>3</sup>Population figures do not include Guam residents who obtain employment as a result of the proposed action.

**Table ES-2. Estimated Total Population Increase on Guam from Off-Island (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Direct DoD Population<sup>1</sup></b>											
Active Duty Marine Corps	510	1,570	1,570	1,570	10,552	10,552	10,552	10,552	10,552	10,552	10,552
Marine Corps Dependents	537	1,231	1,231	1,231	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Active Duty Navy <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0
Navy Dependents	0	0	0	0	0	0	0	0	0	0	0
Active Duty Army	0	50	50	50	50	630	630	630	630	630	630
Army Dependents	0	0	0	0	0	950	950	950	950	950	950
Civilian Military Workers	102	244	244	244	1,720	1,836	1,836	1,836	1,836	1,836	1,836
Civilian Military Worker Dependents	97	232	232	232	1,634	1,745	1,745	1,745	1,745	1,745	1,745
Off-Island Construction Workers (DoD Projects) <sup>3</sup>	3,238	8,202	14,217	17,834	18,374	12,140	3,785	0	0	0	0
Dependents of Off-Island Construction Workers (DoD Projects)	1,162	2,583	3,800	3,964	4,721	2,832	1,047	0	0	0	0
<b>Direct DoD Subtotal</b>	<b>5,646</b>	<b>14,112</b>	<b>21,344</b>	<b>25,125</b>	<b>46,052</b>	<b>39,685</b>	<b>29,545</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>
<b>Indirect and Induced Population</b>											
Off-Island Workers for Indirect/Induced Jobs <sup>3</sup>	419	1,154	2,074	2,828	3,966	3,703	3,440	2,818	2,818	2,818	2,818
Dependents of Off-Island Workers for Indirect/Induced Jobs	398	1,096	1,971	2,686	3,768	3,518	3,268	2,678	2,678	2,678	2,678
<b>Indirect/Induced Subtotal</b>	<b>816</b>	<b>2,251</b>	<b>4,045</b>	<b>5,514</b>	<b>7,734</b>	<b>7,221</b>	<b>6,708</b>	<b>5,496</b>	<b>5,496</b>	<b>5,496</b>	<b>5,496</b>
<b>Total Population</b>	<b><u>6,462</u></b>	<b><u>16,363</u></b>	<b><u>25,389</u></b>	<b><u>30,639</u></b>	<b><u>53,786</u></b>	<b><u>46,906</u></b>	<b><u>36,253</u></b>	<b><u>30,209</u></b>	<b><u>30,209</u></b>	<b><u>30,209</u></b>	<b><u>30,209</u></b>

Notes: <sup>1</sup> DoD population includes military personnel, DoD civilian workers and dependents from off-island

<sup>2</sup> The Navy rows do not include increases from the transient presence of aircraft carrier crew with its CSG.

<sup>3</sup> Population figures do not include Guam residents who obtain employment as a result of the proposed action.

**ECONOMIC ACTIVITY**

Table ES-3 summarizes the primary economic impacts of the proposed action during the peak year of 2014 and the steady-state year of 2020, for both the unconstrained and constrained scenarios. All estimates in this table represent “Total Combined Impacts” – i.e., direct and indirect, construction and operations.

**Table ES-3. Summary of Economic and Housing Impacts (Total Combined Impacts)**

	<i>Unconstrained Scenario</i>		<i>Constrained Scenario</i>	
	<i>2014</i>	<i>2020</i>	<i>2014</i>	<i>2020</i>
Civilian Labor Force Demand <sup>1</sup>	43,278	6,930	38,441	6,469
– Allocated to Guam Residents	5,886	2,661	10,229	2,419
Civilian Labor Force Income <sup>2</sup>	\$1,510	\$278	\$1,305	\$260
Gross Receipts Tax <sup>3</sup>	\$145,434	\$10,013	\$130,237	\$8,690
Corporate Income Tax <sup>3</sup>	\$37,086	\$2,553	\$33,210	\$2,216
Personal Income Tax <sup>3</sup>	\$240,752	\$91,683	\$191,420	\$2,216
Civilian Housing Demand <sup>4</sup>	11,893	3,205	5,594	1,846
Gross Island Product(GIP) <sup>2</sup>	\$1,080	\$187	\$800	\$162

Notes: <sup>1</sup>Full time equivalent jobs.

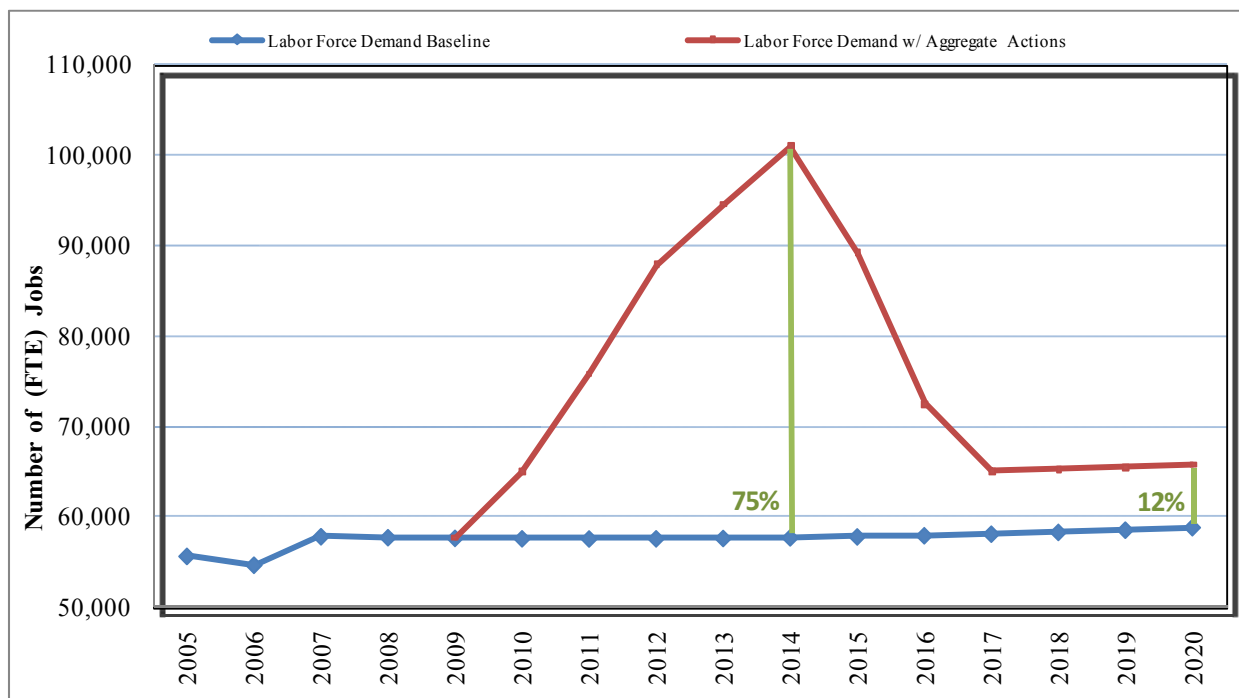
<sup>2</sup>Dollar figures in millions of 2008 dollars.

<sup>3</sup>Dollar figures in thousands of 2008 dollars.

<sup>4</sup>Units of housing required by civilian in-migrants, disregarding housing supply.

Figure ES-1 compares total labor force demand on Guam with and without the proposed action. At the 2014 peak, civilian labor force demand under the proposed action would be 75% higher than it would be without the project. By 2020, the difference declines to 12%. Section 4.3 of the SIAS describes in detail the projected distribution of increased jobs among on- and off-island labor sources.

**Figure ES-1. Labor Force Demand with and without Aggregate Actions (Unconstrained)**



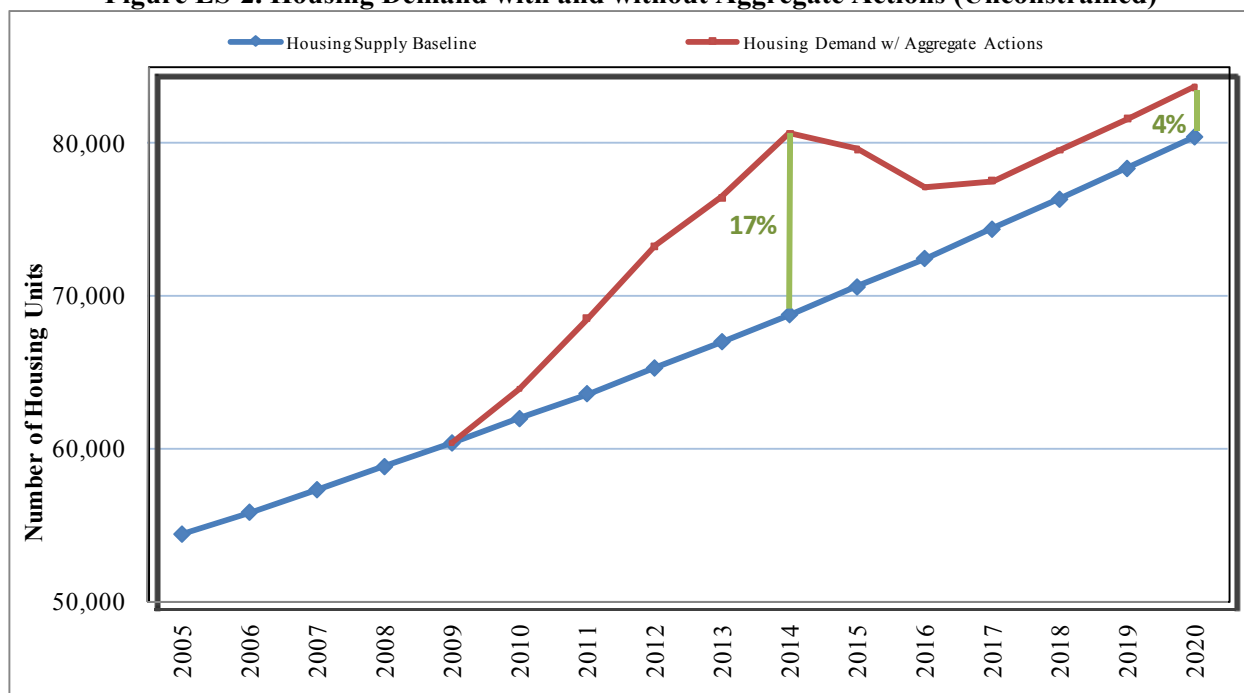
Average and total gross income paid to Guam civilian workers would increase because of the proposed military relocation. The estimated average full-time equivalent (FTE) salary for jobs related to the construction phase (\$33,500) and the military operational phase (\$40,000) would be considerably higher than the 2007 Guam average FTE salary of \$28,150. With a rapid increase in economic activity and a limited pool of on-island labor, there would likely be competition for labor and thus upward pressure on wage rates. Total civilian labor force income is projected to increase by an estimated \$1.5 billion during the peak-year, according to the unconstrained scenario (Table ES-3). The table also indicates the associated effects on tax income. In terms of cost of living, Guam workers will likely continue to see the cost of goods and services rise faster than their incomes. While the proposed action may not represent a reversal of this trend, it would be expected to slow the rate of decline in the standard of living that has been prevalent since 2000.

The proposed action would bring many new jobs to Guam but it would also bring a large new population from off-island. The large influx of new jobs would provide employment opportunities for most that seek them, so the unemployment rate during the construction component is expected to be lower than current levels and full-employment should be reached or exceeded.

The 2014 peak in civilian housing demand is estimated to be 11,893 units in the unconstrained scenario, declining to a steady state of 3,205 additional units in 2020 (Table ES-3). In the constrained scenario, the peak year housing demand would be 5,594 units, declining to 1,846 units in 2020.

Figure ES-2 compares total housing demand on Guam with and without the proposed action. At the 2014 peak, housing demand with the proposed action would be an estimated 17% higher than it would be without the project. By 2020, the estimated difference declines to 4%.

**Figure ES-2. Housing Demand with and without Aggregate Actions (Unconstrained)**



Section 4.3.2 of the SIAS evaluates potential deficits in housing supply and potential changes in housing prices, based on various assumptions of how much housing would be constructed to meet projected demand.



## PUBLIC SERVICES

The analysis of public services impacts in this SIAS evaluated two groups of affected public service agencies. The first group of agencies would be affected by increased service populations. The second group of agencies would be affected by increased development permit applications.

### Agencies Affected by Increasing Population

Analysis was conducted for the following agencies:

- Guam Public School System (GPSS)
- Guam Community College (GCC)
- University of Guam (UoG)
- Guam Memorial Hospital Association (GMHA)
- Guam Department of Public Health and Social Services (GDPHSS)
- Guam Department of Mental Health and Substance Abuse (GDMHSA)
- Guam Department of Integrated Services for Individuals with Disabilities (GDISID)
- Guam Police Department (GPD)
- Guam Fire Department (GFD)
- Guam Department of Corrections (GDoC)
- Guam Department of Youth Affairs (GDYA)
- Guam Department of Parks and Recreation (GDPR)
- Guam Public Library System (GPLS)
- Guam Judiciary

Analysis identified what portion of the increased population caused by the proposed action would access services from each agency. This number was deemed the agency's "service population." It was then determined how many additional staff members each agency would require as a result of this growth in their service population in order to maintain its current level of staff to service population ratio.

Table ES-4 provides a summary of the increase in service population projected for each public service agency. Service population numbers are expected to peak in 2014 and reach a long-term steady-state in 2020.

**Table ES-4. Summary of Public Agency Service Population**

	<i>Unconstrained</i>		<i>Constrained</i>	
	<i>2014</i>	<i>2020</i>	<i>2014</i>	<i>2020</i>
GPSS	4,018	932	2,021	785
GCC	1,685	391	848	329
UoG	2,234	518	927	398
GMHA	54,639	6,088	31,993	4,426
GDPHSS	28,662	11,135	20,170	10,512

	<i>Unconstrained</i>		<i>Constrained</i>	
	<i>2014</i>	<i>2020</i>	<i>2014</i>	<i>2020</i>
GDMHSA	28,662	11,135	20,170	10,512
GDISID	67,880	21,141	45,234	19,479
GPD	79,178	33,608	53,786	28,031
GFD	65,469	10,561	40,087	8,899
GDoC	300	87	210	81
GDYA	10,547	6,328	7,513	6,106
GDPR	79,178	33,608	53,786	28,031
GPLS	79,178	33,608	53,786	28,031
Guam Judiciary	79,178	33,608	53,786	28,031

Table ES-5 shows a summary of the increase in number of staff that would be required by the Government of Guam (GovGuam) public service agencies in order to service the projected increases in demand for service. Although it varies by agencies, the required additional staffing is equivalent to as much as a 44% increase at peak, dropping to at most a 17% increase for the steady-state operational component.

**Table ES-5. Summary of Public Service Agency Key Staffing Requirements**

	<i>Baseline Staffing</i>	<i>Unconstrained</i>		<i>Constrained</i>	
		<i>2014</i>	<i>2020</i>	<i>2014</i>	<i>2020</i>
Public Education Agencies	2,338	619	148	303	123
Public Health and Human Services	655	245	56	156	51
Public Safety	766	305	108	206	95
Selected Other Agencies Driven by Population Growth	124	57	23	38	20

#### **Agencies Affected by Increased Construction and Development**

Analysis was conducted for additional agencies that would be influenced not by a growth in population, but by a growth in permit requests for construction and development. These agencies included:

- Guam Department of Public Works (GDPW), Building Permits and Inspection
- Guam Department of Land Management (GDLM)
- Guam Environmental Protection Agency (GEPA)

- Guam Coastal Management Program (CMP), within Guam Bureau of Statistics and Plans (GBSP)
- Guam Power Authority (GPA)
- Guam Waterworks Authority (GWA)
- GFD, Permitting Staff
- Historic Preservation Office (HPO), within the GDPR
- Guam Division of Environmental Health (DEH) (within the GDPHSS)
- Guam Alien Labor Processing & Certification Division (ALPCD) within the Guam Department of Labor (GDoL)

Analysis of the proposed action indicated the approximate number of construction and development permits that would be needed to complete the planned activities. It was then determined how many permitting staff members each agency would require in the face of this growth in permitting applications and inspections.

Table ES-6 shows summary impacts on permitting and regulatory agencies. Since different permitting agencies serve various functions, which are not driven by population alone, the peak year of analysis varies between agencies.

**Table ES-6. Summary of Permitting and Regulatory Agency Staffing Requirements**

	<i>Unconstrained</i>		<i>Constrained</i>	
	<i>Peak Year (Varies)</i>	<i>2020</i>	<i>Peak Year (Varies)</i>	<i>2020</i>
GDPW	11	1	8	1
GDLM	14	8	12	7
GEPA	29	4	24	3
CMP	10	4	8	2
GPA	4	1	3	1
GWA	7	1	5	1
GFD	4	1	3	0
HPO	14	2	11	2
DEH	5	2	4	2
ALPCD	16	0	16	0

### **SOCIOCULTURAL ISSUES**

Sociocultural impacts are inherently qualitative. Many are not inevitable, but are subject to particular events and policies. Identified impacts include the following:

- Although available evidence does not suggest that Marines or other military personnel would have an impact on Guam's overall crime and social order, there is cause for concern about impacts on crime and social order due to other factors. Construction booms are typically accompanied by a sense of loosened norms and social disorder. In-migrants from the Freely Associated States of Micronesia (FAS) – whose numbers may increase in both the construction and operational stages due to more job opportunities – have high crime rates associated with adapting to less traditional social structures.
- There is a potential for more prostitution, alcohol/substance abuse, and family violence associated with young military populations in general (including Sailors taking shore leave after weeks at sea). The particular reputation of Marines as fighters could well trigger a transitional period of adjustment in which local young men test themselves against Marines in fights.
- There is potential for ongoing social friction due both to more military personnel and more off-island civilian in-migrants, especially in the initial stages of adaptation.
- Guam's indigenous Chamorro population has strong concerns about whether incoming military populations would recognize them as both American by nationality and also as a unique ethnic culture worthy of respect and preservation. This is an example of a potential social impact that could either occur or be avoided depending on events and policies.
- There will be an expansion in non-Chamorro voting population that could affect the proportion of Chamorro office-holders and government workers, eventually affecting the current government budgets and activities dedicated to cultural issues and practices. It could also affect outcomes of any future votes about Guam's political status.

#### **IMPACTS TO COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**

Potential impacts of the proposed action on the CNMI include the following:

- Beneficial impacts to Tinian economy due to 12 to 15 direct jobs on-base and about 35 indirect jobs in the Tinian economy.
- Adverse impacts to Tinian economy due to inhibited access to historical tourism-related sites, cattle grazing land, and wild chili plants.
- Impacts to public services include an increase in the police force related to an increase in population during the construction phase; contracted/civilian fire fighting services may be needed to control range fires; and medical staff traveling with training units may assist in civilian emergencies.
- Adverse impacts to military-civilian relations.

# Guam and CNMI Military Relocation EIS/OEIS

## Socioeconomic Impact Assessment Study

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## Acronym and Abbreviation List

AFB	Air Force Base	GDA	Guam Department of Agriculture
AFL-CIO	American Federation of Labor and Congress of Industrial Organizations	GDISID	Guam Department of Integrated Services for Individuals with Disabilities
AFT	American Federation of Teachers	GDLM	Guam Department of Land Management
ALPCD	Guam Alien Labor Processing and Certification Division	GDMHSA	Guam Department of Mental Health and Substance Abuse
AMDTF	Air and Missile Defense Task Force (Army)	GDoC	Guam Department of Corrections
BCDC	Bureau of Communicable Disease Control (GDPHSS)	GDoL	Guam Department of Labor
BFHNS	Bureau of Family Health and Nursing Services (GDPHSS)	GDP	Gross Domestic Product
BPC	Bureau of Primary Care Services (GDPHSS)	GDPHSS	Guam Department of Public Health and Social Services
BRAC	Base Realignment and Closure	GEPB	Guam Education Policy Board
CDC	Center for Disease Control	GDPR	Guam Department of Parks and Recreation
CHC	Community Health Clinics	GDPW	Guam Department of Public Works
CLTC	Chamorro Land Trust Commission	GDYA	Guam Department of Youth Affairs
CME	Center for Micronesian Empowerment (Guam)	GEDA	Guam Economic Development Authority
CMP	Coastal Management Program (Guam Department of Agriculture)	GEDCA	Guam Economic Development and Commerce Authority
CNMI	Commonwealth of the Northern Mariana Islands	GEPA	Guam Environmental Protection Agency
COMNAV Marianas	Naval Command Northern Marianas	GFD	Guam Fire Department
CONUS	Continental United States	GHRA	Guam Hotel and Restaurant Association
CPI	Consumer Price Index	GIP	Gross Island Product
CSD	Central Statistics Division (CNMI Department of Commerce)	GIS	Geographic Information System
CSG	Carrier Striker Group	GLUC	Guam Land Use Commission
CVN	Nuclear-powered Aircraft Carrier	GMHA	Guam Memorial Hospital Authority
DCA	Department of Chamorro Affairs	GovGuam	Government of Guam
DDESS	Domestic Dependent Elementary and Secondary Schools (DoD)	GPA	Guam Power Authority
DEH	Division of Environmental Health (GDPHSS)	GPD	Guam Police Department
DoD	U.S. Department of Defense	GPLS	Guam Public Library System
DoI	U.S. Department of the Interior	GPSS	Guam Public School System
DoL	U.S. Department of Labor	GVB	Guam Visitors Bureau
EIS	Environmental Impact Statement	GWA	Guam Waterworks Authority
USEPA	U.S. Environmental Protection Agency	ha	hectares
FAS	Freely Associated States of Micronesia	HH	household
FEMA	Federal Emergency Management Agency	HI	Hawaii
FIA	Fiscal Impact Assessment	HIV	Human Immunodeficiency Virus
FOIA	Freedom of Information Act	HPO	Historic Preservation Office (GDPR)
FRC	Federal Regional Council	HUBZone	Historically Underutilized Business Zones
FSM	Federated States of Micronesia	I-O	Input-Output Model
FTE	Full-time equivalent	JGPO	Joint Guam Program Office (Navy)
FY	Fiscal Year	KD	Known Distance
GBSP	Guam Bureau of Statistics and Plans	MIP	Medically Indigent Program (Guam)
GCA	Guam Contractors Association	NAVFAC Pacific	Naval Facility Engineering Command Pacific
GCC	Guam Community College	NEPA	U.S. National Environmental Policy Act
		NFPA	National Fire Protection Association
		NGA	National Governors Association
		NGO	Non-Governmental organization
		NRCHC	Northern Region Community Health Center (GDPHSS)

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OB/GYN	Obstetrics and Gynecology	SRCHC	Southern Region Community Health Center
OEA	U.S. DoD Office of Economic Adjustment	STD	Sexually Transmitted Disease
OEIS	Overseas Environmental Impact Statement	TB	Tuberculosis
OPC	Outer Pacific Committee	UoG	University of Guam
OPEC	Organization of the Petroleum Exporting Countries	USC	U.S. Code
OPM	U.S. Office of Personnel Management	USCG	U.S. Coast Guard
PUMS	Public Use Microdata File	USCIS	U.S. Citizenship and Immigration Service
PX	Post Exchange	U.S.	United States
R&R	Rest and Relaxation	U.N.	United Nations
RMI	Republic of the Marshall Islands	VA	U.S. Veteran Affairs
SDB	Small Disadvantaged Business	VWP	Visa Waiver Program
SIAS	Socioeconomic Impact Assessment Study	WWII	World War II
SOFA	U.S. Status of Forces Agreement		

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## Glossary

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**Boomtowns:** The boomtown effect is a growth and decline scenario where an existing community “experiences a period of extraordinary growth and expects a rapid decline as the project is phased out” (Hua 1985). This SIAS makes note of common socioeconomic boomtown effects that have been observed in the past in other locations and are likely to accompany the proposed action. These include direct and indirect employment and business opportunities, in-migration resulting in population increase, labor shortages, inflation, social and cultural change, expectations for the future that may not be realistic, housing shortages, and a loss of employment opportunities once the construction is over (Cocklin and Kelly 1992, Detomasi 1997, Hua 1985, Offshore Oil and Gas Research Group 2004, Yamaguchi and Kuczek 1984).

**Combined Total Impacts:** sum of the impacts of the construction phase and the operational phase.

**Constrained Scenario:** minimum-impact approach. This scenario assumes blockages would interfere with the full realization of potential beneficial indirect growth. This scenario does not explicitly identify all constraints, but assumes some mix of blockages.

**Direct Expenditures:** first round of spending. These include expenditures related to the construction phase first, and then ongoing military expenditures during the operational phase.

**Direct Impacts:** impacts that come from *direct expenditures*. Direct impacts on jobs and income are split into two components: “direct on-site” and “direct from expenditures.” The term “direct on-site” refers to the jobs and incomes of individuals working on project-related construction or on-base as civilian workers. “Direct from expenditures” refers to those jobs and incomes created by the spending of the direct on-site workers. It also refers to the expenditures by construction contractors or the military. Most tables in this SIAS will show direct, indirect, and total impact results for both the construction and operational components.

**H-2B Workers:** The H-2B nonimmigrant program permits employers to hire foreign workers to come temporarily to the U.S. and perform temporary nonagricultural services or labor on a one-time, seasonal, peakload or intermittent basis.

**Indirect Expenditures:** subsequent rounds of spending (after direct expenditures). These expenditures circulate through the economy, generating spin-off sales and businesses.

**Indirect Impacts:** impacts created by *indirect expenditures*. The term “indirect impacts” is used in this SIAS to cover both *indirect effects* and *induced effects*. In a more technical sense, *indirect effects* are those that occur when the first businesses to receive new outside money spend some of it to buy things from other businesses, and *induced effects* occur when workers at the new/growing businesses spend their added earnings on goods and services, such as kitchen supplies or haircuts. Most tables in this SIAS will show direct, indirect, and total impact results for both the construction and operational components.

**In-migrant Worker:** worker coming in from another region often for purposes of obtaining employment (also, “off-island worker”).

**Multiplier:** factor of proportionality that measures how much an endogenous (from within) variable changes in response to a change in some exogenous (from the outside) variable. For example, how much total employment (inside Guam) changes in response to changes in dollars (from outside Guam) that are spent.

**Over-Supply Scenario (Housing):** scenario where the housing demand is met, but results in a subsequent over-supply of housing, as population declines when construction ends.

**Proxy Group:** populations with expectedly similar characteristics for whom data is available to analyze.

**Sociocultural:** relating to, or involving a combination of social and cultural factors.

**Stay-behind Workers:** workers that migrate to Guam for construction-period jobs and remain on island.

**Total Impacts:** sum of direct and indirect impacts. Most tables in this SIAS will show direct, indirect, and total impact results for both the construction and operational components.

**Unconstrained Scenario:** maximum-impact approach. This scenario assumes no blockages or constraints in the Guam and CNMI environment that might lessen the indirect economic growth potential resulting from the proposed action. The Unconstrained Scenario represent the maximum growth likely to occur compared to the *Constrained Scenario*.

**Under-Supply Scenario (Housing):** scenario where little or no construction occurs to meet civilian market housing demand during the military construction period.

# CHAPTER 1.

## INTRODUCTION

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### 1.1 PURPOSE OF THE STUDY

This Socioeconomic Impact Assessment Study (SIAS) was prepared as a stand-alone study for the Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) for proposed military relocation to Guam and the Commonwealth of the Northern Marianas Islands (CNMI). The purpose of the SIAS is to provide the Joint Guam Program Office (JGPO), the Naval Facilities Engineering Command Pacific (NAVFAC PAC), and the governments of Guam (GovGuam) and CNMI with reliable estimates of the proposed relocation's potential impact on the social and economic conditions on Guam and within the CNMI.

The findings of the SIAS will be used as input to two related documents as follows:

- *The Guam and CNMI Military Relocation EIS/OEIS*: Information from this SIAS will inform the affected environment description and the environmental consequences conclusions contained in the EIS/OEIS.
- *The GovGuam Fiscal Impact Assessment (FIA)*: The SIAS findings will be used as the baseline for assessing fiscal impacts of the military relocation to GovGuam.

### 1.2 BACKGROUND

#### 1.2.1 Overview of the Proposed Military Relocation Action

The analysis in this SIAS addresses the following components of the proposed military relocation action:

- *Marine Corps relocation from Okinawa to Guam*: This component accounts for a majority of the anticipated impacts. It is fully described in Volume 2 of the EIS/OEIS.
- *Construction of facilities for training and operations on Tinian in the CNMI*: These components of the proposed military relocation are described in Volume 3 of the EIS/OEIS. Note that the magnitude of the proposed action on CNMI is far less than for Guam, and so there will be more limited discussion and fewer topics discussed in this SIAS.
- *Aircraft Carrier Berthing at Guam*: This component requires harbor improvements and will increase visits to Guam by Navy aircraft carriers. This component is described in Volume 4 of the EIS/OEIS.
- *Army Air and Missile Defense Task Force (AMDTF) facility development*: This component of the action is described in Volume 5 of the EIS/OEIS.
- *Various "related actions" (i.e., utilities and roadways)*: These components of the action are described in Volume 6 of the EIS/OEIS.

This SIAS does not address the following aspects of the standard EIS/OEIS analysis, including:

- *Analysis of various alternative geographical configurations for actions*. Because socioeconomic impacts would occur at an island-wide level region of influence, these alternatives do not affect SIAS impact analysis.
- *Analysis of cumulative impacts including potential future changes unrelated to the proposed action*. Such a cumulative analysis can be found in Volume 7 of the EIS/OEIS.
- *Analysis of a "no-action" alternative* (where no military buildup occurs).

- *Assessment of the significance of impacts.* Criteria and conclusions related to the significance of potential socioeconomic impacts are described in the appropriate volumes and sections of the EIS/OEIS.
- *Recommended mitigations to reduce the likelihood or potential severity of impacts.* Mitigations are developed as a function of the significance of potential impacts and are described in that context in the appropriate volumes and sections of the EIS/OEIS.

### 1.2.2 The “Boomtown Effect”

Under certain conditions, a rapid and relatively large increase in population and related economic activity can lead to what is called the “Boomtown Effect.” The boomtown effect is a growth and decline scenario where a community “experiences a period of extraordinary growth and expects a rapid decline as the project is phased out” (Hua 1985). Much of the literature on boomtowns has to do with industries such as mining or tourism. However, rapid growth associated with military actions has recently emerged as an issue important to a number of communities across the U.S. The National Governors Association’s (NGA) Center for Best Practices released a new issue brief in November 2008, entitled *Organizing State Responses to Mission Growth*, that discussed expansion of communities associated with military “mission growth” at levels that have not been seen since World War II (NGA 2008). This brief identified the key problems communities are experiencing in terms of increasing demands on infrastructure, pressure on state and local government services, and financing issues. A growing body of media reports has examined examples such as Fort Bragg and Camp Mackall in North Carolina (Cunningham 2008), Fort Meade in Maryland (Witte 2009), Fort Bliss in Texas (Osterreich 2008), and Fort Knox in Kentucky (Green 2009).

The Island of Guam should expect a significant increase in off-island construction workers to meet the construction needs of the proposed action. Thus, like other boomtowns, Guam can expect both a period of overall growing pains and a subsequent reduced level of activity thereafter, although that reduced level is anticipated to feature economic conditions substantially better than current conditions.

This SIAS makes note of common socioeconomic boomtown effects that have been observed in the past and are likely to accompany the proposed action. These include surges in direct and indirect employment and business opportunities, in-migration resulting in population increase, labor shortages, inflation, social and cultural change, expectations for the future that may not be realistic, housing shortages, and a loss of employment opportunities once the construction is over (Cocklin and Kelly 1992; Detomasi 1997; Hua 1985; Offshore Oil and Gas Research Group 2004; Yamaguchi and Kuczek 1984).

Possible boomtown effects for Guam must also be put into the unique context of this proposed action and Guam’s own unique circumstances. For example, the size and characteristics of the in-migrating population would be heavily influenced by Guam’s location as a Pacific island that is remote from the Continental U.S. (CONUS). Social service issues are made more complex by Guam’s role as a service provider to neighboring island countries that are part of the Compact Impact Agreement that enables Guam to receive federal funding in exchange for providing services to residents of the Freely Associated States (FAS). This in turn has sociocultural implications (as defined below) for the island’s Chamorro population. The SIAS analysis takes these factors into account, as well as Guam-specific data and previous Guam boomtown experiences when available.

### 1.2.3 Issues and Concerns from EIS Public Scoping

While EIS/OEIS documents typically provide an evaluation of socioeconomic impacts of a proposed government action, such analyses are not usually based on the level of focused and detailed quantitative analysis represented by this SIAS. This SIAS was determined to be appropriate due in part to the amount



of concern for socioeconomic issues that was voiced by the citizens of Guam and CNMI during a series of public EIS scoping meetings held on Guam, Saipan, and Tinian on April 17-20, 2007. These meetings highlighted a variety of socioeconomic issues of concern to both local residents and the Guam and CNMI governments. The importance of these issues was reinforced as additional public comments were received via mail and email. Additionally, these issues have been stressed in studies and publications released by GovGuam and covered in the public media on Guam and the CNMI.

The socioeconomic issues of greatest concern to residents of Guam are:

- *Social Infrastructure*: e.g., education, healthcare, childcare, and mental health services
- *Community Infrastructure*: e.g., power, water, wastewater, solid waste
- *Labor Impacts*: availability of labor and material for non-defense projects
- *Housing*: e.g., housing supply and demand, affordability
- *Public Safety*: e.g., police, courts, fire protection
- *Tourism/recreation*: e.g., effects on tourism and recreational assets and access
- *Private Property*: concern for use and access to private property
- *Cultural Impacts*: effects on Chamorro culture of off-island construction workers

While the action planned on CNMI is smaller than that on Guam, CNMI residents expressed the following particular concerns:

- *Access to Historical Sites*: cultural traditions and tourism
- *Employment Opportunities*: will proposed action bring jobs?
- *Public Infrastructure*: collaboration between local agencies and the military
- *Harbor and Airport Control*: transportation infrastructure needing repair/improvement
- *Permanent Military Presence*: potential benefits of the action and effects on land lease issues

#### **1.2.4 Issues Identified During Federal Consultation**

In September of 2008, the SIAS research team met with members of the Federal Regional Council (FRC) Region IX in San Francisco and with the United States (U.S.) Department of Agriculture in Washington D.C. as a launch to the SIAS research. The meetings were brokered by the OEA with the goal of establishing the basis for an objective analysis of the needs, impacts and financial challenges posed by the proposed action for GovGuam. Thus the meetings were intended to inform both the SIAS and the FIA report.

The FRC is a consortium of nineteen federal departments and agencies representing Region IX. Region IX is made up of Arizona, California, Hawaii (HI), Nevada and the Outer Pacific Islands. Established in November 1998 out of a Health and Human Service Task Force, the FRC's goal is to achieve better outcomes for the communities in Region IX. It meets monthly and is made up of six committees including the Border Committee, the Faith-Based and Neighborhood Partnerships, the Tribal Affairs Committee, the Guam-CNMI Buildup Committee/Task Force, the Outer Pacific Committee (OPC), and the Homelessness Committee (Regional Interagency Council on Homelessness). The FRC's member agencies include the Departments of Agriculture, Commerce, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior (DoI), Justice, Labor (DoL), Transportation, and Veteran Affairs (VA), as well as the Environmental Protection Agency (USEPA), Federal Deposit Insurance Corporation, General Services Administration, Internal Revenue Service, Small Business Administration and Social Security Administration (FRC 2009).

Since announcement of the proposed action on Guam, the FRC created an Action Plan for Guam (FRC 2008). This action plan includes:

- Communication – establishing a single point of contact on Guam-related matters and informing the public of travel to Guam by FRC members on the website.
- Resource Identification – focused on available federal and non-federal funding opportunities that would be relevant to GovGuam. The FRC’s OPC issues an annual report on “Grants to the Outer Pacific.”
- Training and Technical Assistance – focusing on grant sustainability, auditing and accountability, financial management, and implementation of best practices.
- Partnership with GovGuam – in order to adapt the Action Plan as necessary per Guam’s emerging requirements.

The FRC meetings began with an initial meeting with the Acting Chair of the Council, and also included participation in the FRC monthly meeting, where a presentation was given informing members as to the scope and process of the SIAS (Appendix A). Subsequently, interviews were conducted with various representatives from the following federal agencies:

- Department of Health and Human Services
- Social Security Administration
- Environmental Protection Agency
- Department of Interior
- Department of Transportation
- Department of Agriculture
- Department of Labor
- Department of Veterans Affairs
- General Services Administration

A summary of topics covered in the individual interviews can be found in Appendix B.

Interview questions included the following standard areas of concentration for Guam and CNMI, as well as agency-specific questions:

- Information on recent and historical data/studies helpful to understand historical trends and existing conditions.
- Identification of primary data sources and data contacts for follow-up.
- Identification of current or planned programs that may affect existing conditions.
- Information on on-island military and federal impacts to existing conditions.
- Information on impacts of H-2B construction workers during periods of growth.
- Information on impacts of immigrants.
- Institutional information on historical context, relevant political actions, funding issues, and possible mitigation measures in relation to the proposed action.
- Perspectives from the field regarding SIAS fieldwork that may occur.

Overall, the interviews enabled a list of relevant GovGuam agencies and key contact people at those agencies to be compiled. These contacts were important in subsequent field studies. In addition, the following main issues emerged from the FRC interviews, and included in the SIAS analysis:

- *Impacts on GovGuam agencies:* Federal agencies highlighted existing capacity issues, current funding caps for social services, and potential impacts facing various GovGuam agencies. This resulted in a greater than originally intended SIAS focus on GovGuam’s public service agencies – in terms of both their existing conditions and potential effects of the proposed action.

Furthermore, a more general overview section about GovGuam capacity issues was developed for the SIAS. This addresses both the fiscal situation and more managerially-oriented factors (see Public Service Impacts section below).

- *Impacts on federal agencies:* Federal agencies indicated existing capacity issues that could lead to a longer negotiation processes around the issue of funding for ancillary activities related to the proposed action, as well as other “choke-points” of elements necessary for the proposed action. For example: difficulty in recruiting staff to work in Guam, and the potential demand to open local Guam offices to service an increased in population (rather than doing so from Hawaii). These issues were not considered within the scope of the SIAS, and the focus of the study remained on the proposed action’s impacts to local government and the private sector.
- *Impacts of increasing immigration:* A frequent theme that emerged from discussion with human service agencies involved the challenges posed by possible increased immigration to Guam, especially of Micronesians from the FAS. Potential impacts included increased workload for local services and sociocultural impacts if new immigrants lacked sufficient training to qualify for employment.
- *Lack of data:* The lack of available socioeconomic data pertaining to Guam, and the tracking of such data was also mentioned as a concern. The reason for this was largely given as budget cuts that had interrupted data collection and/or analysis and publication. This meant that the SIAS took on a standardized primary data collection effort among public service agencies.
- *Other key unknowns:* The observations of agency staff experienced in Guam- and CNMI-related issues indicated attention needed to be given to the following key unknowns at the larger socio-economic level: 1) Availability of local trained labor, 2) exact sources of off-island labor, and 3) housing impacts, especially during the construction stage for off-island workers.

The analysis in this SIAS was prepared with the best currently available information on relevant topics such as construction conditions, military personnel numbers, and relocation schedules. However, ongoing federal legislative, planning, and scheduling decisions could result in changes to various input assumptions and thus also to the projected impacts.

### **1.3 SCOPE OF THE SIAS IMPACT ANALYSES**

The following general scope parameters were fundamental to the investigation of the aforementioned socioeconomic issues in this SIAS:

- consideration of both direct and indirect impacts (defined below).
- analysis of impacts from both construction and operational phases of the proposed action.
- analysis of scenarios based on assumptions of unconstrained and constrained economic growth potential.

#### **1.3.1 Direct and Indirect Impacts**

The analysis in this SIAS addresses direct, indirect, and combined or “total” impacts of the proposed action. The following example of project-related expenditures illustrates the difference between direct and indirect impacts. A critical distinction is made between “direct” and “indirect” expenditures that ultimately result in different “direct” and “indirect” impacts. This report also occasionally refers to economic “spin-off” activities; this term refers both to “direct from expenditures” as well as “indirect” impacts.

*Direct impacts* are impacts that come from *direct expenditures*, or the first round of spending. These include expenditures related to the construction phase first, and then ongoing military expenditures during the operational phase. Direct impacts on jobs and income are split into two components: “direct on-site” and “direct from expenditures.” The term “direct on-site” refers to the jobs and incomes of individuals working on project-related construction or on-base as civilian workers. “Direct from expenditures” refers to those jobs and incomes created by the spending of the direct on-site workers. It also refers to the direct expenditures by construction contractors or the military.

*Indirect impacts* are impacts that are stimulated by *indirect expenditures*, or subsequent rounds of spending. These expenditures circulate through the economy, generating spin-off sales and businesses. The term “indirect impacts” is used in this SIAS to cover both *indirect effects* and *induced effects*. In a more technical sense, *indirect effects* are those that occur when the first businesses to receive new outside money spend some of it to buy things from other businesses, and *induced effects* occur when workers at the new/growing businesses spend their added earnings on goods and services, such as kitchen supplies or haircuts.

*Total impacts* are the sum of direct and indirect impacts for a particular phase of the proposed action. Most tables in this SIAS will show direct, indirect, and total results for both the construction and operational phases.

*Combined total impacts* are the sum of the total impacts of the construction phase and the operational phase that would be relevant during times when the two phases overlap.

### **1.3.2 Construction and Operational Components**

The proposed action analyzed in this SIAS is unique because there is some degree of overlap between “operational” and “construction” components through the entire construction period. Impact assessment usually involves separate attention to the two components that normally have little or no overlap. However, the proposed action’s schedule has a desired relocation date for Marines from Okinawa of 2014, when construction activities are projected to still be at a peak. In fact, a limited number of active-duty personnel are expected to arrive on Guam in 2010. A purely operational phase, with all construction completed, is not expected until 2017.

To capture the separate impacts of the construction and operational phases, as well as to show their combined impacts, most quantitative analyses in the study will present results for 2010 through 2020 for:

- Construction Phase – Direct, Indirect, and Total Impacts
- Operational Phase – Direct, Indirect, and Total Impacts
- Combined (Construction and Operational) – Direct, Indirect, and Total Impacts

### **1.3.3 Unconstrained vs. Constrained Impact Scenarios**

The SIAS analysis results in specific quantitative projections for population and employment impacts. These projections are best interpreted as rough-order-of-magnitude estimates because socioeconomic impact forecasts are inherently approximate estimates and actual future events can never be precisely predicted. Also, the economies of Guam and CNMI are relatively small and it is more difficult to make accurate predictions for small economies than for larger ones because, statistically, larger economies exhibit more stable characteristics.

To assist in providing a comprehensive picture of the proposed action’s impacts that takes into account the possibility of such constraints, quantitative impacts in this SIAS are assessed for both an unconstrained and a constrained scenario. The differences between the two scenarios revolve around

possible constraints in the Guam and CNMI socioeconomic environment that might lessen the spin-off economic growth potential resulting from the proposed action. Such constraints might include:

- Limited nearby labor supply.
- Limited housing for new workers.
- Limited government capacity to process permits for new development.
- Limits on availability of construction supplies and materials.
- Limits on availability of business loans.

The *Unconstrained Scenario* is a maximum-impact approach. This scenario assumes no constraints in the Guam and CNMI environment that might lessen the indirect economic growth potential resulting from the proposed action. The Unconstrained Scenario represents the maximum growth likely to occur. Compared to the *Constrained Scenario*, this scenario assumes that currently unemployed Guam residents will take fewer jobs, more in-migrants would be needed, and that each worker would have more non-working dependents. This is the maximum potential adverse effect.

The *Constrained Scenario* is a minimum-impact approach. This scenario assumes constraints would interfere with the full realization of potential beneficial indirect growth. This scenario does not explicitly identify all constraints, but assumes some mix of constraints. It also assumes absorption of currently unemployed Guam residents by the job market, less in-migrants, and fewer non-working dependents per in-migrant. This is the best-case scenario.

Results of the analysis using one scenario are not considered more accurate than results from the use of the other. The actual impacts of the proposed action could in reality be reflected by either of these scenario results or somewhere in between.

#### **1.4 SIAS FOCUS: FOUR MAJOR CATEGORIES OF SOCIOECONOMIC RESOURCES**

The impact assessment and discussion of findings is presented in the SIAS in terms of the following four categories of socioeconomic issues: population change, economic activity, public services, and sociocultural issues.

##### **1.4.1 Population Change**

Because population change is usually the fundamental driver for most other socioeconomic impacts, the SIAS focuses on predicting the total project-related population increase expected to result from the proposed military relocation, both directly and indirectly. *Direct new populations* include construction workers from off-island and their dependents, active duty military, military dependents, new residents filling on-base civilian jobs and their dependents, and new residents filling jobs created by the first round of spending and their dependents. *Indirect new populations* include new Guam residents (and their dependents) who may move to Guam to fill jobs created by subsequent rounds of indirect spending. The analysis will also address the demographic and household characteristics associated with the projected population increase.

##### **1.4.2 Economic Activity**

Economic activity as described and analyzed in this SIAS addresses impacts to:

- Employment and income
- Housing
- Local Government Revenues
- Gross Island Product

- Utility rates
- Local Business Contract Opportunities and Constraints
- Tourism

#### **1.4.3 Public Services**

The public services impact analysis focuses on impacts to:

- Public Education
- Public Health and Human Services
- Public Safety
- Other Selected Service Agencies
- Growth Permitting and Regulatory Agencies

#### **1.4.4 Sociocultural Issues**

Sociocultural issues evaluated in this SIAS include the potential for increases in crime and serious social disorder; issues of concern to the Chamorro population, and community cohesion. Chamorro issues include the trend toward the Chamorro becoming a minority of the Guam population, potential decline in respect for the Chamorro culture and people by military personnel, and acquisition or leasing of lands for development.

### **1.5 ORGANIZATION OF THE SIAS REPORT**

The remainder of this report is organized as follows: Chapter 2 presents an overview of the approach to analysis for each of the four major socioeconomic categories; Chapter 3 describes the baseline conditions associated with the various socioeconomic issues addressed in the study; Chapter 4 describes in detail the projected impacts of the proposed military relocation to Guam; Chapters 5 and 6 describe the baseline conditions and potential impacts (respectively) associated with elements of the proposed relocation that would occur in CNMI; and Chapter 7 provides a list of references.

## CHAPTER 2.

# APPROACH TO ANALYSIS

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The SIAS was initiated in September of 2008 with a series of meetings in San Francisco and Washington D.C. with relevant federal agencies. These meetings provided context for and helped shape the approach to analysis that was used in this SIAS. During this time SIAS consultants and Office of Economic Adjustment (OEA) representatives also met with the GovGuam's Chief of Staff in order to establish appropriate protocol for interaction with GovGuam agencies when in the field. In November of 2008, a series of meetings and interviews were conducted with government officials on Guam and CNMI. Subsequently, survey forms (Appendix C) were prepared and sent to a number of government agencies and another round of meetings/interviews were held in February 2009 (Appendix D) on both Guam and the CNMI.

As introduced in Chapter 1, impacts to be estimated in this SIAS fall under these general categories:

- *Population Change*
- *Economic Activity*
- *Public Services*
- *Sociocultural Issues*

Following is an overview of the approach to analysis for each category.

### 2.1 APPROACH TO ANALYSIS: POPULATION CHANGE

#### 2.1.1 Project-Related Population

Some project-related population is simply the number of active duty personnel and civil-service government employees (and their respective dependents) that would be relocated to Guam. This population is based on information directly provided by the Department of Defense (DoD). The remaining project-related population was estimated based on calculations of the number of off-island civilian workers and their dependents that would move to Guam to fill the expected increase in jobs. Population growth models were used to predict the number of people that would migrate to Guam for the new jobs created by the proposed action, as well as the dependents that would accompany them. This projection is necessarily based on the employment impacts discussed in Section 2.2 below. This analysis resulted in the determination of the number of jobs that would be created by the proposed action, as well as the nature of those jobs. Once this analysis was completed, population impact analysis was completed.

The population analysis contained the following three steps:

1. Determine the capacity of current Guam residents to take jobs.
2. Determine the number of in-migrants who will move to Guam to take jobs.
3. Determine the identity and characteristics of the in-migrant labor pool (also discussed under Demographic Impacts below).

##### 2.1.1.1 Capacity of Guam Residents to Take Jobs

The first step in the population impact analysis was to determine how many of the new jobs created as a result of the proposed action would be taken by current Guam residents. After this is determined, this number is subtracted from the employment impact numbers and new population is based on jobs not taken by current Guam residents.

The question: “How many of the new jobs would be filled by Guam residents who were not currently employed?” is impacted by:

- how much the unemployment rate would decline
- how many “discouraged workers” (i.e., potential workers who have stopped even actively looking for jobs) would be pulled back into the labor market
- labor force participation rates of military spouses, who become part of the potential labor market for both direct and indirect civilian jobs

#### 2.1.1.2 Number of In-migrants adding to Guam’s Population

The number of Guam residents projected to take jobs is subtracted from the total number of expected jobs; the difference is equal to the number of jobs that would be expected to be filled by in-migrant labor. Since it is expected that in-migrant labor will bring some family, about one dependent is added to each in-migrant worker. The number of in-migrant workers plus the dependents expected to accompany them is the total population impact.

#### 2.1.1.3 Identity and Characteristics of In-Migrant Workers and Dependents

These new workers would add to the population of Guam, as would their dependent numbers. Thus the following questions needed to be answered:

- What would be the identity and characteristics of these in-migrant workers?
- How many dependents would accompany each in-migrant?

Both these issues would be affected by where those workers would actually be migrating from. It was determined that the most likely in-migrants would be:

- Temporary foreign workers on common work visas, who would likely not be accompanied by dependents at all.
- Citizens from the nearby CNMI or FAS, who would likely arrive on Guam with, or shortly send for, the remainder of their households, that are relatively large.
- Citizens from HI or CONUS, who would likely have smaller households. It was assumed that those willing to travel as far as Guam for employment may be less likely to bring their family along to such a far away location.

While the analysis does provide estimates of Guam residents’ potential to capture new jobs, it concludes that it is currently impossible to identify the exact percentages of off-island workers from any particular outside place who would in-migrate to Guam for most jobs. Since the exact characteristics of the new in-migrant population are not known, it was necessary to establish “proxy groups” to use in analysis. Proxy groups are populations with expectedly similar characteristics for whom data is available to analyze.

This SIAS analyzed the following proxy groups to represent in-migrants:

- Historical populations who have moved to Guam for purposes of work.
- The military and military-dependent population of HI.

Historical populations who have moved to Guam for purposes of employment were chosen to represent the *employment component* population because most people who would move to Guam as a result of the proposed action would be doing so for employment purposes. While past occurrences are not necessarily going to happen in the future, certain influencing factors (e.g., geographic location) remain the same and it is expected that historical results provide a good indicator of future results.



The military and dependent population of HI was chosen as the proxy group to represent the *military operational phase* population. Because HI has a large military population, including a Marine Corps base, it can be expected that the military and dependents that would move to Guam would be similar in makeup to the group currently living in HI.

#### 2.1.1.4 Additional Population Growth Due to In-Migration

Additional factors influence in-migrant worker populations and therefore population growth on Guam:

- Gradual Population Growth
- Out-migration Statistics
- Encouragement of Increased Migration

First, population growth among in-migrant workers while on Guam was examined. Many working in-migrants are younger people who have children over time, so that their population impacts accrue gradually. Typical to socioeconomic impact assessment and assumed in this analysis is the assumption that in-migrant households have an average household size either like the place where they come (e.g., CONUS) or the place where they are going (e.g., Guam). This assumption may overstate the actual immediate growth, but captures the probable long-term population size.

Second, out-migration of these populations is an issue. Will the temporary in-migrant population leave Guam when their time of employment ends? The unconstrained scenario assumes prompt out-migration of temporary population (direct and indirect) as military construction concludes. However, there is a concern that out-migration might not be so prompt.

While employers of H-2B workers (temporary foreign labor in the U.S. on work visas) are required to prove that workers have left Guam once the particular project the worker was brought in for is completed, there are anecdotal reports of “stay-behind” H-2B workers who have married Guam residents and in that way become permanent residents. There are also concerns that FAS or CNMI in-migrants that migrate for construction-period jobs but either do not become employed, or lose those jobs, may stay on Guam. FAS and CNMI migrants have the status of U.S. citizens and can migrate within the U.S. without constraint.

Developing an estimated number of “stay-behind” H-2B workers is problematic because the factors involved are each difficult to measure and, when tested empirically, produce ambiguous results (Bohning 1981). Nonetheless, studies do show that stay-behind workers can be expected. Thus, general qualitative impacts brought about by possible stay-behind workers are noted in applicable impact sections of this SIAS.

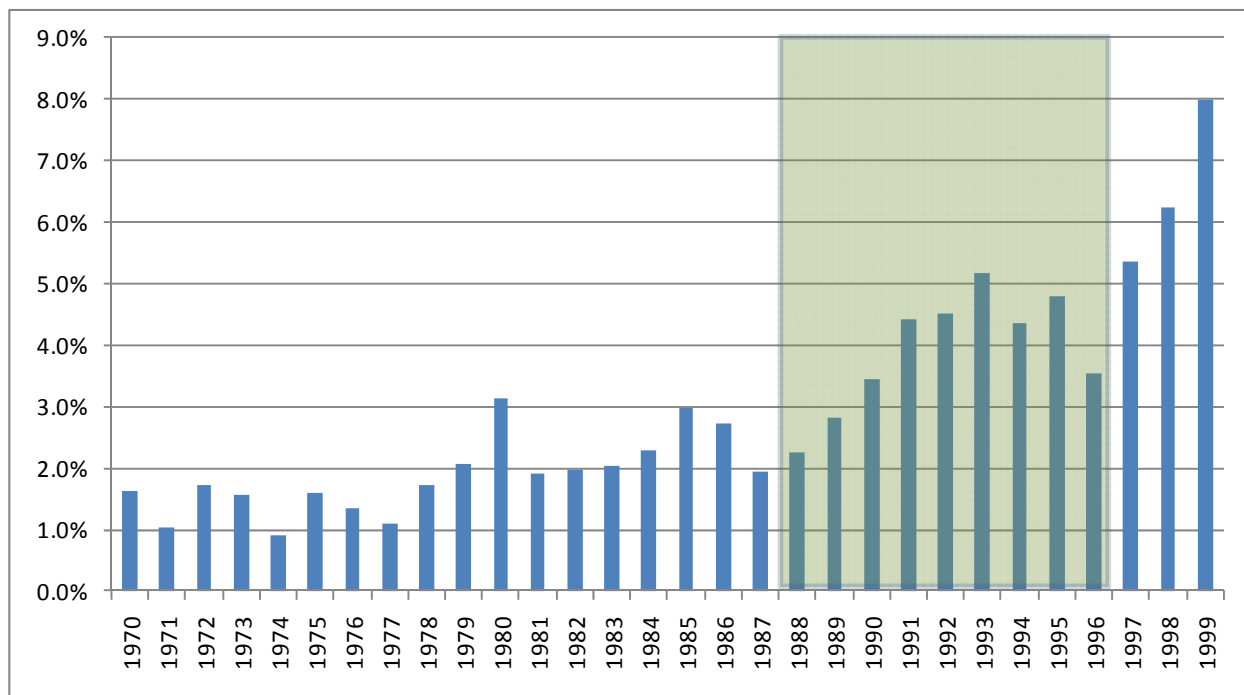
Finally, it has been suggested that immigration flows stemming from temporary workers can generate, over time, more immigrants than there were visas originally allocated (Massey and Liang 1989). It should be noted that U.S. immigration policy can inherently lead to increased immigration over-time, wherein family members apply to have relatives immigrate, increasing the number of immigrants. Effects such as these are difficult to quantify and cannot be directly correlated to the proposed action and are not included in quantified impacts.

Based on multiple interviews with construction contractors familiar with Guam projects, it is expected that a large proportion of H-2B workers will originate from the Philippines. Furthermore, since two-thirds of Guam’s foreign-born population is from the Philippines, it is expected that most “stay-behind” workers and related future population growth would originate from there.

Figure 2.1-1 shows a year-by-year breakdown of when Guam’s Philippines-born population moved to Guam. For instance, in 1993, just over 5% of Guam’s Philippines-born population moved from the

Philippines to Guam. The period from 1988 to 1996 is highlighted as it represents a period of time when a high level of construction activity was occurring on Guam. It should be noted that the large increase in Filipino population on Guam can be mainly attributed to legal immigration.

**Figure 2.1-1. Year of Arrival of Guam's Philippines-Born Population, 1970-1999**



Note: Highlighted period one of high construction activity on Guam

### 2.1.2 Demographic and Household Characteristics

Once it was determined how large the project-related population would be, the characteristics of that new population were projected. These projections in turn fed into projections of the demographic and household impacts of the proposed action on Guam.

In this SIAS, demographic and household characteristics are presented comparatively. In other words, the characteristics of the new population are compared to the existing population, and the impact is presented as the change in characteristics brought about by the proposed action.

Unlike other impact analyses in this SIAS, demographic and household characteristics are presented with an employment component and a military component (not construction and operations as other impacts are presented). The employment component focuses on the impacts from new populations who move to Guam for work related to the proposed action and the military component focuses on the military population impacts.

To establish the characteristics for the employment component proxy group, U.S. Census Bureau year 2000 10% Guam Public Use Microdata Sample (PUMS) data were used. To establish characteristics for the military operational component, the Census Bureau's American Community Survey 3-yr average, 2005-2007 PUMS data for HI were used. PUMS data, in general, provide census data at the individual responder level, allowing analyses to be done at a greater level of detail. For instance, if an analyst is interested in gathering information on 65 year olds, PUMS data screens data for every respondent who reported that they were 65 years old; so analysis can be run on that group alone.

There were two factors used to isolate the employment component proxy group: “not born on Guam” and “moved to Guam for employment purposes.” Characteristics of individual respondents who fit both of these criteria were isolated and analyzed.

Data on active duty military and dependents were isolated. From this isolated data the characteristics of the military component proxy group were determined.

To determine demographic and household impacts, the characteristics determined for each proxy group were compared to Guam’s current characteristics (presented in the Affected Environment Chapter). Impacts are presented as the net difference between the proxy group and the current situation; i.e., characteristics are explained relative to the current situation (larger than or less than).

## **2.2 APPROACH TO ANALYSIS: ECONOMIC ACTIVITY**

“Economic Impacts” primarily include topics where numerical estimates can be made, including:

- Civilian employment and income
- Housing for civilian population
- Government revenues and sources
- Gross Island Product (GIP)

Some economic topics are less conducive to quantification, but qualitative information about their impacts is presented in the SIAS for:

- Potential effects on standard of living
- Unemployment
- Local business opportunities and constraints
- Effects on tourism

### **2.2.1 Economic Model**

For economic impacts, standardized economic impact models and techniques were used for both construction and operational phases. To calculate the indirect impacts of spending, the 2005 State of HI Input-Output (I-O) model was used to estimate how many jobs and other economic variables are created as initial new spending and later rounds of spending flow through the Guam economy. Since there is no specific updated economic model for Guam, HI models are used to represent Guam’s similar island-based economy. The HI I-O was recently used in the Economic Contribution Study for A.B. Won Pat International Airport (Jacobs Consultancy 2007). Other Guam economic impact studies that used HI models include the Socio-Economic Impact Assessment of New U.S. Navy Activities on Guam (U.S. Navy Pacific Division Naval Facilities Engineering Command 1993), the Kilo Wharf Extension EIS/OEIS (U.S. Navy Pacific Division Naval Facilities Engineering Command 2007), the Economic Impact of Navy Base Closures and Outsourcing on Guam (Earth Tech 1999) and the Revised Guam Tourism Impact, Preliminary Results (Global Insight 2007). HI multipliers may be slightly higher than would be expected for Guam because leakages on Guam’s economy are likely greater due to a relatively higher amount of imported products.

Labor force, population, and housing demand estimates all flow from economic assumptions through various specific assumptions about workers per million dollars of expenditures, non-working dependents per worker, and workers per housing unit. These assumptions are described in subsequent sections.

## 2.2.2 Logic Chain and Critical Inputs

The foundation of the logic chain for assessing economic impacts was to “follow the money.” The first step was to identify how much new money would come into the economy and the second was to estimate how that money would circulate through the economy. The following subsections outline the inputs and calculations most important to determining the economic impacts of the proposed action.

### 2.2.2.1 Total Dollars Spent in Construction and Military Operational Phases

Total dollars related to the proposed action were based on expected construction expenditures (data provided by NAVFAC Pacific) and expected base operational expenditures (based on data from historical military contracts). Total dollars directly affect calculations such as job counts and GIP. However, it is important to understand that many of these dollars do not remain in the Guam economy because they go to purchase goods and services that must be imported and/or remain within the DoD in military enclaves. The analysis focused only on dollars that would be spent within the Guam economy.

### 2.2.2.2 Dollars Captured by the Guam Economy

This calculation included assumptions about how many dollars from construction contracts, military operational contracts, or personal expenditures by construction workers or military families actually circulate in the Guam economy. Positive impacts (such as purchases and infrastructure development) that accrue only to the military or to importers were treated neither as a benefit nor as a cost to the local economy.

### 2.2.2.3 Dollars Re-Circulating Through the Economy

This part of the analysis involved the use of I-O “multipliers” to track how much of the money tends to go to different economic sectors. The multipliers were used to determine how many indirect jobs would be generated in the construction and operations components.

### 2.2.2.4 Civilian Jobs

Direct civilian job numbers associated with the construction phase of the action were calculated based on information about the typical portion of Guam construction dollars that go to labor, as well as average construction salaries. Certain direct job numbers were based on similar calculations, but federal civilian worker jobs were calculated as a ratio of federal civilian workers to active-duty military. Indirect jobs that would result from money re-circulating through the economy were determined by the I-O “multiplier” models.

### 2.2.2.5 Tax Revenues for GovGuam

This SIAS includes broad estimates based on incomes, expenditures, and government tax sources. These estimates will be further refined by a subsequent FIA study funded by the DoD’s OEA.

### 2.2.2.6 Available Labor Supply, Nonworking Dependents of In-Migrating Labor, and Average Household Sizes

Assumptions about available labor supply, nonworking dependents of in-migrating labor, and average household sizes were used to estimate population growth and demand for new housing units. Various U.S. Census data points were used (detailed in sections below), along with estimates from local Guam construction contractors, to estimate the increased population who would consume housing. U.S. Census data on number of persons per household were used to establish the number of housing units needed.

### 2.2.2.7 Distinctive Navy Action Inputs

While the above critical inputs apply to all aspects of the proposed action, there are several distinctions specific to the Navy's proposed Aircraft Carrier Berthing action. The following assumptions are relevant to the analytical approach for this particular component of the action:

- No permanent shore-side operational personnel or dependents, nor any federal civilian workers, would be transferred to Guam for this action.
- Operational impacts would flow from an increased number of aircraft carrier days in port ("port-days"). The number of port-days is estimated to increase from a current average of 21 port-days annually to a cumulative total of up to 63 port-days per year, with an anticipated length of 21 days or less per visit. (This SIAS takes this maximum difference of 42 port-days as the effective definition of the "proposed action" for the operational phase.)
- Another source of impacts would be Navy expenditures made in the Guam economy to provide goods and services to the vessel while in port. These expenditures are linked to the number of dockings rather than the number of port-days. There would be approximately three visits, or dockings, per year.
- Most operational impacts would come from expenditures in the Guam economy by sailors while vessels are in port (as opposed to expenditures made on-base).
- Navy-related "direct operational jobs" discussed in this SIAS are all in the private sector, flowing from the two types of direct expenditures described above.

### 2.2.3 Low Capture Rates (High Leakage) for Guam Economy

The term "capture rate" refers to the portion of new construction or operational expenditures spent in the local economy – i.e., money that actually enters the local economy and does not immediately "leak" away to sellers outside the local economy. It was determined that in general, and in relation to this proposed action, the Guam economy will experience low capture rates.

Guam's geographical isolation and low productive capacity has led to a high reliance on imports. In 2008, the value of Guam's imports (\$225 million) was more than twice the export value (\$105 million). Consequently, Guam's trade deficit was \$120 million in 2008 (Guam Bureau of Statistics and Plans [GBSP] 2009b). Furthermore, Guam's exports do not provide a strong trade position for the territory. Guam's most prominent export in 2008 was motor cars that accounted for nearly 50% of total exports. Motor cars are not built on Guam and thus there is no production represented on Guam's top export (GBSP 2009b).

Almost all of the goods needed to construct or operate military bases would not be produced on Guam and would be shipped from off-island and onto military bases, with Guam's economy capturing little or no value.

#### 2.2.3.1 Construction Phase Capture Rates

Capture rates during the construction phase are determined by how much is spent locally by:

- construction firms for required goods and services
- construction workers for their household needs

Neither of these sources is expected to contribute as much to the Guam economy as they might in other regions.

Based on information from the Guam Contractors Association (GCA) (GCA 2008a and 2008b), only 17.5% of total construction expenditures would be spent on Guam goods and services, including the following:

- 5.5% on equipment and supplies from Guam companies
- 5% on Guam-supplied materials (mostly rock products)
- 1.5% on Guam architectural and engineering services

In addition, much of the labor used during the construction phase would come from off-island sources, and these workers tend to spend less in the Guam economy than do local workers. Instead, off-island laborers tend to repatriate much of their earnings (i.e., send money back home to their families).

#### 2.2.3.2 Operational Phase Capture Rates

Capture rates during the operational phase are determined by how much is spent locally by military bases and associated operational phase population largely consisting of uniformed personnel and their families. In general, Guam companies do not capture a large portion of military contracts. In 2008, only 42% of contracts for military related work on Guam went to Guam companies (Guam Economic Development Authority [GEDA] 2009). Even for contracts that go to local firms, most products required to complete their services are imported and the economic benefits are not retained by the Guam economy (Appendix D – Global Facility Services Interview).

Spending in the local economy does occur by Guam residents that have military-related work. Members of the military, on the other hand, do not spend a great deal of their income in the local economy, especially if they are housed on-base as the Marine and Army personnel in the proposed action are expected to be. Much of the expenditures by military personnel are made at on-base establishments that send profits off island, such as military post exchange (PX) outlets.

Military housing would be provided by the military rather than by the Guam private-market. Local shippers and wholesalers do often capture margins on products sold on-base, but still the majority of the value is never realized when imported goods are sold on-base and profits are not reinvested locally.

#### 2.2.4 Capturing the Potential of Indirect Economic and Population Growth During Construction

It is uncertain if Guam has the capacity to fully absorb and benefit from the sudden injection of large expenditures into its economy during the “boom” period (when peak construction overlaps with military arrivals). Large expenditures in this period theoretically would circulate throughout the economy and create opportunities for spin-off growth in jobs and population. But if the economy and social infrastructure cannot expand rapidly enough to provide the labor, housing, and other requirements for these jobs to be realized, then much of these expenditures could leak out of Guam’s economy and the potential growth would not all occur before the construction period ends.

Economic models were used to estimate the extent of indirect economic impacts. These models implicitly assume it would be easy for business to finance new operations and to find additional workers rapidly. However, fast-growing economies in general – and a small U.S. territorial island far from the CONUS in particular – can face many challenges in taking advantage of new economic opportunities. For Guam, these challenges include the topics covered in the following subsections.

#### 2.2.4.1 Limited Nearby Labor Supply

Because of the size and remoteness of Guam, the available supply of resident workers is limited, and direct jobs from the proposed action would take up much of this labor. The economy of the neighboring CNMI is depressed so some workers may move to Guam. Although they are close, there are limited numbers of skilled workers from the FAS.

As will be discussed at greater length in Section 4.3.1.1, the U.S. Congress has temporarily lifted the normal limits on “H-2B work visas” (temporary work permits for foreign labor) for Guam during the construction period. However, foreign workers would not be admitted in large numbers forever, and it would be impractical for many types of employers (especially small businesses) to meet the legal requirements for importing workers and also provide them with housing and health benefits.

#### 2.2.4.2 Limited Housing for New Workers

Although U.S. military personnel and foreign workers entering on H-2B work visas would have housing built for them (as required by law), other workers moving to Guam to take spin-off jobs would likely rely on housing provided by Guam’s private market. Whether the local market can or would provide such housing in sufficient supply and at affordable prices is uncertain. Interviews with public- and private-sector housing experts on Guam highlighted differing opinions regarding whether the private sector would be able or willing to develop commercial housing and development projects while more lucrative military projects were still in progress.

#### 2.2.4.3 Local Government Capacity to Process Permits for New Development

An additional possible constraint on both housing for new workforce and also new commercial or industrial space is the GovGuam’s capacity to process permit applications, conduct building inspections, etc. Local agencies are already beginning to lose workers to private-sector development companies and anticipate difficulty in finding staff to meet additional demand.

#### 2.2.4.4 Availability of Construction Supplies and Materials

Because of Guam’s stormy climate, cement is a necessary ingredient for almost all structures. At present, there is only one cement supplier on Guam and a limited number of storage silos. While efforts are underway to remedy this, the GCA is predicting a shortage for at least the year 2010 (GCA 2008b).

#### 2.2.4.5 Availability of Business Loans

The current international finance crisis has prevented all but the most established credit-worthy businesses from obtaining loans for expansion. Such bank lending is often needed for new business startups or expansions. As of July, 2009 U.S. bank lending is still in decline (U.S. Treasury 2009).

#### 2.2.4.6 Water and Air Transportation Constraints

On Guam, most goods are imported. All imported goods are brought into Guam via the A.B. Won Pat International Airport or through the Port of Guam. The capacities of the existing facilities are below the volumes needed for the direct military buildup itself, let alone additional demands as the rest of the economy grows. Furthermore, dry bulk shipping rates (payments to shipping companies for service) have dropped sharply since October 2008. This can reduce overall shipping capacity worldwide over the next several years, with particular implications for island economies dependent on imported goods. On Guam, the consequent shortages of imported products could not only affect prices, due to shrinking supply to meet increasing demand, but also contributes to limits on availability of construction supplies to meet demand for indirect growth during military construction.

Because of the above and other factors, many “spin-off” economic impacts may not really take place to the extent indicated by the economic models used in this analysis. These impacts may remain only potentials that are never realized – especially at the peak of the construction phase, when the boomtown effect creates so much temporary demand that it may be difficult to find labor and/or build needed new housing and business space before construction starts winding down.

There are several possible results if indirect growth is in some part constrained (blocked or restricted):

- Some or all of the possible additional economic growth simply may never happen, especially for the construction peak military overlap “boom” period.
- Some indirect economic growth may occur, but on a delayed basis.
- Demand for workers in new businesses could attract workers from existing businesses, resulting in labor shortages (especially for lower-paying jobs in industries such as fast food) and/or pressure for higher wages.
- Labor shortages in turn could generate a number of possible outcomes, including longer hours (sometimes with overtime pay), multiple job-holding and attendant family impacts, and/or severe impacts on smaller businesses dependent on lower-wage workers.
- Wages may increase while prices of goods and services rise even faster, reducing the desirability of living/working on Guam.
- An influx of new workers could cause increases in housing prices and/or crowded housing conditions and homelessness or simply eliminate the ability of new workers to move to Guam.

From 2017 on (the steady-state operational component), there is little doubt that the Guam economy will be able to absorb the proposed action’s economic infusion. Long-term impacts from the operational phase are both more predictable and also more clearly positive on a net basis, as there would be additional time to deal with “growing pains” and catch up with the generated demands.

### **2.2.5 Housing Analysis**

Analysis of the impact to housing demand and supply by the addition of the following populations was based on the following factors:

- non-foreign construction workers
- those in-migrating to take spin-off jobs
- those coming to take civilian military jobs and indirect jobs during the operational component

Housing demand and supply questions *do not* apply to demand for or provision of temporary housing for foreign construction workers. Although the exact mechanisms and locations remain uncertain as of this writing, federal contracts would require housing provision for these workers.

#### **2.2.5.1 Housing Demand**

The primary focus of this analysis is demand within the private-sector Guam housing market affected by in-migrating civilian populations, exclusive of active duty military and temporary workforce housing. Civilian housing demand impacts are based on population impacts. The total population impacts are divided by an estimated (based on U.S. Census data) number of persons per household yielding the number of new housing units required.



### 2.2.5.2 Housing Supply

The essential dilemma of the construction boom period is as follows: Would the island economy generate several thousand housing units for the boom period that may remain vacant thereafter, or would the disincentives for such short-term housing production result in a shortage of housing during the construction period?

To answer this question, quantitative impact analysis considered the following two scenarios:

- *Under-supply*: a scenario where little or no construction occurs to meet civilian market demand during the military construction period
- *Over-supply*: a scenario where the demand is met, but results in a subsequent over-supply of housing, as population declines when construction ends

## 2.3 APPROACH TO ANALYSIS: PUBLIC SERVICES

The analysis of public services impacts seeks to address public concern about the capacity of GovGuam to accommodate the new population associated with the proposed action. While this concern affects all types of governmental functions, this SIAS focuses on traditionally “social” public services including:

- Public education
- Public health and human services
- Public safety services
- Other selected services driven by population growth
- Growth permitting and regulatory services that are driven by upcoming construction

The focus of the analysis is not on actual health impacts, for example, but on the capacity of the public health agencies to deal with additional staffing demands. Note also that “growth permitting and regulatory services” is not a traditional human service, but was added because of its importance for allowing or blocking the potential indirect economic benefits discussed in previous sections.

### 2.3.1 Logic Chain and Critical Inputs for Agency Impacts Driven by Population Growth

Impacts on GovGuam public service agencies were estimated based on information from literature reviews, searches of online and historical data sources, written surveys, key informant interviews, and agency data sources when available.

For most agencies, the analysis involved establishing a ratio of key professional staff to “service population.” First, a “baseline” existing ratio of key professional staff to service population was determined. Baseline historical data was gathered from each agency to ensure these most recent available figures did not represent a time of unusually high or low standards of service. Then, the agency’s service population was determined, with care being taken to ensure these determinations captured only those populations that were eligible to receive services (such as civilians only or children only). From these two calculations, the numerical ratio of key professional staff to service population was determined for each agency. The population increase associated with the proposed action could then be applied to this ratio in order to determine the required number of professional staff associated with the proposed action alone.

This procedure was intended to ensure that stated impacts are just those due to the proposed action, not pre-existing problems or deficits. However, the existence of such deficits for individual agencies is noted where applicable, and the impact analysis will also note the larger picture of deficits and challenges affecting GovGuam overall.

Thus, the critical inputs for these sections included:

- Information on specific service population(s) and historical staffing and funding patterns – This was accomplished through structured surveys (conducted in late 2008) of most agencies named in the following sections, with additional information from follow-up personal interviews and agency reports. The surveys were standardized in content, with minor modifications to make them appropriate to each agency, and they also gathered information about needed facilities. Questions about service population established the nature of that population – e.g., general population, children only, etc.
- Estimates of service population growth attributable to the proposed action – these were based on the preceding quantitative economic and population growth results, with adjustments and estimates as needed for service population segments that may have been only a portion of the previously calculated overall population increases.

The basic analysis involved calculating the key professional staff currently available to each agency to provide the existing population with the necessary services, and establishing a ratio. The agency’s “service population” was determined (i.e. the people using the services) through a series of agency surveys and interviews, and care was taken to determine whether this meant the population in general or just some portion, such as civilians only or children only. Next, the ratio of this service population to key professional staff positions was determined.

Once the above calculations were completed, the population increase associated with the proposed action could be applied to the resulting ratios to determine the additional professional staff that would be associated with the proposed action alone, exclusive of existing deficits or other pressures for new services. Care was also taken to determine an appropriate baseline measure by seeking historical data from the agencies, to reduce the odds that the most recent available figures came from years with unusually high or low standards of service.

It should be noted that if there are a significant number of “stay-behind” workers, although public services would not be immediately impacted, if the phenomenon eventually led to increased in-migration over time, in the later years, the numbers of additional public service professionals required will likely be greater than depicted in the tables below.

### **2.3.2 Logic Chain and Critical Inputs for Agency Impacts Driven by Development**

GovGuam agencies responsible for issuing, monitoring and enforcing development permits on Guam (unlike the previously described services), are driven by increases in permit applications in advance of growth rather than population growth.

Agency-specific approaches to analysis were developed based on agency interviews because of the wide range of aspects that are involved in permit applications, depending on the agency and type of permit. In general the analytical steps were as follows:

- Agency interviews were used to focus on what indicators would be most appropriately used to develop projections of additional required personnel. In most cases, the appropriate indicator was number of permits issued.
- The different types of development associated with the proposed action were then translated into the number of predicted building and related permits. These numbers were based on projected population and employment impacts as well as assumptions on permits per housing unit or square foot of

commercial/industrial development Table 2.3-1 and Table 2.3-2 show how the overall numbers of building permits were estimated for the military buildup, using a variety of information sources.

- The calculated number of permits was allocated to each permitting agency using data on historical permits and staffing levels by function.
- Historical staffing per permit data were then used to develop estimates of total staffing needed to meet projected demand for permit agency actions. For example, if it were determined that five staff were handling 500 permit applications per year, the staff ratio would be one full-time equivalent (FTE) per 100 permit applications.
- Finally, the calculated staff ratio was then applied to the number of permit applications projected for the proposed action impact. Using the number of permits and the staff-to-permit ratios, the number of new staff necessary to handle project-related development permitting was calculated. Monitoring/enforcement staffing was estimated based on overall population growth attributable to the proposed project.

One additional consideration was used for Guam Department of Land Management (GDLM) whose staff time is significantly used for rezoning hearings; in this case the number of hearings had to be projected instead of permits, and staffing per hearing information used to generate staff time estimates.

For on-site development, where no permits would be required (except as delegated to Guam agencies by responsible federal agencies) but plan review and coordination/oversight would be required, the concept used was similar, but was based on more judgmental estimates of the permit-equivalent in demands for plan review/development and coordination. In addition, information from the relevant agency contacts on estimated staff needs for these functions related to the project was used.

**Table 2.3-1. Drivers for Deriving Numbers of Permits from Proposed Action (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Population without project	180,692	183,081	185,435	187,754	190,042	192,302	194,541	196,757	198,942	201,095	203,216
Population increase due to project	10,833	27,324	43,661	51,940	76,432	60,895	37,891	29,693	29,693	29,693	29,693
Percent population increase from proposed project	0	0	0	0	0	0	0	0	0	0	0
Numbers of H-2B Workers	5,750	14,212	23,641	28,881	33,871	24,514	11,315	5,355	5,355	5,355	5,355
Year to Year Construction Needed to Eliminate Housing Deficit (from Housing section)	0	2,000	3,045	1,446	1,909	0	0	0	0	0	0
<b>Drivers for Commercial Permits</b>											
Total number jobs located off-base	3,230	7,939	13,164	16,016	18,796	13,838	6,533	3,258	3,258	3,258	3,258
Square foot required per employee	166	166	166	166	166	166	166	166	166	166	166
Total square feet required	536,129	1,317,873	2,185,297	2,658,639	3,120,100	2,297,184	1,084,560	540,768	540,768	540,768	540,768
Existing available usable commercial square footage	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Commercial square footage deficit	336,129	1,117,873	1,985,297	2,458,639	2,920,100	2,097,184	884,560	340,768	340,768	340,768	340,768
Year to year impact	336,129	781,744	867,424	473,342	461,460	-822,916	-1,212,624	-543,793	0	0	0
Cost per square foot	300	300	300	300	300	300	300	300	300	300	300
<b>Total impact, construction value of new permits (\$millions)</b>	<b>\$100.8</b>	<b>\$234.5</b>	<b>\$260.2</b>	<b>\$142.0</b>	<b>\$138.4</b>	<b>\$10.1</b>	<b>\$10.1</b>	<b>\$10.1</b>	<b>\$10.1</b>	<b>\$10.1</b>	<b>\$10.1</b>

Notes: <sup>1</sup> From 2015-2020, non-residential construction was assumed to be for minor replacement/enhancement only, at 10% of the value in 2010.

<sup>2</sup>Year to year impact figures below zero defaulted to Note <sup>1</sup>.

**Table 2.3-2. Derivation of Number of Building Permits from Proposed Action (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Average number units per housing permit	7	7	7	7	7	7	7	7	7	7	7
Number new housing building permit applications, same year as completion of construction	-	151	452	645	848	512	66	0	0	0	0
Average value per non-residential permit	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Number non-residential building permits	288	727	712	514	368	29	29	29	29	29	29
Total new building permits, same year as completion of construction	288	877	1,014	707	571	29	29	29	29	29	29
<b>One year advance time required: Permits submitted, in year of submittal for construction following year</b>	<b>877</b>	<b>1,014</b>	<b>707</b>	<b>571</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>

### **2.3.3 Additional Methodological Notes**

The overall quantitative analysis in the public service section was kept to key professional staffing to maintain consistency between each agency, and to take a uniform approach to the proposed action's impact on those agencies. Calculations were applied to both construction and operational phases and summed on a year by year basis.

It should be noted that the approach taken here is necessarily limited in key aspects:

- The focus only on “key professional staff” (e.g., teachers in public schools and not educational assistants or administrative support staff, or sworn police officers and not clerical support) clearly does not include all staffing needs; and
- The analysis sometimes mentions but does not attempt a complete inventory or quantification of non-staffing requirements – such as new facilities or equipment – associated with the expansion of government. Nor does it attempt a comprehensive quantification of infrastructure costs.

Additional information on these issues is noted in the discussion of Public Services impacts in Chapter 4. When data were available, each section's “additional discussion” portion discusses possible impacts.

### **2.3.4 Additional GovGuam Studies**

The GovGuam has assembled several studies (e.g., Guam Civilian Military Task Force 2007) that attempt a more complete accounting of anticipated needs. However, these studies were based on uneven input from various departments, and confound pre-existing public service requirements with requirements that would be generated by the proposed action. By contrast, the current SIAS approach is more limited in its focus, but is based on a fairly standardized survey methodology of designated agencies (Appendix C).

## **2.4 APPROACH TO ANALYSIS: SOCIOCULTURAL ISSUES**

The analysis of Sociocultural Issues focused on the following topics:

- Crime and social order
- Social aspects of recreation
- Chamorro political and sovereignty interests and
- Other sociocultural impacts (primarily overall military-civilian relations)

### **2.4.1 Logic Chain and Critical Inputs**

Sociocultural topics tend to be primarily qualitative in nature (although crime rates are a partial exception). Thus, there is not the same sort of linkage between one set of calculations and a following set of numbers as was the case for the other impact analysis in this SIAS. Critical inputs to the sociocultural impact analyses included:

- Available evidence from Guam history – often based on key informant interviews, if quantitative data unavailable
- Information from published sources or experts – gathered through standard research and interview approaches
- Because Marines currently represent a few individuals on Guam, data regarding certain sociocultural impacts does not exist. Thus the next best reliable predictor for certain impacts on Guam once the Marine Corps personnel arrive (for example, impacts on overall crime

rates) was the existing, but sparse information on Status of Forces Agreement (SOFA) personnel in Okinawa.

#### **2.4.2 Crime and Serious Social Disorder**

For purposes of this analysis, “crime” means actions subject to arrest by police, and “serious social disorder” means conflicts, such as physical fights that could disrupt the public order whether or not known to police. Less serious social issues are discussed in the following several sections.

The key drivers that could affect crime and serious social disorder are:

- For the construction component, the inherent nature of the intense construction “boom” period, as well as the identity of in-migrant populations (e.g., H2-B construction workers or in-migrant groups coming to take indirect jobs, if there is any evidence such groups contribute disproportionately to crime); and
- For the operations component, the inherent nature of large military bases/populations, as well as the identity of in-migrant populations (e.g., Marine Corps personnel vis-à-vis other military services already represented on Guam or, again, in-migrants coming to take indirect jobs).

Crime consists of either Part I or Part II offenses as designated by the Federal Bureau of Investigation’s *Uniform Crime Reporting Handbook*. Part I offenses are major crimes that are more likely to be reported and recorded consistently over time and geographic locations. These include the “violent” crimes of criminal homicide, forcible rape, robbery, and aggravated assault, as well as the “property” crimes of burglary, larceny-theft, and arson.

Part II crimes are generally less serious and recording or reporting may vary greatly from place to place and from year to year as law enforcement policies change. Enforcement and regulation of Part II offenses are influenced by local policies or availability of federal resources – i.e., the current national emphasis on drugs and substance abuse. Part II offenses are more numerous, but examples include other assaults, prostitution and commercialized vice, drug abuse violations, offenses against the family and children, liquor laws, drunkenness, and disorderly conduct. For the purposes of this section, Part II offenses are considered violations of social order.

A critical distinction when analyzing crime impacts is between the total numbers of crimes (“volume of crime”) and the actual crime rate (numbers divided by population). Population increases always bring with them increases in the volume of crime, but the crime rate would increase only if new populations are disproportionately likely to commit crimes.

#### **2.4.3 Chamorro Issues**

Scoping comments received as part of this socio-cultural study included concerns about impacts on various Chamorro issues, often reflecting concerns about the cultural continuity and/or degree of political self-determination of the island’s indigenous population. Although there are other cultural or ethnic groups on Guam, the stated cultural concerns were restricted to Chamorros. Most of the information for this analysis came from interviews and correspondence with the University of Guam (UoG), the Chamorro Land Trust Commission (CLTC), and the Department of Chamorro Affairs (DCA).

#### **2.4.4 Community Cohesion**

“Community cohesion” refers to positive or negative interactions between individuals or groups that allow people to maintain connections to, and a sense of identification with, their communities. Because no

quantitative data are available regarding this issue as it relates to the construction or military component, this SIAS presents a qualitative discussion based primarily on interviews with local stakeholders. These interviews provided insight into collateral impacts on social relationships.

## **2.5 CNMI IMPACT METHODOLOGY**

### **2.5.1 Scope of Analysis**

This SIAS analyzes the impact of currently-planned range developments in CNMI. The Director of JGPO, Mr. David Bice, has been quoted as saying that the Marine Corps might build a training range support base on Tinian in the unspecified future (Eaton 2008), but this is not certain, and thus was not analyzed.

### **2.5.2 Logic Chain and Critical Inputs**

Economic impact methodology followed that used for the Guam analysis, detailed above.

Public service impacts for this action are quite limited due to the small number of jobs involved. However, information about these was based in part on input from military planners and discussions with Tinian resident department heads.

Sociocultural topics are also assessed in a qualitative fashion, based primarily on interviews conducted during three site visits over the course of a year (from February 2008 to February 2009).



## CHAPTER 3.

### AFFECTED ENVIRONMENT - GUAM

#### 3.1 HISTORICAL AND ECONOMIC OVERVIEW

For both Guam and the CNMI, the discussion in this report is limited to the time following World War Two (WWII). However, it should be noted that both Guam's and the CNMI's socioeconomic histories were heavily influenced by 400 years of Spanish rule, 20<sup>th</sup>-century Japanese occupation and battles during WWII.

Since WWII, Guam's economic history has been volatile, led by changes in population and global events in the military, social and natural spheres. This section examines chronologically the most significant of these causes.

Post-war reconstruction and the formation of new U.S. military bases were the basis for Guam's first major economic expansion and the initial placement of contemporary infrastructure. During this time, Guam's population experienced significant increase – from a pre-war 1940 level of 22,900 (with a military and dependent population of 1,427) to 59,498 (with a military and dependent population of 26,617) in 1950.

The 1950s brought with it a shift in military governance, presence, and focus on Guam. Two significant events took place in 1950: the U.S. Congress enacted the Organic Act of 1950 and the major hostilities of the Korean War began. The Organic Act re-designated the island of Guam as an unincorporated territory of the U.S., passing its control from the Navy to the DoI and granting a greater measure of self-governance to the people of Guam. The destruction caused by Typhoon Alice in 1954 required that the U.S. military shift its focus on Guam from base construction to the island's public works. Although the ongoing Korean War and the Cold War with the Soviet Union required a continued military presence on Guam, the island's military population experienced an overall decline of 15% between 1950 and 1960 (Table 3.1-1).

**Table 3.1-1. Combined Military and their Dependent Population on Guam, Selected Years**

1950	1960	1970	1980	1987	1990
26,617	23,300	19,777	20,000	23,790	19,610
1993	1994	1997	2000	2003	2007
22,077	15,865	13,002	11,624	11,832	14,110

Source: U.S. Census Bureau 2008c.

Three major events took place in 1962: Super Typhoon Karen wrought devastation on Guam with winds in excess of 160 miles per hour; U.S. President John F. Kennedy lifted security clearance requirements for visitors to Guam; and the Military Sealift Command Office opened. While the typhoon brought significant damage to Guam, destroying temporary and permanent structures, and leaving many homeless in its wake, the lifting of visitor security clearance requirements opened some doors to economic diversification. Combined with the initiation of Pan American Airway services from Japan to Guam in 1967, opportunity for direct growth on Guam's visitor industry was sparked. This growth also led to indirect growth in related industries such as construction, recreational fishing and diving, commercial fishing and retail trade. Furthermore, the opening of Sealift command operations meant that Guam's tactical utility now included the provision of sea transportation for military equipment, supplies and ammunition (Global Security 2007). During the late 1960s and 1970s Guam played a strategic role in the

Vietnam War including its use by B52 bombers during the war and its provision of a home for Vietnam refugees at the end of the war.

Guam's economy stagnated in the 1970s and early 1980s, partially in response to the 1973 Organization of the Petroleum Exporting Countries (OPEC) oil embargo. Construction activity and visitor arrivals declined over the decade. The inflation-adjusted income of Guamanians began to drop in 1973, and continued to decline until 1984 (with a brief respite from 1976-1978 due to military-supported reconstruction after 1976's Typhoon Pamela) (Bank of Hawaii 1987). Poor economic conditions escalated in the early 1980s – Guam's economy experienced inflation-adjusted declining growth from 1978 to 1982, including economic depression (an extended period of declining growth unadjusted for inflation) from 1980 to 1982.

However, this declining trend began to change in 1982 when the island's inflation-adjusted growth stabilized from 1982 to 1984 and skyrocketed between 1985 and the end of the decade. Japan's emergence as a global economic superpower strengthened Guam's visitor and construction industries. In the latter part of the 1980s, Cold War military spending and the closing of U.S. bases in the Philippines increased Guam's military (includes dependants) population to a level not seen since the 1960s (23,800 in 1987), thereby adding to its economic base.

The late 1980s brought fluctuation and eventual decrease to military population levels on Guam that lasted through the 1990s. Troops temporarily transplanted from closed Philippine bases were relocated at the end of the 1980s resulting in a new post-war population low of 19,600 in 1990. While events in the Middle East did lead to a few years of increase in military population, the Base Realignment and Closure (BRAC) process quickly negated this increase. The BRAC led to the closure of Naval Air Station Hagatna causing the military population on Guam to fall from 22,077 in 1993 to 15,865 in 1994. In 1995, BRAC led to three major realignments of military activities on Guam that compounded the decline in armed forces (Global Security 2007). By 2000 Guam's military and dependent population stood at 11,624.

The economic effects of the BRAC decisions on Guam were initially offset by growing private-sector strength, buoyed significantly by the tourism industry. Guam's Asia-oriented visitor base expanded and peaked between 1995 and 1997, generating substantial increases in the construction of hotels and condominiums. However, the 1997 collapse of Asian financial markets, compounded by the crash of a Korean Air Lines plane full of visitors, led to a 12.4% decline on Guam's primary Japanese market and an 83% decline in its secondary Korean market from 1997 to 1998. While visitor numbers have increased since that low mark, the peak levels experienced in the mid-1990s have yet to be recaptured, even in the present day.

From the year 2000 through 2008, Guam's economy has continued to mirror its volatile recent past. In 2000, the visitor industry appeared poised to regain health. However, this was stymied by the attacks of September 11 in 2001, the costly Super Typhoon Pongsona in 2002, and the pandemic of severe acute respiratory syndrome in 2003. During this brief three-year period, Guam's economy contracted: unadjusted for inflation, total payroll declined by 2%, employment declined by 2,250 payroll jobs, and individual salaries increased by only 1%. From 2004 to 2006, partially in response to the announcement of the proposed action, Guam's economy has once again showed signs of expansion. A study for the Guam Visitors Bureau (GVB) (GVB 2007) using 2005 data found that tourism was the island's second largest private industry (following Finance, Insurance, and Real Estate) and both the primary Japanese and second Korean market were growing at that time.

However, while growth on Guam's overall business activity had been strong, high inflation eroded gains in workers' wages, causing slower growth in consumer oriented business. As of the end of 2008, Guam's real estate market has shown signs of slowing. Commercial real estate on Guam has declined in value due to world-wide issues of tight credit and declines in consumer discretionary spending. Reports show that Guam real estate sales and construction activity have dropped from 2007 levels due to world-wide economic conditions coupled with a moratorium on development in the Tumon Bay area, that at the time of writing continues to be under debate (Captain 2008b). By the end of 2008, international economic conditions plus other market and demographic factors produced declining year-over-year trends for a variety of key tourism indicators, including total arrivals, hotel occupancy rates and taxes, and hotel room-nights sold (GVB 2008, Guam Hotel and Restaurant Association [GHRA] 2008).

### 3.2 POPULATION CHARACTERISTICS

#### 3.2.1 Overall Trends

Guam's population as of the most recent full U.S. Census of 2000 was 154,805. The U.S. Census Bureau provides a more recent estimate of Guam's population as 175,877 in the year 2008 (U.S. Census Bureau 2008a). The island's population has grown significantly since becoming a U.S. Territory. From 1950 to 2000 Guam's population grew at an average rate of 21% per decade (about 2.1% annually). However, as is shown in Table 3.2-1, the Census Bureau projects that this growth will taper off, possibly due to outmigration rates observed around the year 2002, when the estimates in this table were made.

**Table 3.2-1. Annual Rate of Increase on Guam's Population**

	1950-1960	1960-1970	1970-1980	1980-1990	1990-2000	2000-2008	2010-2020*	2020-2030*
Annual Population Increase	1.2%	2.4%	2.2%	2.3%	1.5%	1.6%	1.2%	0.9%

Note: Estimated.

Source: U.S. Census Bureau 2008b.

#### 3.2.2 Demographics

Table 3.2-2 shows Guam's population growth and changing ethnic mix from 1920 to 2000. Between 1990 and 2000, the percentage representation of Chamorro and Caucasian ethnicities on Guam's population declined, while Filipino and "Other" ethnicities (most often comprised of other Asian or Pacific Islander ethnicities) increased. Some changes in ethnic percentages reflect differences in Census definitions over time. However the dramatic changes in the Chamorro and Caucasian percentages from 1940 to 1950 are a product of WWII, during that the U.S. military buildup increased the population of other ethnicities on Guam.

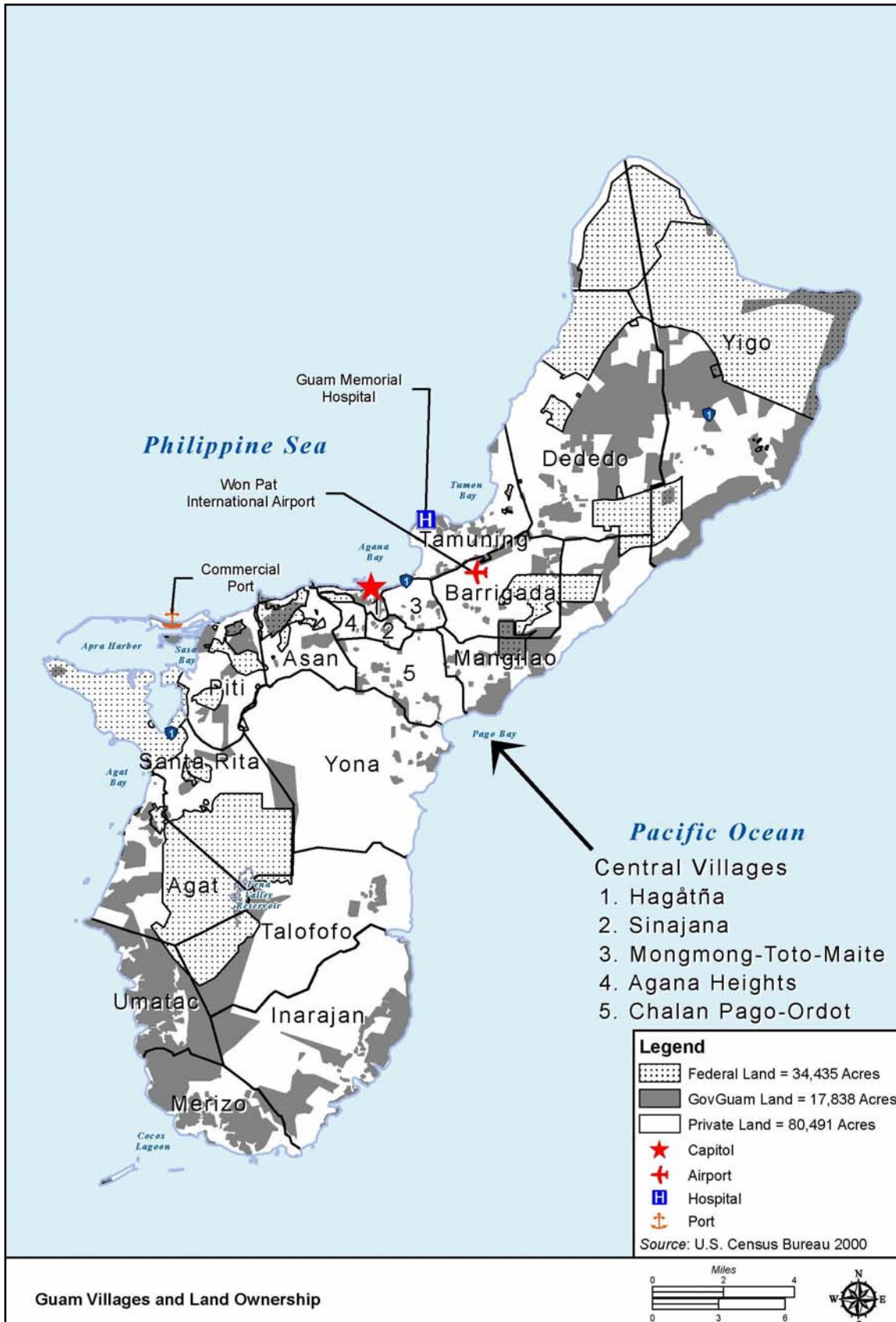
**Table 3.2-2. Guam-Wide Total Population and Ethnicity, 1920-2000**

	1920	1930	1940	1950	1960	1970	1980	1990	2000
Total Population	13,275	18,509	22,290	59,498	67,044	84,996	105,979	133,152	154,805
<b>Ethnicity</b>									
Chamorro/Part-Chamorro	92%	89%	91%	46%	52%	N/A	45%	43%	42%
Caucasian	2%	7%	4%	39%	31%	N/A	8%	14%	7%
Filipino	3%	2%	3%	12%	13%	N/A	21%	23%	26%
Other	3%	3%	3%	4%	4%	N/A	26%	20%	25%

Source: U.S. Census Bureau 2000.

The below provides a graphic depiction Guam villages and land ownership patterns. While Table 3.2-3 provides demographic information for Guam and the island's individual villages for the year 2000.

Figure 3.2-1. Guam Villages and Land Ownership



The three largest village populations are in the northern villages of Dededo and Yigo and the centrally-located village of Tamuning.

**Table 3.2-3. Demographic Characteristics 2000, Guam Total and Individual Villages**

	Population/Gender			Ethnicity					Median Age	Place of Birth				Education (25 yr. and over pop)		
	Total	Male	Female	Chamorro/Pt	Filipino	Caucasian	Other Pacific Islander	Other		Guam	Other U.S.	Philippines	Other Pacific Islands	High School	College Degree	
Guam Totals	154,805	79,181	75,624	42%	26%	7%	8%	17%	27.1	52%	12%	21%	7%	52%	25%	
North	Dededo	42,980	21,645	21,335	30%	45%	3%	8%	13%	27	46%	7%	35%	7%	50%	23%
	Yigo	19,474	9,999	9,475	27%	31%	15%	8%	19%	25	40%	23%	25%	7%	53%	26%
Central	Tamuning	18,012	9,420	8,592	18%	26%	8%	10%	37%	32	31%	11%	22%	9%	49%	31%
	Barrigada	8,652	4,320	4,332	56%	19%	5%	7%	13%	28.3	62%	9%	15%	7%	53%	25%
	Mangilao	13,313	6,958	6,355	47%	22%	4%	11%	16%	27.4	55%	8%	18%	10%	50%	23%
	Mongmong-Toto-Maite	5,845	2,895	2,950	53%	16%	4%	13%	15%	27.1	60%	8%	13%	11%	54%	22%
	Hagåtña	1,100	672	428	49%	16%	4%	17%	14%	31.8	52%	8%	14%	15%	51%	21%
	Sinajana	2,853	1,433	1,420	73%	7%	4%	6%	9%	28.7	73%	10%	6%	6%	55%	23%
	Agana Heights	3,940	1,946	1,994	68%	10%	6%	7%	8%	28.1	68%	13%	9%	6%	53%	28%
	Chalan Pago-Ordot	5,923	3,011	2,912	53%	11%	5%	6%	26%	27.3	66%	10%	11%	7%	55%	22%
	Asan	2,090	1,078	1,012	71%	8%	8%	5%	8%	28.9	70%	15%	6%	5%	56%	24%
	Piti	1,666	882	784	60%	7%	16%	3%	14%	30.3	60%	22%	7%	4%	50%	31%
South	Yona	6,484	3,242	3,242	70%	5%	6%	4%	15%	24.3	76%	12%	4%	4%	53%	25%
	Agat	5,656	2,910	2,746	67%	23%	3%	3%	4%	25.3	70%	7%	18%	3%	52%	19%
	Santa Rita	7,500	4,028	3,472	31%	20%	24%	1%	24%	26.3	38%	38%	17%	1%	58%	30%
	Talofofo	3,215	1,641	1,574	79%	3%	7%	5%	6%	24.8	78%	12%	2%	5%	55%	22%
	Umatac	887	465	422	95%	1%	1%	1%	2%	21.9	91%	6%	1%	1%	66%	6%
	Inarajan	3,052	1,546	1,506	86%	2%	2%	2%	8%	23.5	86%	7%	2%	3%	57%	11%
Merizo	2,163	1,090	1,073	89%	1%	3%	2%	5%	23.3	86%	9%	2%	2%	62%	11%	

Source: U.S. Census Bureau 2000.

### 3.2.2.1 North

As of 2000, 40% of Guam's population resided in the Northern region. That percentage has likely increased since that time as Dededo and Yigo have been growing quickly over the past 10 years.

The region was 50.06% male 49.94% female compared to the overall Guam population (51.15% male 48.84% female).

Ethnically, the Northern region was less Chamorro than the rest of Guam; Dededo was far more Filipino than the rest of Guam (45% vs. 26%) and Yigo was more heavily populated with Caucasians than the Guam average (15% vs. 7%).

The median age of the population in the northern region was similar to that of Guam's overall population; Dededo's median age was 27 years old and Yigo's is 25 years old compared to Guam's overall median age of 27.1 years old.

A lower percentage of people in the Northern region were born on Guam compared to the rest of the Island; similar to the ethnicity of the areas, a proportionally large percentage of Dededo's population was born in the Philippines (35%) and a proportionally large percentage of Yigo's population was born in other areas of the United States.

In terms of education level, the 2000 Northern region was very similar to the rest of Guam. Dededo has slightly lower percentages of people who have completed high school or college while Yigo had slightly higher percentages than Guam overall.

### 3.2.2.2 Central

As of 2000, 41% of Guam's population resided in the Central region. The most populous villages in the region were Tamuning (18,012) and Mangilao (13,313). Piti and Hagatna were the least populous (1,666 and 1,100, respectively).

The Central region was 51.44% male 48.56% female compared to Guam's overall population (51.15% male 48.84% female).

Ethnically, the Central region was slightly more Chamorro than the rest of Guam (45% vs. 42%) with the largest Chamorro populations residing in Mangilao and Barrigada. On a percentage basis, Sinajana and Asan were the most heavily Chamorro. Tamuning had the largest Filipino population; however, in 2000 the central region is less Filipino than Guam overall (19% vs. 26%).

The Central region tended to be older than Guam overall; the median age in the region was 29.4 years old compared to the overall median age of 27.1 years old. Tamuning had the oldest population on Guam with a median age of 32 years old.

Fifty seven (57) percent of Central region residents were born on Guam that is greater than Guam's overall rate of 52%. Mangilao had the highest number of residents who were born on Guam.

In terms of education, the Central region was similar to the rest of Guam. For residents over the age of 25, both had rates of 52% who had completed high school and 25% who had completed college.

### 3.2.2.3 South

As of 2000, about 19% of Guam's population resided in the Southern region. The most populous villages in the region were Santa Rita (7,500) and Yona (6,484). Umatac was the least populous (887).

The Southern region was 51.53% male 48.46% female compared to Guam's overall population (51.15% male 48.84% female).

The Southern region was 64% Chamorro in 2000, by far the most heavily Chamorro of the three regions. Umatac, Merizo and Inarajan were each over 85% Chamorro. Agat and Santa Rita were each over 20% Filipino and Santa Rita had the highest percentage of Caucasians in all of Guam.

The Southern region tended to be younger than Guam overall; the median age in the region was 25.3 years old compared to the Guam overall median age of 27.1 years old. Umatac had the youngest population on Guam with a median age of only 21.9 years old.

Seventy six (76) percent of Southern region residents were born on Guam that was greater than Guam overall (52%). In Umatac, Merizo, and Inarajan, over 85% of residents were born on Guam.

In terms of education, the Southern region had a higher percentage of high school graduates than the rest of Guam (57% vs. 52%) but a lower percentage of college graduates (22.8% vs. 25%).

### 3.2.3 Household Characteristics

Table 3.2-4 provides demographic information for Guam and the island's individual villages for the year 2000.

**Table 3.2-4. Household Characteristics 2000, Guam Total and Individual Villages**

	Population in HHs	Number of HHs	Avg HH Size	% of HHs that are Family HHs	% of HHs that are Married	% of HHs that are Families	Median HH Income	Income per HH member	% HHs below poverty line	
Guam Totals	150,928	38,769	3.89	83%	59%	36%	\$39,317	\$10,107	22%	
North	Dededo	42,635	10,016	4.26	89%	63%	39%	\$37,654	\$8,839	23%
	Yigo	18,947	4,634	4.09	91%	70%	48%	\$37,415	\$9,148	19%
Central	Tamuning	17,619	5,953	2.96	68%	48%	27%	\$35,347	\$11,942	24%
	Barrigada	8,481	2,097	4.04	87%	61%	36%	\$49,974	\$12,370	16%
	Mangilao	12,474	3,190	3.91	83%	55%	34%	\$39,754	\$10,167	26%
	Mongmong-Toto-Maite	5,833	1,633	3.57	76%	47%	28%	\$31,134	\$8,721	31%
	Hagåtña	822	268	3.07	69%	43%	22%	\$31,136	\$10,142	27%
	Sinajana	2,850	742	3.84	82%	50%	25%	\$48,750	\$12,695	20%
	Agana	3,862	1,058	3.65	81%	51%	29%	\$47,396	\$12,985	14%
	Chalan Pago-Ordot	5,846	1,573	3.72	79%	50%	30%	\$36,506	\$9,813	30%
	Asan	2,089	552	3.78	84%	52%	30%	\$48,611	\$12,860	19%
	Piti	1,613	474	3.4	77%	53%	31%	\$54,167	\$15,931	13%
South	Yona	6,434	1,486	4.33	89%	61%	38%	\$52,955	\$12,230	20%
	Agat	5,633	1,298	4.34	86%	54%	32%	\$37,398	\$8,617	24%
	Santa Rita	6,512	1,780	3.66	87%	73%	48%	\$41,928	\$11,456	9%
	Talofofo	3,192	738	4.33	88%	59%	37%	\$47,885	\$11,059	22%
	Umatac	887	162	5.48	93%	54%	35%	\$34,286	\$6,257	33%
	Inarajan	3,036	644	4.71	91%	60%	38%	\$42,361	\$8,994	24%
Merizo	2,163	471	4.59	89%	57%	34%	\$39,940	\$8,702	23%	

Source: U.S. Census Bureau 2000.

### 3.2.3.1 North

As of 2000, almost 41% of Guam's population living in households resided in the Northern region; Dededo was the single largest village on Guam in terms of population in households and number of households.

Both villages in the Northern region had larger average household sizes (Dededo, 4.26 and Yigo, 4.09) than Guam's overall household counts (3.89).

Compared to Guam overall, Dededo and Yigo had a higher percentage of family households, married family households, and family households with children.

Households incomes in Dededo (\$37,654) and Yigo (\$37,415) were lower than Guam overall (\$39,317); also, each had lower incomes per household member. Dededo had a higher percentage of households below the poverty line than Guam overall but Yigo had a far lower percentage; the region, on average, had a similar percentage of households below the poverty line (21.5% vs. 22%).

### 3.2.3.2 Central

The Central region, similar to the Northern Region, was occupied by about 41% of Guam's population living in households. Tamuning and Mangilao were the largest villages in the region in terms of population living in households and number of households.



The Central region had a much lower number of persons per household than Guam overall (3.51 vs. 3.89). The low number for the region was greatly influence by Tamuning that had only 2.96 persons per household – the lowest number on Guam.

The Central region had lower percentages of households that were family households, married family households, and family households with children than did Guam overall.

Households in the Central region had higher incomes than Guam overall (\$39,764 vs. \$39,317); the region also had a higher income per household member (\$11,383 vs. \$10,107). The village of Piti had the highest household income and income per household member on Guam. While the Central region had higher incomes in general, the region had a higher percentage of households below the poverty line; two of the regions villages, Mongmong-Toto-Maite and Chalan Pago-Ordot, had 30% or more households below the poverty line.

### 3.2.3.3 South

As of 2000, the Southern region was occupied by about 18% of Guam’s population living in households. Santa Rita and Yona were the largest villages in the region in terms of population living in households and number of households.

The Southern region had more persons per household than Guam overall (4.23 vs. 3.89). Umatac had the most persons per household on Guam (5.48).

Compared to Guam overall, the Southern region had higher percentages of households that were family households, married family households, and family households with children.

Households in the Southern region had higher incomes than Guam overall (\$43,905 vs. \$39,317); the region also had slightly higher income per household member (\$10,460 vs. \$10,107). While incomes, on average, in the Southern region were higher than Guam overall, some of Guam’s poorest villages were located there; Agat, Inarajan, Merizo and Umatac each had incomes that were well below the Guam overall average. Umatac had a higher percentage of households below the poverty line than any other village on Guam.

### 3.2.4 Military Demographics

Military populations can affect the composition and growth of villages on Guam. Dededo and Yigo cover military-owned land and have high proportions of military residents relative to other villages. Between 1990 and 2000, these two villages experienced rapid population growth: Yigo’s by 37% and Dededo’s by 35%. The more service- and tourism-based village, Tamuning, experienced population growth of 8% during the same period.

Guam’s active duty military population has remained constant at about 6,200 over the past ten years, with a slight dip in the early 2000s (Table 3.2-5).

**Table 3.2-5. Active Duty Military Population on Guam, 1998-2007**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total Active Duty	6,379	6,155	5,806	5,974	5,820	5,944	6,220	6,514	6,253	6,286
Navy	3,946	3,902	3,741	3,626	3,810	3,760	3,922	4,085	3,867	3,879
Air Force	2,119	1,964	1,752	1,981	1,670	1,828	1,950	1,844	1,596	1,596
Army	178	158	172	183	200	217	211	422	606	632
Coast Guard	134	130	136	180	136	136	134	160	180	175
Marine Corps	2	1	5	4	4	3	3	3	4	4

Source: GBSP 2006; COMNAV Marianas 2008.

The demographic characteristics of military and military dependents living on Guam, in 2000, are shown in military and military dependents on Guam were younger than Guam overall. Additionally, there were more Caucasians and fewer Pacific Islanders among the group. Military households had a lower median income than Guam overall. However, military households also had fewer persons per household to the extent that income per household member was greater than Guam overall (\$10,963 vs. \$10,107). Military and military dependents had slightly higher educational attainment; 58% completed high school and an additional 36.6% obtained a college degree.

Table 3.2-6 shows that military and military dependents on Guam were younger than Guam overall. Additionally, there were more Caucasians and fewer Pacific Islanders among the group. Military households had a lower median income than Guam overall. However, military households also had fewer persons per household to the extent that income per household member was greater than Guam overall (\$10,963 vs. \$10,107). Military and military dependents had slightly higher educational attainment; 58% completed high school and an additional 36.6% obtained a college degree.

**Table 3.2-6. Active Duty Military and Military Dependent Demographic Characteristics, 2000**

Median Age	Gender		Ethnicity					Median Household (HH) Income \$	Median HH Size	Income Per HH Member \$	Education (25 yr. and over pop) %	
	Male %	Female %	White %	Asian %	Native Hawaiian/ Other Pacific Islander %	Black or African American %	Other %				High School	College Degree
23	52.2	47.8	44.6	16.0	11.8	8.2	19.4	33,000	3.01	10,963	58	36.6

Source: U.S. Census Bureau 2000c (10% PUMS).

### 3.3 ECONOMIC CHARACTERISTICS

#### 3.3.1 Employment and Income

##### 3.3.1.1 Employment by Industry

As of 2000, Guam's industrial employment composition was quite different than that of the U.S. as a whole. Guam's economy was more government- and service-oriented and less production-oriented than the rest of the U.S. economy.

Table 3.3-1 shows that GovGuam is the major employer on Guam. Furthermore, it shows that the percentage of Guam's payroll employment employed in the Government sector is high compared to the U.S. overall.

**Table 3.3-1. Government's Share of Employment (June 2009)**

Country/Territory	Payroll Employment	Government Workers	Government Workers (% of Labor Force)
U.S.	132,609,000	22,511,000	17%
Guam	59,340	14,430	24.3%

Sources: U.S. Bureau of Labor Statistics 2009a; GDoL 2009b.

Table 3.3-2 shows the industrial employment composition of Guam's economy. Between 2000 and 2009 the number of construction jobs has increased. Over the same period, the number of jobs in the retail trade industry declined, possibly due to lower spending by Guam residents coping with decreasing price-adjusted incomes (see subsequent discussion).

**Table 3.3-2. Guam Civilian Employment by Industry, 2000 and 2008**

<i>Industry</i>	<i>2000 Number</i>	<i>% of 2000 Total</i>	<i>2009 Number</i>	<i>% of 2009 Total</i>	<i>Change 2000- 2009 Number</i>	<i>% Change 2000- 2009</i>
Agriculture	288	0%	410	1%	122	42%
Construction	4,430	7%	6,790	11%	2360	53%
Manufacturing	1,619	3%	1,690	3%	71	4%
Transportation & Public Utilities	4,981	8%	4,690	8%	-291	-6%
Wholesale Trade	1,942	3%	2,050	3%	108	6%
Retail Trade	12,324	20%	11,190	19%	-1134	-9%
Finance, Insurance & Real Estate	2,657	4%	2,580	4%	-77	-3%
Services	15,129	25%	15,510	26%	381	3%
Federal Government (excl. active-duty military)	4,436	7%	3,790	6%	-646	-15%
GovGuam	12,741	21%	10,640	18%	-2101	-16%
<b>Totals</b>	<b>60,547</b>	<b>100%</b>	<b>59,340</b>	<b>100%</b>	<b>-1207</b>	<b>-2%</b>

Source: GBLS 2009.

### 3.3.1.2 Occupational Profile

Table 3.3-3 shows employment by occupation for Guam during the years 2000 and 2008 and the percentage change in employment in each occupation over that time period. From 2000 to 2008, as measured by the U.S. Bureau of Labor Statistics, Guam added 1,800 jobs (from 57,000 to 58,810) an increase of 3.2%.

More jobs were held in Office and Administrative Support occupations than any other occupation; common jobs under this category include Executive Secretaries and Administrative Support, Customer Service Representatives, and various clerking positions. Jobs in Community and Social Services, Computer and Mathematical and Legal occupations increased at high rates while jobs in Transportation and Materials Moving, Production and Healthcare Support each declined by over 10%.

**Table 3.3-3. Guam Employment by Occupation, 2000 and 2008**

<i>Occupation</i>	<i>Employment</i>		
	<i>2000</i>	<i>2008</i>	<i>% Change</i>
Office and administrative support	10,090	10,660	5.60%
Food preparation and serving related	6,360	5,790	-9.00%
Sales and related	5,530	5,500	-0.50%
Management analysts	4,960	4,590	-7.50%
Construction and extraction	3,380	4,510	33.40%
Education, training, and library	3,600	4,170	15.80%
Transportation and material moving	4,120	3,420	-17.00%
Building and grounds cleaning and maintenance	3,660	3,360	-8.20%
Installation, maintenance, and repair	3,000	3,140	4.70%
Personal care and service	1,720	2,430	41.30%
Protective service	2,370	2,420	2.10%
Business and financial operations	2,090	2,060	-1.40%
Production	1,810	1,510	-16.60%
Healthcare practitioners and technical	1,230	1,500	22.00%
Architecture and engineering	750	810	8.00%
Community and social services	360	710	97.20%
Healthcare support	690	620	-10.10%
Arts, design, entertainment, sports, and media	590	540	-8.50%
Computer and mathematical	260	460	76.90%
Life, physical, and social science	290	370	27.60%
Legal	140	240	71.40%
<b>Total</b>	<b>57,000</b>	<b>58,810</b>	<b>3.2%</b>

Source: U.S. Bureau of Labor Statistics 2009a.

### 3.3.1.3 Income Profile

Table 3.3-4 shows median annual salary by occupation for Guam during the years 2000 and 2008 and the percentage change in salary in each occupation over that time period. From 2000 to 2008, as measured by the U.S. Bureau of Labor Statistics, median salary for Guam jobs increased by \$3,041 per year (from \$22,890 to \$25,931) an increase of 13%.

The highest salaries were found in Legal occupations, Management Analyst occupations and Architecture and Engineering occupations. Salaries in Education, Training and Library occupations and Arts, Design, Entertainment, Sports and Media occupations increased at high rates while salaries in Legal occupations, Life, Physical and Social Science occupations, and Community and Social Services occupations each declined.

**Table 3.3-4. Guam Median Annual Salary by Occupation, 2000 and 2008**

Occupation	Median Annual Salary		
	2000	2008	% Change
Legal	\$61,460	\$55,850	-9%
Management analysts	\$43,320	\$47,270	9%
Architecture and engineering	\$37,700	\$43,000	14%
Computer and mathematical	\$37,770	\$40,860	8%
Healthcare practitioners and technical	\$34,870	\$39,940	15%
Business and financial operations	\$36,660	\$39,540	8%
Life, physical, and social science	\$38,870	\$38,000	-2%
Education, training, and library	\$27,960	\$37,740	35%
Community and social services	\$30,320	\$29,810	-2%
Installation, maintenance, and repair	\$24,420	\$25,860	6%
Construction and extraction	\$24,710	\$25,750	4%
Arts, design, entertainment, sports, and media	\$19,920	\$24,560	23%
Protective service	\$23,820	\$24,510	3%
Office and administrative support	\$20,320	\$23,480	16%
Healthcare support	\$20,180	\$21,380	6%
Production	\$19,350	\$21,030	9%
Personal care and service	\$18,100	\$20,150	11%
Transportation and material moving	\$16,900	\$19,390	15%
Sales and related	\$15,330	\$15,830	3%
Building and grounds cleaning and maintenance	\$13,490	\$15,350	14%
Food preparation and serving related	\$13,670	\$15,180	11%
<b>Employment Weighted Average</b>	<b>\$22,890</b>	<b>\$25,931</b>	<b>13%</b>

Source: U.S. Bureau of Labor Statistics 2009a.

### 3.3.1.4 Price Adjusted Income

Changes in salary, over-time, should be understood in terms of purchasing power. Purchasing power is how much somebody can buy with their income. How much somebody can buy with their income depends on the prices of the goods and services they purchase. Purchasing power will increase if salaries increase faster than prices but purchasing power will decrease if prices increase faster than salaries.

As shown in the table above, salaries on Guam increased by 13% from 2000 to 2008; however, during that same period of time, as shown in Table 3.3-5 consumer prices on Guam increased by 47.3% meaning that purchasing power on Guam decreased substantially.

**Table 3.3-5. Guam Consumer Price Index (CPI), All Items, Index, Yr. 2000 = 100**

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Guam CPI	100	98.6	99.3	102.0	108.2	116.5	129.9	138.7	147.3
U.S. CPI	100	102.8	104.5	106.9	109.7	113.4	117.1	120.4	125

Sources: GBSP 2009a; U.S. Bureau of Labor Statistics 2008.

To illustrate the impacts that price changes have on income; Table 3.3-6 uses information from previous tables. Salaries in Table 3.3-3 are divided by the Guam price index in Table 3.3-5. Since the price index begins in 2000 and the value is set at 100, year 2000 salaries are divided by 1 and are thus unchanged.

The price index in 2008 reaches a value of 147.3 so 2008 salaries are divided by 1.473 and are thus reduced by 47.3%.

The median salary on Guam, though it increased by 13% in the table above, when adjusted for price change, decreased by 30% from 2000 to 2008. A 30% decline in price adjusted income means that the same person working the same job could purchase 30% fewer goods and services in 2008 than they could have in 2000.

**Table 3.3-6. Guam, Price Adjusted Median Annual Salary by Occupation, 2000 and 2008**

<i>Occupation</i>	<i>Median Annual Salary (Adjusted for Prices)</i>		
	<i>2000</i>	<i>2008</i>	<i>% Change</i>
Legal	\$61,460	\$37,912	-62%
Management analysts	\$43,320	\$32,087	-35%
Architecture and engineering	\$37,700	\$29,189	-29%
Computer and mathematical	\$37,770	\$27,736	-36%
Healthcare practitioners and technical	\$34,870	\$27,112	-29%
Business and financial operations	\$36,660	\$26,840	-37%
Life, physical, and social science	\$38,870	\$25,795	-51%
Education, training, and library	\$27,960	\$25,618	-9%
Community and social services	\$30,320	\$20,235	-50%
Installation, maintenance, and repair	\$24,420	\$17,554	-39%
Construction and extraction	\$24,710	\$17,479	-41%
Arts, design, entertainment, sports, and media	\$19,920	\$16,672	-19%
Protective service	\$23,820	\$16,638	-43%
Office and administrative support	\$20,320	\$15,938	-27%
Healthcare support	\$20,180	\$14,513	-39%
Production	\$19,350	\$14,275	-36%
Personal care and service	\$18,100	\$13,678	-32%
Transportation and material moving	\$16,900	\$13,162	-28%
Sales and related	\$15,330	\$10,746	-43%
Building and grounds cleaning and maintenance	\$13,490	\$10,420	-29%
Food preparation and serving related	\$13,670	\$10,304	-33%
<b>Employment Weighted Average</b>	<b>\$22,890</b>	<b>\$17,602</b>	<b>-30%</b>

Source: U.S. Bureau of Labor Statistics 2009a.

### 3.3.1.5 Unemployment

Table 3.3-7 shows Guam's civilian labor force numbers between the years 2000 and 2007, the last year that data are available.

Between the years 2000 and 2004, Guam's civilian labor force experienced drastic decline. It began expanding again following 2004 that may be related to news announcements that year of the proposed action and/or to increases in the number of H-2B workers (see below).

However, as of 2007, this expansion on Guam's labor force still had not brought the island back to its 2000 level. This is an indicator that Guam's recent economy remains unsettled, despite decreases in

unemployment and small increases in total employed persons that have been tracked over the same period of time. A reduced labor force such as this reflects probable out-migration of Guam's skilled workers and/or is an indicator that "discouraged workers" are dropping out of Guam's economy. Furthermore, Guam's unemployment rate of 8.3% in September 2007 was higher than the national figure 4.4% at that time (though the U.S. rate has since increased, to 8.9% as of April 2009). Guam had no unemployment insurance program.

The 2007 data shows that nearly 80% of those working on Guam were employed in three adjoining urban districts: Hagatna, Dededo, and Tamuning. Also, nearly half were employed in three industries: accommodation and food service, retail, and construction. (U.S. Census Bureau 2009b)

As of July 2008 there were 1,619 H-2B workers on Guam (GDoL 2008b). The H-2B temporary worker program is for "temporary service or labor if unemployed persons capable of performing such service or work cannot be found in this country (8 U.S. Code (USC) 1101(a) (15) (H))."

**Table 3.3-7. Guam Employment Trends 2000-2007**

<i>Year</i>	<i>Civilian Labor Force</i>	<i>Labor Force Participation Rate<sup>1</sup></i>	<i>Employed</i>	<i>Unemployment Rate</i>
2000	70,800	67.8%	59,950	15.3%
2001	64,800	64.5%	56,040	13.5%
2002	62,050	62.4%	54,980	11.4%
2004	61,520	61.7%	56,810	7.7%
2005	64,130	61.1%	59,630	7.0%
2006	65,940	62.9%	61,390	6.9%
2007	63,600	57.8%	58,290	8.3%

Note: <sup>1</sup>The labor force participation rate is the percentage of the adult population 16+ either employed or unemployed but actively seeking employment.

Source: GDoL 2007.

### 3.3.2 Housing Supply and Characteristics

As of the 2000 Census there were approximately 48,000 housing units on Guam. Almost 19% were vacant.

During the early portion of the 2000's, while Guam's economy was in recession, both real estate prices and the construction of new housing units fell. Decreased new home construction led to historically low values of new residential building permits from 2000-2002. Housing price declines continued into 2003, when home prices bottomed at a median price of around \$110,000 for a single-family home (First Hawaiian Bank 2007).

In 2004, real estate prices began to rise again, in response to improving worldwide economic conditions and initial discussions of the proposed action. This in turn spurred new construction. From the time the market bottomed in 2003 through 2006, home prices rose 41% and condo prices rose 74% (First Hawaiian Bank 2007). Data showed prices increasing through 2007 (Captain 2008a), and anecdotal evidence suggested that this trend was expected to continue through 2008 (First Hawaiian Bank 2008). However, while home prices have continued to increase, the rate of price increase has begun to decline in the currently cooling economy (Captain 2008b).

Table 3.3-8 illustrates declining home prices during the early part of the 2000's and rising home prices more recently. The home purchase component of Guam's Consumer Price Index (CPI) increased 98%

from 2003 to 2006 while, during the same period, median salaries increased only 2.7% (U.S. Bureau of Labor Statistics 2008).

**Table 3.3-8. Home Purchase Component of Guam CPI, 2000-2006**

	2000	2001	2002	2003	2004	2005	2006
Home Purchase	100.0	98.6	86.5	94.5	124.7	155.9	187.3

Notes: The Guam CPI shows prices bottoming in 2nd quarter 2002 while some market research shows prices continuing to fall into 2003; the true bottom to housing prices probably falls somewhere in between.

Source: GDoL 2006a.

Table 3.3-9 provides year 2000 housing characteristics information for Guam and each of Guam's villages.

**Table 3.3-9. Housing Characteristics for Guam, 2000**

	Total Housing Units	Vacant Units		Occupied Units		Median Rooms	Avg. Bedrooms	Median Value (Owner-Occupied)	Median Rent		Median Year Structure Built	
		Total	For Rent	Total	Renter Occupied				Gross	Contract		
Guam Totals	47,677	19%	10%	38,769	52%	4.1	2.5	\$171,900	\$775	\$645	1983	
North	Dededo	12,119	17%	7%	10,016	45%	4.1	2.6	\$163,100	\$695	\$590	1985
	Yigo	5,489	16%	5%	4,634	57%	4.4	2.5	\$161,800	\$719	\$609	1985
Central	Tamuning	8,108	27%	21%	5,953	75%	3.4	2.2	\$273,600	\$855	\$720	1983
	Barrigada	2,307	9%	5%	2,097	38%	4.2	2.6	\$190,900	\$837	\$705	1983
	Mangilao	3,926	19%	14%	3,190	50%	3.9	2.4	\$182,700	\$741	\$626	1988
	Mongmong-Toto-Maite	2,102	22%	15%	1,633	62%	4	2.3	\$179,900	\$732	\$620	1981
	Hagåtña	395	32%	27%	268	69%	3.5	2	\$266,100	\$665	\$544	1976
	Sinajana	857	13%	10%	742	45%	4.5	2.7	\$189,800	\$852	\$675	1976
	Agana Heights	1,193	11%	8%	1,058	50%	4.4	2.5	\$194,200	\$718	\$623	1976
	Chalan Pago-Ordot	1,920	18%	6%	1,573	44%	4.1	2.5	\$175,900	\$884	\$755	1990
	Asan	660	16%	3%	552	39%	4.7	2.6	\$209,800	\$814	\$661	1979
	Piti	576	18%	15%	474	43%	4.8	2.9	\$271,400	\$1,025	\$911	1977
South	Yona	1,745	15%	10%	1,486	32%	4.6	2.7	\$173,100	\$724	\$547	1981
	Agat	1,499	13%	8%	1,298	51%	3.8	2.4	\$162,700	\$585	\$458	1982
	Santa Rita	2,517	29%	2%	1,780	63%	5	2.8	\$174,000	\$1,006	\$835	1976
	Talofofu	849	13%	3%	738	34%	4.3	2.5	\$170,400	\$797	\$663	1987
	Umatec	179	9%	3%	162	35%	4.7	2.6	\$152,100	\$413	\$213	1984
	Inarajan	701	8%	2%	644	28%	4.2	2.5	\$172,700	\$768	\$613	1986
	Merizo	535	12%	8%	471	41%	4.2	2.4	\$171,800	\$679	\$525	1984

Notes: "Median Rent" is the value where half the rents are higher and half lower. "Contract rent" is the monthly rent regardless of any costs for furnishings, utilities, fees, meals, etc. "Gross rent" includes those additional things.

Source: U.S. Census Bureau 2000.

### 3.3.2.1 North

As of the year 2000, the Northern region had a total of 17,608 housing units (12,119 in Dededo and 5,489 in Yigo); this comprised 37% of the total number of housing units on Guam.

Overall, Guam had a very high vacancy rate (19% compared to the U.S. nationwide figure of 9%); the Northern region had a lower vacancy rate than Guam overall, but with a 17% rate in Dededo and a 16% rate in Yigo, the region still had a high vacancy rate.

About 7% of total units in Dededo and 5% in Yigo were available to be rented compared to the Guam overall rate of 10%.

The Northern region, on average, had fewer renter occupied units as a percentage than Guam overall; the relatively low rate in Dededo (45%) more than offset the relatively high rate in Yigo (57%).

Housing units were slightly larger in the Northern region compared to Guam overall; Yigo had more rooms per unit and Dededo had more bedrooms per unit than the Guam overall average.



Despite the slightly larger and newer (median year built in 1985 vs. 1983 in the Northern region, prices were lower than overall Guam both in terms of median value and rents.

#### 3.3.2.2 Central

As of the year 2000, the Central region had a total of 22,044 housing units; this comprised 46% of the total number of housing units on Guam.

Overall, Guam had a very high vacancy rate (19% compared to the U.S. nationwide figure of 9%); the Central region had an even higher vacancy rate than Guam overall. Tamuning had a high percentage of units that were vacant (27%). Most of these were available for rent (21%). And, in general, the Central region had a higher rate of renter occupied units than Guam overall.

Housing units were smaller in the Central region compared to Guam overall; Tamuning had the smallest sized units on Guam.

Despite the smaller units in the Central region, prices were higher than overall Guam both in terms of median value and rents.

Housing units in the Central region were about the same age as Guam overall, the median year units were built was 1983.

#### 3.3.2.3 South

As of the year 2000, the Southern region had a total of 8,025 housing units; this comprised 17% of the total number of housing units on Guam.

Overall, Guam had a very high vacancy rate (19% compared to the U.S. nationwide figure of 9%); the Southern region had a slightly lower vacancy rate than Guam overall and only a small percentage of these (5%) were available to be rented. On average, the Southern region had a lower rate of renter occupied units than Guam overall.

Housing units were larger in the Southern region compared to Guam overall; Santa Rita had the largest units on Guam in terms of number of rooms.

Despite the larger units in the Southern region, prices were generally lower than overall Guam.

Housing units in the Southern region were older than Guam overall, the median year units were built was 1981.

#### 3.3.2.4 Temporary Workforce Housing

Based on information from Guam construction contractors and the GDLM there is presently capacity to house 3,700 temporary workers. Over half of this capacity (1,900) is owned and operated by one contractor at a single location in Harmon Industrial Park. The remainder of the capacity (1,800) is spread among 17 different locations, mostly in the north and central regions (JGPO & NAVFAC Pacific 2009).

### 3.3.3 Revenue Sources for the Government of Guam

Table 3.3-10 explains the tax rates, sources, and budgetary destinations for the major internal revenue sources (plus Compact Impact funding – reimbursements to the local government agencies of Guam, CNMI and HI for costs incurred due to the in-migration of Micronesians, as per Section 104(e) of the Compact of Free Association. The subsequent Table 3.3-11 provides a more comprehensive breakdown of all projected revenues by source for Fiscal Year (FY) 2009.

GovGuam bases most of its Gross Receipts and Income taxes on the Internal Revenue Service code. Guam residents do not pay federal income taxes. Instead, GovGuam taxes resident income at the federal rates and passes the money to the federal government. The federal government then passes the same amount back. While real property taxes on Guam are relatively low, taxes on real estate transactions are 35%. The largest sources of tax revenue go to the Guam General Fund. Smaller tax revenues go into a variety of Special Funds for specific projects.

**Table 3.3-10. Revenue Sources for the GovGuam**

<i>Tax</i>	<i>Tax Rate</i>	<i>Taxed Item</i>	<i>Budgetary</i>
Gross Receipts Tax	4%	Gross income	General Fund
Hotel Occupancy Tax	11%	Daily room rate	Tourist Attractions Fund
Personal Income Tax	10% - 35%	Income	General Fund
Corporate Income Tax (Guam Based)	15% - 35%	Net income	General Fund
Corporate Income Tax (Other Business on Guam)	15% - 35%	Guam source income	General Fund
Real Property Sales Tax	35% of the full cash value	Sale of land or buildings	Territorial Education Facility Fund
Annual Real Property Tax	0.005% for land	Assessed value	Territorial Education Facility Fund
Annual Real Property Tax	.01% for buildings	Assessed value	Territorial Education Facility Fund
Liquid Fuel Tax	\$0.10 per gallon	Diesel	Highway Fund
Liquid Fuel Tax	\$0.04 per gallon	Aviation fuel	Highway Fund
Liquid Fuel Tax	\$0.11 per gallon	All other fuel	Highway Fund
<i>Federal Grant</i>	<i>Total Federal Grant</i>	<i>Grant Base</i>	<i>Budgetary</i>
Compact Impact Payment	\$30,000,000	% of Insular FAS Population	Discretionary (Governor)
GG.501	Interior Department - Payments to the Territories	Various formulae for broad category of grants and programs <sup>1</sup>	Multiple

*Legend:* FAS= Freely Associated States of Micronesia.

*Note:*<sup>1</sup>For FY 2008, GovGuam received \$299 million.

*Sources:* Guam Department of Revenue and Taxation 2008; U.S. DoI 2009.

In FY 2008, GovGuam received \$5.5 million in funding for health, education, social and public safety services, and for infrastructure related to services affected by qualified non-immigrants. It also received \$6.1 million in Compact Impact funds for the Guam Schools Leaseback project (U.S. DoI 2009).

By far the largest portion of federal grants-in-aid to GovGuam is for public health and social services. However, there are sizeable grants for the attorney general's office, people with disabilities, the UoG, and military affairs. Total federal grant revenue (\$299 million) is about 5% of projected grand total revenues for FY 2009.

**Table 3.3-11. Projected FY 2009 Breakdown of GovGuam Projected Revenues**

<i>FY2009 Revenue Source</i>	<i>Amount</i>
Income tax	(see "Federal Sources" below)
Corporate	\$104,039,979
Individual	\$77,505,105
Withholding taxes, interest and penalties	\$174,329,231
Provision for tax refund	\$(88,600,000)
<b>Total Income Taxes ( listed above)</b>	<b>\$267,274,315</b>
Business privilege tax	\$196,131,262
Other taxes	\$1,468,543
<b>Total Taxes</b>	<b>\$464,874,120</b>
Federal Sources	\$48,351,222
Use of Money and Property	\$3,293,486
Licenses, Fees, and Permits	\$3,248,507
Department Charges	\$954,462
<b>Total General Fund Revenue</b>	<b>\$520,721,797</b>
<b>Total Special Fund Revenue</b>	<b>\$108,007,741</b>
Administration	\$928,738
Agriculture	\$455,600
Attorney General	\$3,254,724
Guam Council on the Arts and Humanities	\$240,500
Guam Police	\$740,911
Department of Integrated Services for Individuals with Disabilities	\$2,052,208
Judiciary of Guam	\$545,825
Labor	\$35,000
Military Affairs	\$1,055,955
Public Health and Social Services	\$23,298,212
UoG	\$1,508,000
<b>Total Federal Grant Revenue (listed above)</b>	<b>\$34,115,673</b>
<b>Total Other Sources of Funding</b>	<b>\$406,941</b>
<b>Grand Total</b>	<b>\$663,252,152</b>

## 3.3.3.1 Federal Expenditures in the Economy

While federal expenditures represent an important element for the Guam economy, the per-capita level of total federal expenditures as of FY 2007 was barely above the national average (Table 3.3-12). As of that FY, 21 states and the District of Columbia had higher per capita total federal expenditures than did Guam.

**Table 3.3-12. Per Capita Federal Expenditures, Guam Versus U.S., FY 2007**

	<i>Total</i>	<i>Retirement and Disability</i>	<i>Other Direct Payments</i>	<i>Grants</i>	<i>Procurement</i>	<i>Salaries and Wages</i>
Guam	\$8,647.44	\$1,464.16	\$525.50	\$1,745.75	\$2,965.36	\$1,946.67
U.S. Total	\$8,339.18	\$2,571.22	\$1,926.36	\$1,624.13	\$1,392.57	\$824.91

Source: U.S. Census Bureau 2008a.

It should also be noted that Guam's per capita federal total of \$8,647 was the highest of all American "outlying areas," followed by the Virgin Islands (\$5,976), Puerto Rico (\$4,261), and American Samoa (\$3,691). Amounts for the CNMI and other Micronesian areas were all below \$2,000 as of fiscal 2007.

The same Census report cited above showed that total federal expenditures on Guam peaked in FY 2003 and fell back slightly thereafter. From 1998 to 2007, the national figure increased 72%, compared to just 48% for Guam.

### 3.3.3.2 Overview of GovGuam Capacity Issues

Because of its geographic and historical circumstances GovGuam faces two broad types of capacity challenges both of which will affect its ability to cope with the impacts of the proposed action: (1) human resources, and (2) financial resources.

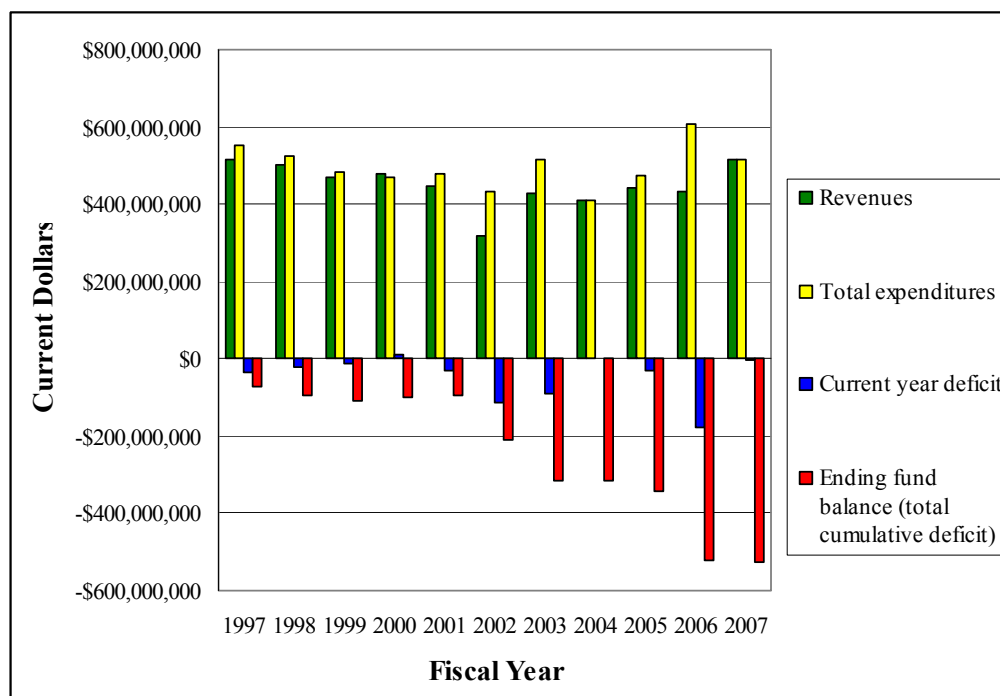
*Human resources.* Guam is geographically remote from any major population center and its population base is small. Guam's population is much smaller than any U.S. state and would rank only 126 among U.S. mainland cities (U.S. Census Bureau 2007). This small and remote population is a limiting factor to having a pool of available skilled, technical and managerial workers. Additionally, Guam's history as remote colony of Spain for 400 years, its 20<sup>th</sup>-century occupation by Japan and being governed U.S. military Officers until the passage of the Organic act in 1950 has limited Guam's experience at self governance as compared to most U.S. mainland local and state governments. This lack of governance experience has affected GovGuam's performance, especially in regard to handling of federal funds. Several GovGuam agencies have been put into federal receivership because of delinquent services or been cited for high-level administrative fraud.

*Financial resources.* Guam's financial challenges involve both revenues for its normal operations and also ability to borrow money to provide infrastructure for either existing or potential population growth from the proposed action. Therefore, some detail is provided below to explain the status of Guam's government finances

The General Fund is the primary operating fund of most American government units. It is used to account for all assets and liabilities of a government except those particularly assigned for other purposes in another more specialized fund. An example of a specialized fund, on the other hand, is the capital projects fund that accounts for financial resources used for acquisition, construction, or operation of major capital facilities. Guam has had a persistent problem with deficits in its General Fund receipts and expenditures over the past 10 years.

Figure 3.3-1 shows annual General Fund revenues, expenditures, and deficits from FY1997 to FY2007. General Fund Expenditures grew by an annual average of about 1.8% over FY1996 to FY2006, primarily due to a jump in FY2006. However, revenues fell substantially over that period, resulting in a total cumulative deficit of \$528 million by the end of FY2007.

**Figure 3.3-1. Historical Guam General Fund Revenues, Expenditures, and Deficits**



Sources: Banc of America LLC 2007, Guam Office of the Public Auditor 2008.

In part because deficits were affecting the ability to sell bonds for existing costs and new infrastructure, the government started a deficit reduction plan in FY2007. This plan included tighter spending controls, more diligent revenue collection, more careful accounting systems, and more timely audits. Upon completion of audits, the FY2008 balance is expected to show a small surplus (Banc of America LLC 2007). The current (early 2009) cumulative Guam General Fund deficit is also somewhat improved, at approximately \$510 million (Standard & Poor’s 2008). However, to achieve balanced budgets, Guam has cut staffing and services.

Guam’s efforts to reduce its outstanding \$510 million debt are complicated by even larger “unfunded obligations,” that are not included in its official cumulative debt estimates. “Unfunded obligations” refer to future commitments that were not backed up by reliable provisions to pay for those commitments. Guam has historically incurred some unexpected expenses for its operation due to agreements that have led to later costs that were not planned for or budgeted. The actual amounts of all Guam’s unfunded obligations are not yet clear. There are some recent examples. A “consent decree” is a judicial order, expressing a voluntary agreement between parties to a suit, especially an agreement by a defendant to cease activities alleged by the government to be illegal. A \$20 million immediate down-payment toward the approximately \$180 million consent decree of 2003, signed by the governor and environmental officials, to close the Ordot landfill and open a new one; \$252 million in delinquent tax refunds owed (Standard & Poor’s 2008); \$92 million in payments of cost-of-living adjustments to Guam employees that were ordered by the Superior Court of Guam as owed (Standard & Poor’s 2008); and the Guam Government retirement fund, with unfunded liabilities of about \$1.3 billion (Banc of America LLC 2007).

These unfunded obligations, in sum, are much higher than the official Guam total deficit. This means that Guam’s capacity to borrow in order to correct its problems is very limited, creating extreme difficulty in maintaining current levels of service. In addition, both expansion of services and also building new

infrastructure (such as could be necessary to accommodate the proposed action) may be difficult in the absence of adequate amounts and sources of borrowing.

Standard and Poor's has recently noted major drawbacks on Guam's prospects for borrowing:

"The [revised-upward B+] rating still reflects the general government's highly speculative-grade credit characteristics, including: the government's massive historical budget imbalance (the unreserved general fund balance is currently at approximately \$510.1 million), leading to continuous operating cash flow pressure and a negative general fund balance position; the territory's mainly tourism-based economy, primarily from Asia, leaving it vulnerable to economic cycles; and the potential effect of severe weather events, such as the two major typhoons that devastated the island earlier this decade, on the economy."

"This B+ rating affects the \$236.7 million in existing General Obligation debt that was present as of September 30, 2007. However, the government is "expected to sell an additional \$271.6 million in legislature-authorized General Obligation bonds later in fiscal 2009. The bond package was authorized as part of a deficit financing and fiscal recovery package approved in the fiscal 2009 budget." (Standard & Poor's 2008)

Additionally, the financial crisis of 2008-2009 has greatly affected Guam's ability to market General Obligation bonds. General Obligation bonds are loans that are secured by the tax receipts of the issuing government body. Often, in the event the issuer does not repay on time, general obligation bond creditors have first claim on the issuing governments' assets or tax receipts over other creditors. The government's B+ rating is still below investment grade, at a time when even investment grade bond issues are having difficulty finding buyers. An "investment grade bond" is one that is assigned a rating in the top four categories by commercial credit rating companies. These ratings vary from rating company to rating company, but investment grade bonds are viewed as very safe. For example, Standard & Poor's defines "investment grade" as class BBB and above. Guam's B+ rating is below the BBB rating.

For example, in November 2008, Guam's financial advisors released a \$50 million primary market offering to potential investors in its General Obligation bonds. However, the offering failed to attract investors. Soon thereafter, the offering was reduced to \$11 million, but investor interest was only \$4.2 million, below the Guam government's size threshold for the offering.

The proposed action would generate more demands on Guam for roads, ports, sewer, water, power, and other necessary infrastructure. Part of these needs, as yet unknown as to amount, can be paid for by setting up private sector responsibilities for their provision, and/or user fees. However, in sum, these demands would increase the pressure for substantial borrowing.

### 3.3.4 Gross Island Product

GIP measures the total value of all final goods and services produced in a particular economy; it is the most commonly used benchmark to gauge the overall size of an economy. The most recent measure of GIP on Guam was completed in 2002, when it was estimated that Guam's GIP was about \$3.4 billion. Table 3.3-13 details Guam's GIP from 1991 to 2002.

**Table 3.3-13. Guam GIP 1991-2002 (Millions of Current \$s)**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GIP	\$2,667	\$2,902	\$2,917	\$3,014	\$2,999	\$2,993	\$3,109	\$3,551	\$3,025	\$3,420	NA	\$3,428

Note: "Current dollars" reflect the dollar value for the years data were recorded; for example, in the table above, 1991 GIP is in 1991 dollars, 1992 GIP is in 1992 dollars and etcetera.

Source: GBSP 2006.

### 3.4 PUBLIC SERVICES

#### 3.4.1 Education Services

Primary, secondary, and high-school education for the civilian residents of Guam is provided through the GPSS, and various private schools. Although there are currently no charter schools on Guam, the recently enacted (January 30, 2009) Guam Public Law 29-140 authorized the establishment of such schools. School-age children of active duty military and other federally-related populations on Guam are served by schools in the DoD Dependent Schools Pacific/DDESS Guam system.

Higher education services on Guam are provided by the UoG, Guam Community College (GCC), and the Pacific Islands University. UoG and GCC also provide vocational training and business development programs.

##### 3.4.1.1 Primary, Secondary and High School Education

###### Public Schools

GPSS is one unified school district, supporting 40 schools (26 elementary, eight middle, five high and one alternative). GPSS plans to open three new schools. A large number of GPSS schools are located within Guam's central region, followed by the northern area, with the smallest number of schools in the south and Apra Harbor region. As of July 2008, GPSS employed about 4,000 employees and serviced approximately 31,000 students (Kelman 2008).

The student population of GPSS is very diverse. In school year 2007/2008, the largest student ethnic groups were Chamorro (46%), Pacific Islander (30%) and Filipino (21%). A total of 11,739 (37.79%) students were listed as Languages Other Than English students (Guam Department of Education 2008). There are also an estimated 100 military dependents that are part of the total GPSS student population (Appendix D – GPSS Interview).

###### Private Schools

Guam has approximately 27 private schools. Of these schools, 15 are Catholic; 11 are Christian; and one is non-denominational. Civilian and military families wishing for their dependents to receive a faith-based education often choose private schools. The Catholic Church opened a new high school in November 2008; is studying the possibility of building another in northern Guam whether or not the proposed action occurs; and could build more private schools if the buildup does occur (Kelman 2008). Overall, private schools on Guam have an enrollment of approximately 6,500 (Guam Civilian Military Task Force Education Sub-Committee 2009).

###### Military (DDESS)

All information for this section was obtained from a 2009 interview with DDESS staff (Appendix D – DDESS Interview).

Education for military dependents in the U.S. is supplied by the umbrella organization, the DoD Educational Activity. Prior to 1997, military dependents on Guam attended GPSS. Guam's military school system was established during school year 1997/1998, citing that GPSS was unable to meet accountability expectations in school improvement. Currently, Guam's military schools are part of the DDESS system that manages military education in territories of the U.S. Although Guam is technically part of DDESS and the school system will be referred to as DDESS in this study the operational control of Guam's military school district was passed in school year 2004/2005 to DoD Dependent Schools-Pacific, headquartered in Okinawa, Japan.



DDESS runs two elementary schools, two middle schools and one high school on Guam. Andersen Elementary and Middle School are located in the north. McCool Elementary and Middle School is located near Apra Harbor. Most recently built (September 2007), Guam High School, is also located in central Guam, as is the District Superintendent's office. As of 2009, DDESS employed approximately 267 employees and had a student population of 2,672.

A diverse group of individuals are eligible to send their dependents through the DDESS system. Those eligible for free education include active duty with orders to Guam (Air Force, Navy, Army, and Marine Corps), the U.S. Coast Guard (USCG), full time deployed National Guard members, and a limited set of civilian DoD workers (Table 3.4-1). DDESS teachers are allowed to send their dependents to these schools on a space-available basis. Civilians employed by federal agencies willing to sponsor employee dependents by paying for a DDESS education are also eligible to send their dependents to these schools.

**Table 3.4-1. DDESS Enrollment by Sponsor's Employer**

	<i>Number</i>	<i>Percentage</i>
Navy	1,038	39%
Air Force	944	34%
Army	298	11%
Army Guard	130	5%
DoD Educational Activity	91	3%
Coast Guard	70	3%
DoD	62	2%
DoD Civilian	58	2%
Non DoD	44	2%
Air Force Reserve	30	1%
Marines	8	1%
Non-appropriated Fund Personnel (NAF)	8	1%
Customs	2	0%

*Source:* DoD Educational Activity 2009.

#### 3.4.1.2 Higher Education

GCC, UoG, and Pacific Islands University are located in Mangilao, in the central region of Guam. GCC and UoG are both fully accredited by the Western Association of Schools and Colleges. Pacific Islands University is accredited by the Transnational Association of Christian Colleges and Schools. All information for this section was obtained from 2008 surveys and 2009 interviews with GCC and UoG staff, or the Pacific Islands University (Pacific Islands University 2009) website unless otherwise noted.

#### GCC

GCC offers degrees and certificates, career and technical education, apprenticeship programs, adult and continuing education, at the secondary and post-secondary level. Various educational opportunities are offered on the GCC Main Campus, Southern High School, Simon Sanchez High School, and Okkodo High School. Adult Education programs are also available at satellite locations in the villages. GCC is currently building a new allied health building that is slated to be completed in September 2009.

As of school year 2007/2008, GCC had a total enrollment of 3,731 (1,806 Post-Secondary and 1,925 Secondary), supported by a total of 218 staff, including 159 teaching faculty. The largest ethnic groups represented in GCC's student population include Chamorro (44%), Filipino (31%), and Chuukese (8%) (GCC 2008a).

## UoG

The UoG offers degrees in 35 undergraduate and 15 graduate areas. It is the only baccalaureate and master's degree institution in Micronesia. UoG has an enrollment of more than 3,300 and is comprised of a similar ethnic grouping to that of GCC: Chamorro 43%), Filipino (36%) and Caucasian (6%) (UoG 2008). UoG employs 832 people, inclusive of 182 full-time faculty, and in addition recruits 70 adjunct and contract personnel per semester (Guam Civilian Military Task Force Education Sub-Committee 2009).

In September 2008, with assistance from the national Procurement Technical Assistance Program, UoG established a Procurement Technical Assistance Center, hosted by the University's School of Business and Public Administration. The Procurement Technical Assistance Center is intended to link the University's Small Business Development Center and Guam's businesses with federal contracting opportunities.

## Pacific Islands University

This University was founded as the Micronesian Institute of Bible Studies in 1976 and became Pacific Islands University in July of 2009. In addition to its Guam campus, the University has teaching facilities in Chuuk, Palau, and Yap. It offers four undergraduate programs of biblical study including: Certificate, Diploma, Associates of Arts Degree and Bachelor of Arts Degree. It also offers a Master of Arts in Religion. Current student enrollment at all University sites includes 98 full-time and 62 part-time undergraduate students, 1 full-time and 3 part-time graduate students (Pacific Islands University 2009).

### 3.4.1.3 Educational Attainment

Overall, data from the 2000 Census show a fairly high level of educational attainment on Guam, as shown in Table 3.4-2, although this attainment is slightly lower than the national average.

**Table 3.4-2. Guam Educational Attainment as of 2000**

	<i>Guam</i>	<i>%</i>	<i>U.S.</i>	<i>%</i>
<b>Total Population 25 Years &amp; Over</b>	<b>83,281</b>	<b>100</b>	<b>182,211,639</b>	<b>100</b>
Less than 9th grade	7,843	9	13,755,477	8
9th grade to 12th grade, no diploma	11,862	14	21,960,148	12
High school graduate (includes equivalency)	26,544	32	52,168,981	29
Some college or associate degree	20,398	24	49,864,428	27
Bachelor's degree	12,774	15	28,317,792	16
Graduate or professional degree	3,860	5	16,144,813	9
<b>% High School Graduate or Higher</b>		<b>76</b>		<b>81</b>
<b>% Bachelor Degree or Higher</b>		<b>20</b>		<b>25</b>

Source: U.S. Census Bureau 2000.

## 3.4.2 Health and Human Services

Health services involve the preservation of health and prevention, treatment and management of illness through the professions of medicine, dentistry, nursing and allied health. Human Services can incorporate a range of agencies and services including support of low-income, specially identified, or at-risk populations.

This section first gives brief detail of the overarching factors that affect health and human services on Guam. It then outlines the key public, nonprofit, private and military agencies that provide primary health and human services to Guam's population.

Guam's population currently experiences a variety of health concerns. The table below (Table 3.4-3) is a listing of the leading causes of death on Guam, and reflects Guam's overall community health status. Guam's Office of Vital Statistics lists heart disease, cancer, and cerebrovascular disease as the leading causes of death on Guam (GMHA 2008).

**Table 3.4-3. Leading Causes of Death 2001-2005**

<i>Cause</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>
Disease of the Heart	211	210	204	235	222
Malignant Neoplasm	104	124	115	112	97
Cerebrovascular Disease	64	52	52	41	65
Diabetes Mellitus	19	18	19	27	33
Suicide	23	22	23	17	29
Motor Vehicle Accidents	21	13	23	18	26
Septicemia	NA	NA	NA	13	22
All other accidents and adverse events	38	23	31	38	21
Fibrosis and Cirrhosis of the Liver	NA	NA	NA	NA	15
Chronic Obstructive Pulmonary Disease	16	20	18	19	13

*Source:* GMHA 2008.

Challenges to the island also include fertility rates, communicable and infectious diseases, and obesity. Diabetes is a huge risk factor in the population, and the rate of dialysis has increased by 540% in the last 10 years, reaching five times the rate of the mainland U.S. (U.S. Department of Health and Human Services 2008). In 2007, Guam recorded the highest number of reported influenza/flu symptoms since 1996. Furthermore, Guam reported in 2007 the most new cases of tuberculosis (TB) since 1997. Guam's TB infection rate is 53 new cases per 100,000 population, or 12 times the 2007 U.S. rate of 4.4 (GDPHSS Office of Epidemiology and Research 2007).

Guam's place as a hub in the Asia Pacific region is an additional factor affecting its overall health status. The island can be susceptible to health concerns that are emergent in neighboring areas, whose populations often have high health needs and often do not have immunization or health records. For example, populations in both Chuuk and the Philippines have experienced high levels of TB, with Chuuk recently experiencing incidents of drug-resistant versions of TB (U.S. Public Health Service 2008). Because individuals from these locations often come from a lower socioeconomic background, upon immigrating to Guam, they become eligible for federal public assistance. After arrival on Guam, these populations sometimes live in isolated, overcrowded and substandard conditions that include inadequate infrastructure for living (such as water and power supply) and poor quality public services (such as waste collection, fire and police protection), leading to high rates of hepatitis B, TB, cholera, and Hansen's disease, among other public health concerns.

Since 1988, Guam has been considered a Medically Underserved Area (GDPHSS Maternal and Child Health Services 2007), that demonstrates the island's difficulty in meeting the above health care needs. The island is currently experiencing shortages of health care providers and lacks specific health care specialists. It is often difficult to recruit specialists from the U.S. mainland because of its remote location and a typically lower pay scale. In 2005, Guam had a total of 244 physicians serving its population, including physicians on Guam Memorial Hospital and licensed military physicians working on a part-time basis (Western Pacific Region Health Databank 2007). Other statistics show a count of 14.1 active physicians per 10,000 residents, compared to the national average of 25.9 in 2005 (U.S. Department of Health and Human Services 2006). Guam's dentist to population ratio (including private practice dentists) is 1:2,500 (GDPHSS Maternal and Child Health Services 2007). This indicates significantly lower

coverage than the national average dentist to population ratio, where in 2000 it was 1:1,691 (American Dental Association Survey Center 2002).

Guam's distance also means that referral for specialized services in the U.S. require patients to take a seven-hour trip by commercial plane to HI. Flight times from Guam to various countries for treatment are as follows:

- Manila, Philippines – 3.3 hours
- Tokyo, Japan – 3.4 hours
- Hong Kong, China – 4.4 hours
- Cairns, Australia – 4.9 hours

A further factor affecting Guam's ability to meet the health care needs of its population is that a large percentage of the island's population does not have adequate health insurance. Often, immigrants arriving on Guam through the Compact of Free Association agreement are without insurance. Past Guam Department Public Health and Social Services (GDPHSS) estimated that 60,000 individuals on Guam are uninsured or underinsured, out of a total population of approximately 160,000 (GMHA 2008). An individual may be considered underinsured if they possess private health insurance but that insurance does not adequately cover necessary treatments. Furthermore, many individuals that have health insurance are unable to afford the co-pays for treatments or medications and will turn to government health agencies for free services. The agencies' mandates are to serve all those that come in through the door. Although they do have processes by that to verify whether an individual is insured or not, private insurance companies are unwilling to release the names of their clients due to confidentiality issues. So if an individual states he or she does not have health insurance, often agency staff must take their word for it.

Finally, the funding of Medicaid and Medicare programs also provide unique challenges to the Guam healthcare system. For example, by statute Guam's Medicaid funding is capped and annual increases are based on the CPI. Federal matching funds for Medicaid (the Federal Medical Assistance Percentage) is set for 50%, the minimum rate. Once Guam has exhausted this capped Medicaid funding, all Medicaid costs must be assumed by GovGuam. Medicare funding on Guam is still paid under the system of the Tax Equity and Fiscal Responsibility Act of 1982 that limits Guam Memorial Hospital's reimbursement to \$6,000 per discharge. This is a lower rate than allowed to most other U.S. states and territories (U.S. Department of Health and Human Services 2008).

#### 3.4.2.1 Guam Memorial Hospital Authority

Unless otherwise noted, all information for this section was obtained from a 2008 survey and 2009 interview with GMHA staff (Appendix D - GMHA Interview).

GMHA is Guam's only civilian general hospital, servicing the entire island population's primary health care needs. In 1964, a public law was passed for GovGuam to administer and operate GMHA. In 1978, the hospital moved to its current location in Tamuning, a building originally built for the Catholic Diocese to serve as a private acute care facility. In 1996, GMHA opened a Skilled Nursing Unit facility in Barrigada Heights. GMHA employs 105 medical staff. Approximately 77% of staff is board certified.

Currently, the 22,000-square-foot GMHA provides a total of 250 beds including 158 acute care beds. The SNU has 40 beds. GMHA is often at capacity. On an average day, GMHA sees approximately 140 patients. The hospital's annual activity volume includes 10,624 admissions, 6,500 outpatient visits, 29,916 emergency room patients, and 2,353 deliveries.

GMHA is funded primarily through patient payment. Patients are mostly civilian, although military dependents do at times access GMHA services, after that the hospital can bill TRICARE (military health plan provider). GMHA funding from insurance in 2007 is shown below (Table 3.4-4).

**Table 3.4-4. Insurance used by GMHA Patients 2007**

<i>Insurance Type</i>	<i>%</i>
Private Insurance	33
Medicaid	24
Self-Pay	21
Medically Indigent Program (MIP)	9
Medicare	10
Other	3

Source: GMHA 2008.

In the past four years, GMHA has also been receiving money from the GovGuam Pharmaceutical Fund. The Fund is allocated 6.19% of the territory's gross receipts tax. The Medically Indigent Program (MIP) and Medicare programs reimburse the hospital on a per-client basis.

#### 3.4.2.2 Guam Department of Public Health and Social Services

The GDPHSS provides various health services to the public including primary and acute health care.

##### Bureau of Primary Care Services

The GDPHSS Bureau of Primary Care Services (BPC) was established in 1998 to administer two Community Health Clinics (CHCs): the Northern Region Community Health Center (NRCHC) and the Southern Region Community Health Center (SRCHC). These centers are Federally Qualified Health Centers that provide primary, acute and preventative care on an outpatient basis only. Prior to 1998, primary care services from GDPHSS did not exist, and services were limited to preventive services under the Maternal Child Health Program of the GDPHSS Bureau of Family Health and Nursing Services (BFHNS).

Anyone is able to use the services of the CHCs regardless of income, family size, or ability to pay, and the Clinics focus on low income, uninsured and medically underserved populations. Their Sliding Fee Program is based on the federal income poverty guidelines that take into account income and family size. Through this program, patients receive discounts of 100%, 75%, 50% or 25%. Furthermore, GMHA will refer patients who have no primary care provider and/or health care to CHCs after they are discharged from the GMHA Emergency Room or after hospitalization (Appendix D - GDPHSS BPC Interview).

In 2008, the CHCs received a total of 20,440 visits from patients for family practice, internal medicine, obstetrics and gynecology, pediatrics, nurse practitioner services and certified nurse midwife services. To meet these needs, the CHCs currently employ 55 FTE staff total. A total of 13.1 FTE of this are medical providers (medical doctor, family practitioner, internist, obstetrics and gynecology, pediatrics, nurse practitioner). The insurance utilized by CHC users from 2005 – 2008 were as follows (Table 3.4-5):

**Table 3.4-5. Percentage of Insurance Users of CHC Clients, 2005 – 2008**

<i>Insurance</i>	<i>%</i>
Medicaid	46
None/Uninsured	29
MIP	22
Private	2
Medicare	1

Source: GMHA 2008.

### Bureau of Family Health and Nursing Services

The GDPHSS BFHNS provides health and social services, mostly to individuals with no insurance, except in the case of TB or sexually transmitted diseases (STDs). It is located at the central GDPHSS location, has one room at the NRCHC, and its staff makes visits to the SRCHC. The BFHNS provides: women's health services, family planning services, child health services, services for children with special health needs, home care services, communicable disease services (e.g. immunization, TB clearance, health certificate, and skin tests), chronic screenings in the community, and information to the public through information booths. Table 3.4-6 lists the number of encounters the BFHNS has had with clients for these various services, showing a dramatic increase in access of communicable disease services between 2007 and 2008. Decreases in various other services accessed do not indicate a decreasing need for these services, but rather the inability for BFHNS to meet these needs. Currently, because of staffing and supply shortfalls, the BFHNS prioritizes its work in the following order: infectious diseases, child health, prenatal care, women, chronic needs, and family planning.

**Table 3.4-6. GDPHSS BFHNS Workload Output History 2005-2008**

<i>Program (workload indicator)</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Women's Health Services (# childbearing women)	5,427	5,860	5,483	5,214
Family Planning Services (# childbearing women)	2,837	7,751	4,634	2,780
Child Health Services (children 0-18)	4,495	7,508	7,000	7,105
Children with Special Health Needs Services (children 0-18)	708	682	747	1,087
Immunization Services (children 0-18 and senior citizens)	8,131	12,037	10,148	10,214
General Public Health Services (clients receiving services)	1,626	3,620	4,505	1,971
Communicable Disease Services (clients dealing with TB, STD, HIV)	9,279	11,689	12,446	21,603
Chronic Care Services	1,434	2,369	1,774	1,082

*Source:* Interview with GDPHSS BFHNS (Appendix D).

Integral to the work of the BFHNS is its staff of nursing personnel. Community Health Nurses at the BFHNS travel to different villages on Guam, making visits in order of priority. In 2008, BFHNS' staff of four community health nurses had a combined caseload of 18,641 individuals with individual nurse caseloads ranging from 3,344 to 5,172 individuals per nurse annually (Appendix D - BFHNS Interview).

### Bureau of Communicable Disease Control

All information for this section was obtained from a 2009 interview with Bureau of Communicable Disease Control (BCDC) staff (Appendix D – CDC Interview). The Center for Disease Control (CDC) provides STD, human immune-deficiency virus (HIV), and TB related services, children and adult immunizations, and laboratory services. These services are provided at the central GDPHSS location, as well as at the NRCHC and SRCHC through Memoranda of Understanding agreements. Services at the main location are completely free of charge while the CHCs charge a fee for service. The CHCs see approximately 22,000 clients a year, with higher morbidity rates in the northern areas of Guam.

Communicable disease investigators will investigate reported cases including interviewing patient contacts and performing home visits. They also perform Direct Observed Therapy for TB patients – visiting them daily to ensure they properly take their medication, to decrease the risk of the development

of drug-resistant TB on Guam. From 2006 to 2007 the number of contact investigations performed by investigators increased by 70%.

All individuals are eligible for STD, HIV, and TB services. The program is responsible for surveillance and control of these diseases, as well as clearances for work and school. The CDC Vaccines for Children immunization program services eligible children from 0-19 years old. To be eligible for this program children must be Medicaid eligible, uninsured, American Indian or Alaskan Native, or considered underinsured. Those not eligible for the CDC program can still access immunization services, but on a limited scale.

Finally, the CDC provides the laboratory services for all of GPHSS's programs. A majority of the clinical laboratory work is in the form of testing for the Maternal Child Health program, and the STD and TB clinics.

### Division of Public Welfare

All information for this section was obtained from a 2009 interview with Division of Public Welfare (DPW) staff (Appendix D – DPW Interview). The DPW is responsible for a wide array of social services, administered through a number of different Bureaus. The Division's administrative headquarters are located in the main building, while eligibility sites for each of the social services it administers are scattered throughout the island. Below is a list of the bureaus and sections encompassed by the DPW, along with examples of the social services that they provide.

#### *Bureau of Social Services Administration*

This bureau administers Title XX Guam Consolidated Grants programs, Child Protective Services, and Family Preservation and Support services, among other programs. It also administers foster care and adoption services, being the only adoption program available on the island.

#### *Bureau of Health Care Financing Administration*

This bureau administers the Medicaid, State Children's Health Insurance Program, MIP and locally-funded Catastrophic Illness Assistance Program.

#### *Bureau of Economic Security*

This bureau administers the Supplemental Nutrition Assistance Program (formerly the Food Stamps Program), Temporary Assistance for Needy Families, the locally-funded General Assistance program, and various Adult Programs. It also determines eligibility for Medicaid, MIP and Catastrophic Illness Assistance Program.

#### *Work Programs Section*

This section administers the Jobs Opportunity and Basic Skills program, Guam Employment and Training Program, as well as eligibility for Child Care and Development Funds.

Other programs provided by the DPW include Old Age Assistance, Aid for the Blind, Aid for the Permanently and Totally Disabled, and the Enhanced Allotment Plan.

### Division of Environmental Health

All information for this section was obtained from a 2009 interview with Division of Environmental Health (DEH) staff (Appendix D – DEH Interview).

The DEH provides regulatory services including the generation of sanitary permits and health certificates, and the issuance of health citations. The DEH will perform pre-operation inspections of new permanent or temporary facilities, issue permits for their operation, and continue to perform periodic inspections of these facilities during operations. DEH also generates health permits for employees requiring such a permit (such as those working with food, at massage parlors, or cosmetologists), making sure that the employees have completed their TB skin test and any food safety workshops (offered at GCC) that are required.

In 2008, DEH generated 2,841 sanitary permits for permanent establishments, conducted 1,112 facility inspections and generated 22,573 health certificates. Each of the DEH's 3.4 FTE field staff performed approximately 327 inspections during 2008. Applications for sanitary permits cost \$135 per application, with an additional \$5 per employee for establishments more than 10 employees, and must be renewed annually. Health certificate applications cost \$10, not including additional costs for TB skin tests or food safety workshops, to be updated annually. If a facility does not pass sanitary inspections, further inspections are charged a fee of \$25.

Revenue from these regulatory services makes up about 50% of the DEH budget. While costs and revenue have typically balanced out, for the division, they are able to have this balance only by not conducting the recommended four annual inspections of every regulated facility on Guam.

#### 3.4.2.3 Guam Department of Mental Health and Substance Abuse

Guam's behavioral health service providers are made up of the GDMHSA, the single state agency offering comprehensive behavioral health services to adults and children on Guam, as well as private and non-profit providers. The GDMHSA is located next to the Guam Memorial Hospital.

All individuals are eligible for services at GDMHSA, although the agency prioritizes the most indigent clients. Prioritization of GDMHSA's work is as follows: emergency services, inpatient acute care, medication dispensation, residential treatment services, outpatient services and prevention and outreach activities. Those with insurance will typically be seen in a private practice environment. However, insured individuals wishing to access free medication will sometimes go through GDMHSA's diagnosis system (Appendix D - GDMHSA Interview).

#### 3.4.2.4 Guam Department of Integrated Services for Individuals with Disabilities

All information for this section was obtained from a 2009 interview with GDISID staff (Appendix D – GDISID Interview).

GDISID was created to be a single point of entry to services for Guam's disabled population. It is made up of three departments: the Division of Vocational Rehabilitation, the Division of Support Services, and the Division of Evaluation Enforcement and Compliance. GDISID manages the Guam Get Care System, a web-based comprehensive directory of services, funded by a grant from the Aging and Disability Resource Center through the year 2010. The website also allows the sharing of forms and case tools, and has recently become a way to track data. Currently the website experiences an average of 30,000 hits per month. The system is also utilized by the GDPHSS Division of Senior Citizens through a Memorandum of Understanding.

##### Division of Vocational Rehabilitation

The Division of Vocational Rehabilitation caters to individuals with disabilities whose disability is an impediment to employment. It provides job training and placement. The Division of Vocational Rehabilitation reviews medical, psychological and physical evidence to determine if an individual is



eligible and will work with individuals to obtain this evidence as well as develop employment opportunities.

#### Division of Support Services

GDISID's Division of Support Services provides an eligible individual with case management. A social worker maintains contact with the individual, advocates for them, assists them with accessing services, and works with them to develop goals in an individualized service plan. Division of Support Services also coordinates with the Division of Vocational Rehabilitation.

#### Division of Evaluation Enforcement and Compliance

The Division of Evaluation Enforcement and Compliance is focused on ensuring that GDISID meets the requirements of the Americans with Disabilities Act. It processes complaints and grievances from any agency or private person that is related to disabilities.

Currently GDISID employs six social workers and eight counselors. Three staff members run the Division of Evaluation Enforcement and Compliance. In November 2008, an executive order transferred three residential homes (Guma Mami, Catholic Social Services, and Latte Treatment Center) previously contracted with the GDISID to the GDMHSA. After several patients' guardians filed suit in 2001, the agencies were placed under permanent federal injunction in 2004, meaning that the U.S. District Court of Guam ordered them to make specific changes in the care of their patients (Guam Judiciary 2008).

#### 3.4.2.5 Naval Hospital Guam

The Naval Hospital Guam in Hagatna Heights offers medical care to military personnel, military dependents, veterans, and in case of emergency, civilians. The military also runs small outpatient clinics at Andersen Air Force Base (AFB) and on the Naval Base, as well as a dental clinic. The current Naval Hospital Guam facility was opened in 1954, is 306,000 square feet, and houses 38 active beds including six intensive care unit beds, plus an additional 64 contingency beds. Its branch clinics house nine exam rooms and eight dental rooms. Currently a 2,700 square foot Veterans Affairs Community Based Outpatient Clinic is housed inside Naval Hospital Guam, meaning that patients must pass through Navy security to be seen (Naval Hospital Guam 2008). Current plans are to replace the Naval Hospital with a new hospital at its present location; and to have the VA outpatient clinic be located in a separate building outside the hospital property adjacent to Route 7.

Collaboration between the military and public health systems includes limited consultation and treatment services by specialized military medical officers, assistance when GMHA or the GDPHSS encounter supply or pharmaceutical shortages, as well as a source of back up during times of human or natural disaster.

The military sector provides mental health services to active duty members and their dependents, while the VA Administration services the mental health needs of veterans and their families.

#### 3.4.2.6 Guam Veterans Affairs Office

All information for this section was obtained from a 2009 interview with the Guam VA that advocates for veterans and active-duty personnel on Guam for access to veterans' benefits (Appendix D – VA Interview).

The U.S. Department of VA is responsible for the provision of benefits for qualified veterans. The Guam VA office, currently run by a staff of two individuals, assists veterans with information and applications for their benefits and claims. Guam also provides veterans with free driver's licenses and veterans license

plates that can be processed on Guam. However, most of the forms and claims filed by Guam veterans are sent to the U.S. Department of Veterans Affairs in Honolulu, where they are reviewed and processed.

Health benefits for veterans are provided by the U.S. Veterans Health Administration. As mentioned previously, the Guam VA runs a Community Based Outpatient Clinic in Naval Hospital Guam in Hagatna Heights. Currently this clinic is run by a staff of 10 including one FTE physician. Veterans needing medical attention are first seen at this Community Based Outpatient Clinic. If further attention is needed, veterans can be referred either to a private practice doctor or the Naval Hospital Guam for services. If still more specialized care is needed, they are referred to Tripler Medical Center in Honolulu. Urgent care for veterans can also be taken care of by GMHA, who must then apply for reimbursement from the VA office in Honolulu. Counseling for veterans that have seen combat is provided in the Veterans center that is currently staffed by two counselors, an office manager and one outreach staff. The Veterans Health Administration also runs a homeless veteran's program with drug and alcohol treatment that is contracted to the Salvation Army, and provides Section-8 Rental Vouchers for Veterans. This results in greater selection of affordable housing by allowing voucher holders to choose privately rented housing.

The Veterans Benefits Administration administers all additional benefits including: Education and training, Pension, Vocational Rehabilitation and Employment Services, Home Loan Service, Life Insurance, Dependency and Indemnity Compensation, and Burial Services (the Guam VA has purview over two state veterans' cemeteries in Piti and Hagatna).

To date, the Guam VA has assisted approximately 3,600 veterans in accessing benefits. This office is also tasked with serving veterans from Micronesia; as such services do not exist in these outer islands. The office experiences a volume of approximately 50 phone calls and 30 in-person visits per day.

#### 3.4.2.7 Private Providers

There has been a recent increase in private mental health providers on Guam. Private providers are mostly psychiatrists, clinical psychologists, and individual, marriage and family therapists. Private clinics also provide mental health services. Only a limited number of private providers and pharmacies accept government insurance such as the MIP and Medicaid due to factors such as slow reimbursement.

#### 3.4.2.8 Non-Profit or Academic Centers/Providers

Currently there are no non-profit groups on Guam providing health care and no academic medical centers. Various non-profit providers on Guam serve both adults and youth, and provide ancillary and support services, as well as emergency, homeless and youth shelter. Some examples of these include: the Guam Salvation Army, Sanctuary, Inc., and Catholic Social Services.

The Guam Salvation Army provides assistance during times of natural disaster, runs a Family Services Center that serves the needs of those who are facing financial crisis or eviction and homelessness through distribution of food, educational programs, and holiday events. The Lighthouse Recovery Center is a residential facility with the capacity to assist 24 men transitioning from homelessness or substance abuse into independent drug-free lifestyles using a six month program. The Lighthouse Recovery Center also provides aftercare – providing outpatient treatment to a current roster of 60 clients, and maintaining 17 units on lease as transitional housing. The Salvation Army also conducts homeless outreach twice a month, contacting about 30 people per outreach activity (Appendix D - Guam Salvation Army Interview).

Sanctuary, Inc. serves runaway, homeless or troubled youth by providing emergency shelter, a transitional living program, and weekly youth groups around issues of anger management, tobacco cessation, drugs

and alcohol, and self esteem. Sanctuary Inc. also provides weekly adult groups in anger management, and parenting support, and skills (Appendix D - Sanctuary, Inc. Interview).

Catholic Social Services provides programs for the elderly, homeless and those with disabilities. It also provides supportive services such as an emergency food and shelter program and a housing counseling program (Catholic Social Services 2009).

Organizations such as Salvation Army, Sanctuary Inc., and Catholic Social Services are important elements in supporting the health and human service system on Guam. Often, local and federal government agencies contract with these organizations for services. For instance, the Guam VA maintains a contract with Guam Salvation Army to support up to seven beds for homeless veterans (Appendix D - Guam Salvation Army Interview). Similarly, GDMHSA maintains contracts with Sanctuary Inc. for youth treatment services (Appendix D - GDMHSA Interview).

### 3.4.3 Public Safety

Public Safety includes the protection from and prevention of events endangering the general public's safety, including crime and disasters, both natural and man-made. Government agencies on Guam involved in law and traffic enforcement, fire suppression, emergency medical response, safety inspections, and civil and criminal litigation, justice, and corrections are all considered public safety agencies.

While overall crimes as processed by Guam Police Department (GPD) increased by about 9% between 2002 and 2006, the territory had significantly lower reported rates of both violent and property crimes per 100,000 residents when compared to U.S. averages. Table 3.4-7 compares recent crime rates for Guam and the U.S. (using Part I or "serious" crime as defined by the Federal Bureau of Investigation). The violent crime rate on Guam has recently been trending down while the property crime rate has been trending up. In 2006, larceny-theft (2,639 cases) was the most common offense known to GPD. Vandalism (1,500 cases), burglary (1,292 cases) and disorderly conduct (1,156) were other common offenses. Other than disorderly conduct, each of the crimes mentioned had increased from 2002 levels.

**Table 3.4-7. Comparison of Violent and Property Crime Rates, Guam Versus U.S., 2002-2006**

Year	Violent crime rate per 100,000 residents		Property crime rate per 100,000 residents	
	Guam	U.S.	Guam	U.S.
2002	292.4	494.4	2,188.7	3,630.6
2003	302.0	475.8	2,332.6	3,591.2
2004	277.8	463.2	2,189.2	3,514.1
2005	230.2	469.0	2,749.1	3,431.5
2006	239.7	473.5	2,423.1	3,334.5

Source: GPD 2007; U.S. Department of Justice 2006.

Guam is a high-risk public safety area during times of natural, man-made and technical disasters. The remaining information in this section is from the Guam Emergency Response Plan (Guam Homeland Security Office of Civil Defense 2009), unless otherwise noted.

The territory's location makes it vulnerable on a number of levels. Guam is located in an area of high risk for natural disasters including typhoons, tropical storms, and tsunamis and its remoteness means that it cannot depend on aid from contiguous regions in the event of disaster (Suburban Emergency Management Project 2007). Guam's geographic location is also one that places it in close proximity to areas in the region such as North Korea and China, and the proposed action itself is meant to utilize this strategic

positioning to, “fulfill U.S. government national security and alliance requirements in the Western Pacific Region” (Suburban Emergency Management Project 2007).

The Emergency Operations Center at the Office of Civil Defense (whose administrator is designated by the Governor of Guam) is the primary agency responsible for coordinating Guam’s response to all emergencies and disasters through the National Incident Management System. The Office of Civil Defense is also responsible for all public information activities during emergencies, and the coordination of other response agencies. Response agencies on Guam include, but are not limited to: GFD, GPD, Guam Environmental Protection Agency (GEPA), Guam Department of Public Works (GDPW), GDPHSS, Guam Department of Education, Guam Mayors Council, and American Red Cross. Responses to acts of terrorism on the island are the responsibility of the Office of Guam Homeland Security.

The primary federal agency that works with the territory of Guam in times of emergency is the Federal Emergency Management Agency (FEMA), and more specifically, the FEMA Region IX Pacific Area and Regional offices. Memorandums of Understanding are maintained with all DoD agencies on Guam that possess emergency management capabilities. However, these Memorandums of Understanding are utilized only in the event that GovGuam emergency response resources are exhausted.

The next section gives brief overviews of the key GovGuam agencies responsible for public safety on Guam and concludes with a description of some of the local and military collaborations.

#### 3.4.3.1 Guam Police Department

GPD is the law enforcement agency for the entire territory, outside of federal property. Its Operations Bureau includes Special Operations, Neighborhood Patrol, and Highway Patrol Divisions. GPD’s Investigations Bureau is made up of Criminal Investigations and Forensic Science Divisions. Handling of traffic accidents and reporting of motor vehicle and boating accidents fall under the purview of the GPD. Overall, the department is responsible for both preserving the peace and ensuring a safe environment for the territory of Guam divided into District I and District II. GPD’s four precincts include: Hagatna, Dededo, Agat, and Tumon/Tamuning. Police stations are located in, respectively, Hagatna, Dededo, Agat, and the Tumon Bay resort area. A new Yigo precinct is also planned for the near future. The 2006 precinct population was as follows:

- Dededo 68,996
- Hagatna 53,148
- Agat 28,976
- Tamuning 19,899

In 2007, GPD employed 309 sworn personnel and 66 civilian employees. The total number of arrests in 2007 was 3,315 (GPD 2007).

#### 3.4.3.2 Guam Fire Department

GFD is the primary agency responsible for fire suppression, search and rescue, and emergency medical response for the territory of Guam. GFD operates 12 fire stations (5 in the northern district and seven in the southern district), two rescue bases, and the E911 Integrated Emergency Communications Center. GFD’s fire stations and rescue bases are managed under its Fire Operations Division while its E911/Fire Dispatch work is managed under a separate division. The Emergency Medical Services / Rescue Bureau manages rescue operations including ambulance services on Guam. Guam experiences weather conditions that make it vulnerable to wildland/urban interface brush fires. The GFD is usually the first responder in such incidents, and is responsible for establishing an Incident Command System.

GFD currently employs approximately 200 full time sworn personnel, including emergency medical technicians. Approximately 32 of these personnel are equipped to perform open water rescues.

GFD cooperates with military fire response agencies through the National Incident Management System. For land-based search and rescue incidents that occur on federal or military property, military responders take the lead on emergency coordination, supported by GovGuam agencies. For sea-based incidents beyond the GFD's capacity, the U.S. Coast Guard (USCG) takes operational lead (Guam Homeland Security Office of Civil Defense, 2009).

The GFD also employs two inspectors that work in cooperation with the GDPW to ensure that any construction plans are reviewed for compliance with fire codes prior to being approved. The GFD's Code Enforcement Section performs inspections of facilities for code compliance (Appendix D - GFD Interview).

#### 3.4.3.3 Guam Department of Corrections

The Guam Department of Corrections (GDoC) is responsible for the handling of persons after their conviction of a criminal offense. The Department is organized into four divisions: Administration, Prison Security, Diagnostic Treatment Services, and Parole Services.

The Prison Security Division maintains four main facilities: the Hagatna Detention Facility, the Adult Correctional Facility, the Women's Facility and Community Corrections Center. The latter three facilities are all located in Mangilao. The Hagatna Detention Facility is meant to hold local pre-trial detainees, Federal Marshal detainees and overnighters. The Adult Correctional Facility is made up of 14 housing units used to house individuals that have been convicted of a crime (minimum, medium and maximum security), parolees being kept for a parole infraction, and immigration detainees. The Women's Facility is located outside the Adult Correctional Facility and is the territory's only holding facility for women. The Community Corrections Center houses inmates that are classified as minimum-out and are eligible for work credit, work release, and educational release (GDoC 2008).

Diagnostic Treatment Services provides prisoners with rehabilitation services through counseling and programs that provide residential substance abuse treatment; educational opportunities leading to general education development completion; and vocational rehabilitation, community release programs, and basic medical and dental services. Parole Services processes parole applications, determining eligibility, and conducts parolee surveillance and counseling.

Space constraints currently exist for GDoC facilities. Over-crowding at the Hagatna Detention Facility necessitates that the Adult Correctional Facility be used to house some pre-trial individuals. GDoC has considered building a new facility to meet housing needs, but there have been no firm plans to do so (GDoC 2008).

#### 3.4.3.4 Guam Department of Youth Affairs

All information in this section was obtained through an interview with Guam Department of Youth Affairs (GDYA) staff (Appendix D – GDYA Interview).

The GDYA runs a variety of programs geared toward youth development, rehabilitation and involvement with the community. Its youth programs and facilities include the following:

##### Youth Correctional Facility and Cottage Homes

The Youth Correctional Facility and Cottage Homes facilities are used to house youth offenders. Status offenders (non-criminal) are housed in the Cottage Homes, a non-secure correctional facility. This facility

has 18 spaces. Non-status offenders (criminal) are placed in the secure Youth Correctional Facility. The Youth Correctional Facility has a capacity of 45 beds, usually broken down to between male and female dorm rooms and 15 beds for the juvenile drug court or for over-flow beds.

#### Counseling/Case Management

GDYA's Counseling and Case Management Unit provides individual, group and youth counseling to GDYA clients and families at the agency's various sites. Social workers provide client assessment, case management, counseling and crisis intervention. Additional services such as various psychological evaluations, vocational testing and behavior modification programs are also provided.

#### Community Social Development Resource Centers

The Community Social Development Resource Center programs at resource centers in three locations: Dededo, Mongmong-Toto-Maite, and Agat. These resource centers provide a broad range of services including an Aftercare program for those released from GDYA correctional facilities, the Jumpstart Program an inpatient treatment-oriented program geared toward early reintegration of clients into the community, and Chansa, a program that targets at-risk youth before they enter the juvenile justice system. The Social Development Unit also runs various programs and services such as mentoring, crisis intervention and outreach counseling.

#### Prevention

GDYA's Prevention Unit runs programs including Youth Crime Watch, School Children Out-Reach Empowerment, the leadership development program Youth Year, and various sports and summer activities in the community.

#### 3.4.3.5 Military Security

While Navy and Air Force security personnel work independently, they share facilities and training. In addition, if military personnel are given base suspension or debarment on one military property, they lose privileges on all military bases. Currently both the Air Force and Navy are adapting to new Joint Region Marianas requirements, whereby the Navy will take the lead for the joint region. In the 1980s, a military corrections facility existed on the Naval Base, but that facility has since been closed due to underuse. Andersen AFB still maintains a small correctional facility of four cells (Appendix D - Naval Security Interview).

In addition to on-base patrol, military security does play a role outside the fence. There exists a close working relationship between the GPD and military security. GPD headquarters are located in old Navy facilities that GPD provides safety briefings for the military and have recently begun working to patrol the Tamuning/Tumon area of Guam together. Furthermore, when large ships come in to port, shore patrol is a requirement (Appendix D - GPD Interview).

#### **3.4.4 Agencies Affected by Population Growth**

The agencies discussed in this section were selected because they will likely be impacted by increases in service population or an increase in H-2B construction workers.

##### 3.4.4.1 Guam Department of Parks and Recreation

The Guam Department of Parks and Recreation (GDPR) administers approximately 70 public parks and recreational facilities, including beach parks, community parks, skate parks, historic parks, baseball fields, a baseball stadium, a sports complex, tennis courts and a public pool. All other community centers and parks fall under the 19 village mayors, who work closely with GDPR. GDPR also runs sports leagues and

provides swimming and tennis lessons among others. A sports complex is in the process of being built in Dededo, and it will include baseball fields and a swimming pool (Appendix D – GDPR Interview).

GDPR current staffing runs less than 80 employees. Staffing for park rangers, teaching positions, and park maintenance is primarily outsourced. GDPR's Historic Preservation Office (HPO) conducts cultural resource review under federal law and engages a comprehensive historic preservation program on Guam. It also conducts permit reviews. This office has a staff of approximately 13 people (Appendix C – GDPR Survey)

#### 3.4.4.2 Guam Public Library System

The Guam Public Library System (GPLS) provides one main library in Hagatna, five branch libraries in the villages of Agat, Barrigada, Dededo, Merizo, and Yona, and a bookmobile. Currently, GPLS employs a staff of 28. The GPLS supports the needs of the public, as well as schools and government agencies, providing library services, programs for school children and families, reference and internet searching. All residents on Guam are eligible for a library card.

Library resources are also available at all public and some private schools on Guam, institutions of higher education and other institutions such as the Territorial Law Library (Appendix C – GPLS Survey).

#### 3.4.4.3 Judiciary of Guam

All information in this section was obtained from a 2009 interview with Judiciary staff (Appendix D – Guam Judiciary Interview), unless otherwise noted.

The Judiciary of Guam is comprised of the Courts and Ministerial Division, Probation Services Division, Marshal's Services Division, Client Services and Family Counseling Division, and Procurement and Facilities Management Division.

Trial Courts are made up of Traffic Court, Small Claims Court, Child Support Court, Drug Courts and Family Court. Between the years 2002 and 2007, 50,444 cases were filed with the Judiciary's Clerks office and 323,515 hearings were scheduled. Of those scheduled, 192,423 were heard and as of 2007 28,864 cases were pending hearings.

The Judiciary's Probations Services Department works to supervise, monitor and reintegrate probationers back into the community. Parole officers manage adult and juvenile clients, playing roles in the Mental Health and Drug Courts, as well as performing drug tests and attending criminal hearings.

The U.S. Marshal's Service provides law enforcement services within the judicial system by preserving order and providing security and escort services in the courtrooms. Training for U.S. Marshal's includes initial basic law enforcement training and intermediate and advanced follow-up training.

The Client Services and Family Counseling Division of the Judiciary provide psychological counseling and evaluation to children and adults, individuals, families and groups in the judicial system. Special therapeutic courts such as the Mental Health Court and other counseling programs in the Judiciary collaborate with other government agencies, nonprofits and the business community to work with individuals on plans. Currently, these therapeutic courts have a 95% adult success rate and an 80% juvenile success rate.

Until recently, the Judiciary was housed on one site in Hagatna. As of August 2009, it opened up a Northern Court Satellite in the Dededo Mall, where there is room for one court room that will process small claims and traffic violations, among others.

#### 3.4.4.4 Guam Department of Labor

The Guam Department of Labor (GDoL) consists of numerous divisions, bureaus, and programs related to employment. The agency's organizational chart presents three main clusters: (1) "Statistics," including the Bureau of Labor Statistics and its Economic Research Center; (2) "Employment and Training," including various employment assistance and job training programs; and (3) "Regulatory and Compliance," including divisions for occupational safety and health, fair employment, etc. The Workforce Investment Board is also attached to the Director's Office.

While all parts of the GDoL would be affected by the proposed action, the Agency for Human Resources Development and the Alien Labor Processing and Certification Division (ALPCD) are among those particularly likely to be affected, and in fact are already heavily involved. The Agency for Human Resources Development works to increase the pool of labor on Guam by identifying actual or potential discouraged workers – including those deficient in basic skills – and improving their skills through means ranging from classroom training to on-the-job training with private-sector partners. The ALPCD is responsible for processing applications to bring foreign ("alien") workers into Guam and assuring compliance with federal Department of Homeland Security requirements (GDoL 2009a).

ALPCD is the primary Guam entity reviewing and issues permits under the H-2B work visa program of the U.S. Citizenship and Immigration Service (USCIS), and would be the primary unit of GovGuam affected by the proposed project's use of H-2B workers (indirect effects arising from housing these workers on GDPW and possibly GDLM would occur).

ALPCD manages the H-2B program's Guam components (with oversight by the Governor and in cooperation with the U.S. State Department), and is involved in the H-2B process in six ways:

1. Prospective employers file applications for Temporary Labor Certification with ALPCD
2. ALPCD adjudicates these applications, recommending approval or denial to the Governor of Guam (the Governor's recommendation, further interviewing, and visa issuance are handled by the U.S. State Department)
3. If ultimately approved by the USCIS, once the worker arrives on Guam, he/she must report to the ALPCD to file an Application for Registration and get a worker identification card issued by ALPCD
4. ALPCD conducts labor law enforcement, compliance monitoring, job site and temporary worker housing inspections
5. ALPCD processes Exit Clearance forms two weeks before the worker is ready to depart the U.S.
6. Statistics, data gathering and recordkeeping on ALPCD programs

H-2B workers are issued one-year permits, renewable up to three years. For the proposed action, it is likely that most workers hired before 2015 would stay for more than one year, meaning extensions would have to be granted by ALPCD.

For the most recently completed FY2007 and FY2008, staffing of the ALPCD totaled 5 FTEs.

#### 3.4.5 Agencies Affected by Development on Guam

The agencies discussed in this section were selected because they will likely be impacted by increases in development and construction on Guam as a result of the proposed action. They are GovGuam agencies responsible for issuing, monitoring and enforcing development permits on Guam.



Because actions taken on federal land do not require local development permits, most of the impact on GovGuam development permitting functions would come from off-base growth generated by the proposed action (i.e., purchases from construction or operations and from indirect growth). In a few cases – such as the GEPA – federal agencies have delegated responsibility for oversight of direct project activities to local agencies, and so the direct project impacts also affect local permitting, monitoring, and enforcement to some extent.

For private-sector development permits, two primary agencies are involved: GDLM for rezoning proposals, and the GDPW for building permits. If rezoning (including conditional use permits) is required, developers apply with the GDLM (that acts as technical arm for the Guam Land Use Commission (GLUC) and also makes referrals to other agencies for rezone reviews). If the rezoning action is allowed, developers then go to the “one-stop permitting” center with GDPW (GDPW in turn, typically refers part of the building permit review to GDLM). If no rezoning is needed, the GDPW one-stop permitting center is the primary point of contact for applicants. GDPW typically refers building permit applications for review by any or all of the agencies addressed in this section (listed above).

#### 3.4.5.1 Guam Environmental Protection Agency

GEPA was initially established in 1973 as prescribed in Guam Public Law 11-191, signed into law on December 7, 1972. The Agency has six divisions: Administrative Services, Water Programs, Environmental Monitoring and Analytical Services, Air and Land Programs, Environmental Planning and Review, and Energy, Sustainable Development and Outreach. This last division is new and was approved in GEPA’s 2009-2013 work plan. GEPA’s jurisdiction includes wastewater; clearing, grading, and excavation; drinking water and water quality certification; groundwater management and water quality monitoring; hazardous waste and clean-up of toxic waste sites; air quality; land use impacts; and water pollution control; clearing, grading, stockpiling and stormwater management (GEPA 2009).

GEPA is delegated authority by the USEPA to carry out the USEPA mandates on Guam. GEPA has several divisions, including Air and Land, Water, Environmental Planning and Review, and Monitoring.

#### 3.4.5.2 Guam Department of Public Works

The GDPW is a multi-purpose agency with responsibility for: highway maintenance, construction, and safety; bus operations; housing management; solid waste management; administration of capital improvement projects; and operation of the “one-stop permitting” center. The focus of this study will be on this agency’s permitting operations – namely, building (architectural and structural), electrical, plumbing, flood control, and highway encroachment, and management of the one-stop permitting center. (GDPW 2009).

The GDPW is a “one-stop” permitting center where those needing development permits can get referred to the full range of permits needed for their projects. GDPW not only reviews permits itself, but also routes applications to other agencies for their review.

#### 3.4.5.3 Guam Department of Land Management

The GDLM has five operating divisions: Land Planning; Land Administration; Land Survey; Land Records, and Geographic Information System (GIS)/Land Information System. The focus of this study for the GDLM is on the Planning Division that has clearance responsibilities relating to building, occupancy, and clearing and grading permits; business, liquor and contractor licenses; temporary worker housing facilities; and childcare facilities. Under the auspices of the Land Use Commission and the Shoreline Protection Commission (as of writing, the latter Commission was to be transferred to the Coastal

Management Program [CMP] shortly), the Planning Division is responsible for processing zoning changes and variances, subdivision applications, development plans, conditional use and wetland permits, and horizontal property regime requests (GDLM 2009).

Much of GDLM's permitting activity is driven by referrals from GDPW, through GDPW's one-stop permit center. However, other permitting issues arise, especially rezoning proposals previous to issuance of building permits that are heard by the GLUC with staff assistance primarily by GDLM (the GLUC chair).

#### 3.4.5.4 Guam Bureau of Statistics and Plans

The GBSP is responsible for collection and dissemination of economic and business statistics, coordinating information management throughout the government, producing mapping tools and products that facilitate the use of data by governmental agencies, and the administration of the CMP.

The focus of the analysis for this agency is on CMP administration. The entire island of Guam is designated a Coastal Zone. CMP conducts a number of programs, including public education, permit review, consistency reviews, and policy planning. The agency is responsible for reviewing a wide variety of applications for developments including requests for zone changes; issuing seashore reserve permits; making federal consistency determinations; conducting site inspections; monitoring activities and developing mitigation strategies. When the new Seashore Reserve Plan is adopted, this agency will administer it (Appendix D – GBSP Interview).

#### 3.4.5.5 Guam Economic Development Authority

The Guam Economic Development Authority (GEDA) (formerly known as the Guam Economic Development and Commerce Authority [GEDCA]), a public corporation, is an autonomous agency of GovGuam. Its mission is to promote a sustainable economy for Guam. It manages three industrial parks as well as several parcels for the Guam Ancestral Land Commission. It provides investor incentives and commercial loans. The Authority generates its own revenues (GEDA 2009).

#### 3.4.5.6 Guam Department of Agriculture

The Guam Department of Agriculture (GDA) is organized into five divisions: Aquatic & Wildlife Resources; Forestry and Soil Resources; Agricultural Development Services; the Plant Inspection Facility; and Animal Control. It operates five marine reserves and has played an important role in the restoration of coral reefs and fishery resources. The Department must sign off on any construction permits that would impact the environment (GDA 2009).

### 3.5 SOCIAL VALUES AND ISSUES

The announcement of the proposed action necessitated public scoping meetings be conducted (Earth Tech 2007). Several meetings were conducted in 2007. During that time public comments were collected. Of interest in this section are some categories of expressed concerns that relate to the socioeconomic impact of the proposed buildup, above and beyond those discussed above. The section below lists the categories most often mentioned in the public scoping meetings, and provides historical and current background to these issues.

#### 3.5.1 Chamorro Issues and Interests

Chamorros were first conquered by the Spanish soon after contact with Magellan's expedition. Most died of disease within a hundred years after contact. Guam was administered under a U.S. Naval Governor

after it was taken from Spain in 1898. The Japanese occupation from 1941 to 1944 was marked by forced labor, cultural assimilation, and violence. After WWII, the island was a restricted U.S. Navy zone until 1961.

The topics of political minoritization and WWII Reparations discussed below are linked to the military in the minds of many Chamorro and other Guam residents. While they would not technically be “impacted” by the proposed action, the issues are frequently raised in the context of military planning.

To some extent, all these issues have in common a sense of concern over perceived past wrongs that some Guam residents argue should be “made right” by the military and/or the federal government in the course of the planned buildup.

#### 3.5.1.1 Cultural Artifacts

The DCA is charged with administering and expanding Guam’s current relatively small museum for archaeological or other cultural artifacts. An expression of interest has been made that artifacts discovered in archaeological excavations during the EIS/OEIS investigations or subsequent military construction to be stored at this or a future proposed Museum.

#### 3.5.1.2 Political Status

Chamorro sovereignty groups feel U.S. military presence works against self-government and strengthens the sense of “colonization” on Guam. As a result of the Spanish-American War, Guam was sold to the U.S. in 1898. During the early period of the U.S. governance of Guam, the island was administered under the authority of the Navy. Naval policies included the intention to assimilate the Chamorro population, and included a banning of the use of Chamorro language in schools (U.N. 1963). Prominent local Chamorro residents drafted a 1902 petition arguing that the non-representative form of government existing at that time went against the ideals of American democracy, and asked for further clarification of Guam’s political status.

The Navy’s administration of Guam was interrupted during WWII, when in 1941, one day following the invasion of Pearl Harbor, Japanese military forces bombed Guam. The Japanese took control of the island for a period of two and a half years, where strict social standards were imposed, including restrictions in the use of the Chamorro language as well as English in local education. Guamanians were also used as forced-labor on a variety of Japanese military construction projects. Through alignment with U.S. naval officials and other methods, including prayer and the singing of songs, Chamorro resisted Japanese occupation. Eventual return of the island to the U.S. occurred on July 21, 1944. The end of Japan’s occupation was welcomed by local Chamorro. However, renewed U.S. military and political presence on Guam at the end of WWII included policies that put less emphasis on issues such as Chamorro reparations from the Japanese occupancy (see below) or land rights, causing Chamorro opposition.

The passage of the Organic Act in 1950 provides context for the current political, legal and social relationship of Guam to the U.S. government. Although the Act did not provide full self-determination for Guamanians, it did bring stability as local citizens were given some opportunity to influence the island’s governance. The Organic Act extended U.S. citizenship to indigenous and non-indigenous citizens on Guam and contained a bill of rights similar to that found in the amendments to the U.S. Constitution, but not including the provision of a trial by jury. Three branches of government were created, and decision making for the island was given to a local legislature composed of civilians. This ended more than 50 years of Navy administration of Guam. In an island wide 1976 referendum, island residents voted to maintain close ties with the U.S., but to also begin negotiations to improve the Territory’s status. A 1979

draft constitution was rejected by a vote of five to one, particularly because of the need for continued discussion on Guam's political status.

Today Guam is an unincorporated Territory administered by the U.S. DOI. As an unincorporated Territory, the island is a possession of the U.S., but not part of the U.S. and not all provisions of the U.S. Constitution apply to the island. While universal suffrage applies to Guamanians 18 years and older, and Guamanians are considered citizens of the U.S.; they are not eligible to vote in U.S. presidential elections; and Guam's Congressional representative does not have the right to vote on national laws (except in committees).

One political goal of some Chamorros has been total sovereignty. However, there has never been a recorded majority of voters on Guam in favor of full independence from the U.S. Therefore, some Chamorro activists have sought legal redress through the United Nations (U.N.). They have attended and spoken at numerous U.N. workshops on decolonization (U.N. 1963). It may be noted that Article 73(b) of the U.N. Charter does not specifically call for the Administering Power to help the territory move towards independence. Rather, it discusses "self-government," "progressive development," and "varying stages of advancement," as opposed to full independence (U.N. 1945).

#### 3.5.1.3 Political Minoritization

Related to the issue of political status is a concern about the growing "minoritization" of Chamorro as other ethnic groups – U.S. Mainlanders, Filipinos, or non-Chamorro Micronesians – increase as a percentage of the population. Prior to WWII, Chamorro comprised more than 90% of Guam's population. The percentage dropped below 50% by 1980 and was 42% in 2000.

Past labor shortages have resulted in increases in Filipinos and non-Chamorro Micronesians, while the military has been a driver of Caucasian or other Mainlanders coming to Guam. Inter-marriage among ethnic groups on Guam is rare and/or new; the 2000 Census found just 10% of the population identified themselves or household members as being of two or more ethnic groups, and more than 60% of these were children. Most young people are assimilating in the sense that they speak "only English" (65% for those 5-17 in 2000, versus 28% "only English" for those 18 and over). Among the 11% of children who were Chamorro speakers, two-thirds spoke it less frequently than English – while among the 26% of adults who were Chamorro speakers, only one-third spoke it less frequently than English.

#### 3.5.1.4 World War II Reparations

Wartime reparations from the Japanese occupation remain a highly contentious issue, particularly because the elderly victims of that period are now reaching the end of their life spans. Guamanians suffered under the Japanese military administration from 1941 to 1944, and some believe that this occupation was the result of U.S. military presence on Guam. Although the U.S. guaranteed Japan immunity from reparations claims through Article 14 of the Treaty of Peace in 1946, Guamanians continue to request that the U.S. federal government pressure Japan to pay war reparations, or that the federal government pay them in Japan's stead. However, neither the U.S. Department of Insular Affairs nor the U.S. State Department has expressed a strong desire to pursue this request and Congress has refused to waive protections in Article 14 (U.S. DoI 2004).

### 3.5.2 Military-Civilian Social Issues on Okinawa that Affect Public Perception on Guam

Public perception on Guam regarding the proposed action is affected in part by social issues that have emerged on Okinawa. In short, these issues are:

- Use of land

- Economic development
- Environmental damage
- Military-related accidents
- Crime and social order
- Prostitution and crimes against women

Thus, a brief overview of such issues on Okinawa is warranted as background for impact assessment.

Okinawa Prefecture in Japan consists of 49 inhabited and 110 uninhabited islands including the actual island of Okinawa (the largest island in the prefecture).

U.S. military presence on Okinawa began in the closing weeks of WWII with the Battle of Okinawa. Approximately 150,000 Okinawans, about a third of the population, lost their lives (Lacey 2009). American casualties in the operation numbered over 12,000 killed and 36,000 wounded (Global Security 2009). Most surviving Okinawans were interned in camps at the end of the Battle of Okinawa. A few remained in the camps up to the start of the Korean War, when the U.S. military started to expand captured Japanese bases (Molasky 1999). Kadena Air Base and Futenma Air Station were built in the middle of highly cultivated part of the island, and Okinawa was transformed into an “island of bases” (Asahikawa Medical College 2000). Although the U.S. occupation of the main Japanese islands ended in 1952, the U.S. continued administration of the Ryukyu Islands, including Okinawa, until 1972.

Over the years, the presence of the U.S. bases has incurred protests from anti-war organizations, labor, religious groups, women’s organizations, and political factions. Some of the major concerns are detailed below.

One stated concern is that while Okinawa comprises a small percentage of Japan’s total land area (0.6%), a large amount (approximately 75% of the total land area) of facilities used exclusively by the U.S. Forces in Japan is located in the prefecture. In addition, a majority of U.S. service members in Japan (an estimated 60%) are stationed here, 60% of whom belong to the Marine Corps (Okinawa Prefecture 2009).

Some Okinawa residents perceive military bases as hindering regional economic development. Since 1972, three sets of plans have been set forth to improve the prefecture’s infrastructure and incorporated plans for roadways, harbors, airports, and educational facilities. However, the locations and size of U.S. military bases have impeded the planned urban redevelopment. Military bases occupy approximately 10.4% of prefectural land and 18.8% of the main island of Okinawa where most of the population and industries are concentrated (Okinawa Prefecture 2004).

Additional concerns include noise pollution. In “A Report on the Aircraft Noise as a Public Health Problem in Okinawa,” studies showed that aircraft noise exposure resulted in a wide range of physical and mental consequences that included sleep disorders, hearing loss, higher rates of low birth weight infants, fatigue, neurosis, and negative effects on children (Asahikawa Medical College 2000).

Environmental damage has also been cited. Reports claim that highly carcinogenic materials (fuels, oils, solvents, and heavy metals) are regularly released. Training exercises using live ammunition have caused forest fires, soil erosion, earth tremors, and accidents, and soil runoff has polluted the coral reef (Okinawa Prefecture 2004).

Military-related accidents and incidents, including helicopter and aircraft crashes, have also been a source of concern. Between Okinawa's reversion and the end of December 2003, 275 U.S. military aircraft-related accidents were recorded (40 of these were aircraft crashes) (Okinawa Prefecture 2004).

Crime and social order issues involving SOFA personnel on Okinawa are also of concern to Guam residents. Available crime counts in Okinawa include active duty military, civilians associated with military, and their dependents. Data from Japan's National Police Agency show that arrests for major crimes have been relatively low from 2003 to 2007, but increased by 11.1% in 2008. Despite this increase, Okinawa police are hesitant to make too much of the numbers, pointing out that the numbers are too small and appear to be more significant than they actually are. Analysts have stated that crimes by Americans are perceived as a major problem largely because of the attention they get in the local and international press and protests by anti-base groups on the island (Allen 2008).

Nevertheless, Americans connected to the military commit far fewer crimes per capita than their Okinawan counterparts. In 2008, SOFA-status people made up 3.28% of the island's population but accounted for 1.62% of all arrests. Previous years' statistics show similar low rates (Allen 2009; Allen 2008; Allen and Sumida 2008; ROK Drop 2008; Weaver and Kusumoto 2008). During 2008, the Marine Corps made several changes to help prevent misconduct among its service members in Okinawa. Some of the changes included an expansion of uniformed courtesy patrols, a new liberty card policy, checks of outgoing vehicles at Marine Corps installations and additions to the orientation and education seminar that all newcomers must attend (Allen 2009).

A critical event occurred in September 1995 with the abduction and rape of an Okinawan schoolgirl by three U.S. service members. Widespread public protests led to bilateral negotiations between the U.S. and Japan and led to the establishment of the Special Action Committee on Okinawa.

In looking at the history of U.S. military presence in Okinawa, arguments of justice and jurisdiction surround hundreds of allegations of sexual crimes that have been reported through the years. From 1945 to 1950, 278 rapes by U.S. servicemen were reported and an additional 200 rapes by U.S. military personnel were reported between 1972 and 1997 (Caron 1999). While the military views each crime as an individual incident, local protestors of these sexual crimes see gender-related violence as a structural issue that is perpetuated by legal, political, economic, and social structures (Cachola et al. 2008).

SOFA-related data rely on Okinawa prefecture records that group crime statistics into six major categories:

- Heinous crimes – murder, rape, robbery, arson
- Violent crimes – assaults, blackmail, extortion
- Thefts – burglaries, car thefts, muggings
- Intellectual crimes – fraud, counterfeiting
- Moral offenses – gambling, indecent assault, molestation
- Other, including vandalism and trespassing

The only quantitative data available are for "Heinous Arrests." Information on Moral Offenses is combined with Other Arrests and is therefore not listed in the table below.

**Table 3.5-1. SOFA-Status Total and Heinous Arrests  
on Okinawa, 2003-2008**

Year	Total Arrests		Heinous Arrests	
	# of Individuals	Cases	# of Individuals	Cases
2003	133	112	12	7
2004	72	59	1	1
2005	65	66	4	2
2006	63	57	5	3

Year	Total Arrests		Heinous Arrests	
	# of Individuals	Cases	# of Individuals	Cases
2007	46	63	6	6
2008	63	70	13	7

Source: Allen 2009.

The number of SOFA-status individuals arrested for Heinous Crimes is low, although the specific crime of rape cannot be distinguished from murder, robbery, and arson. Also, low numbers may be attributable to the widely accepted idea that sexual crimes are consistently underreported.

In 1969, at the height of the Vietnam War, the Okinawan police estimated that 7,362 Okinawan women were working in prostitution, though others estimated this number to be 10,000 or more. According to an Okinawan activist group (Okinawa Women Act Against Military Violence 2009), an estimated 7,000 Filipinas today serve as prostitutes – on entertainment visas – for U.S. military personnel in Okinawa, even though prostitution is illegal in Japan.

### 3.5.3 Land Issues

Guam's land issues have included debate over the large areas of military land on the island restricted from public access and concerns over nonpayment or perceived inadequate payment for land used as military bases during and after WWII. More recently, tighter national security measures following the attacks of September 11, 2001 resulted in the Air Force restricting access to tour groups that had previously accessed to two beaches (Tarague and Jinapsan) on the shores below Andersen AFB. Landowners themselves now must access these properties using all-terrain vehicles along the coastline rather than having direct access through Andersen AFB.

Agencies involved in land issues include the Guam Ancestral Lands Commission and the CLTC.

#### 3.5.3.1 Guam Ancestral Lands Commission

The five-member Commission, assisted by its staff, was set up by Guam Public Law 25-45 to pass title of federal excess lands, once returned to the GovGuam, back to original landowners or their heirs. Guam Public Law 25-178 sets the missions, mandates, powers and jurisdiction of the Commission in processing claimant applications for Deed of Title.

#### 3.5.3.2 Chamorro Land Trust Commission

The five-member CLTC, aided by its staff, controls the Chamorro homelands. It makes these lands available to qualified applicants (native Chamorro or descendants thereof) through residential, agricultural and grazing leases. For purposes of this Land Trust, a "native Chamorro" is defined as anyone descended from people residing on Guam from the period between 1898 and prior to the 1950 Organic Act (Appendix D - CLTC Interview).

The Commission normally also issues commercial licenses to generate the revenue necessary for operating the Program (21 Guam Code Annotated, Chapter 75; Guam Public Law 22-18, and Guam Public Law 23-38 as amended). However, in June 2009 the Legislature passed a bill imposing a moratorium on commercial leases until the CLTC develops regulations and a land use plan designating specific lands available for commercial leases (Hart 2009). This bill was the culmination of a critical report by the Office of the Public Auditor on, and subsequent legislative attention to, a variety of questions about CLTC management and staffing capacity to deliver all its service to native Chamorro. Part of the intent of the bill was to ensure residential leases are prioritized over commercial leases (Gesick 2009).

### **3.5.4 Crime, Vice, and Social Order**

Tourism, the military, and periodic construction spikes have all been perceived to create markets for alcohol, illegal drugs, prostitution, and illegal gambling on Guam. Such issues have emerged as significant during public dialogue about the proposed action and its attendant construction phase.

The first U.S. military-civilian conflicts on the island back in 1899 centered on fights due to the sale of liquor to Sailors and Marines, and subsequent “drunkenness” (Rogers 1995). Guamanians also remain particularly concerned about the abuse of local women, due to reports of rapes by military personnel on Okinawa.

Recent figures from 2006 show Part I Offenses account for 26.02 cases per 1,000 residents, while Part II Offenses tally at 42.65 cases per 1,000 residents (GPD 2007).

As for crimes on-base, Guam has concurrent jurisdiction that allows civilian law enforcement personnel access to the base. For example, U.S. Marshals can go on-base to serve court orders (Guam Judiciary 2008). Depending on the type of case, the military can take jurisdiction. For example, if Child Protective Services is involved, the military and civilian agencies work together, and the information is public. However, if cases are handled by internal base procedures, no public disclosure is necessary (Guam Civilian Military Task Force Committee on Public Safety 2008).

### **3.5.5 Sociocultural Changes**

When overseas bases are placed in areas culturally different from the majority of military personnel, there often exists a feeling of disconnect between incoming military personnel’s culture and ways of doing things and that of the local population. On Guam, discussions on this often involve the concept of military personnel’s respect for Guam’s people. There is no clear evidence that this feeling is any more or less pronounced on Guam than elsewhere. However the most common suggestion for the military in conducting the proposed action was better communication (KUAM.com 2008).

Community surveys capture the diversity of community sentiment toward the proposed action. A March 2007 survey by the Guam Chamber of Commerce found 71% of those polled support an increased military presence (Partido 2007). A subsequent survey conducted by the UoG Public Affairs and Legal Studies Club in 2008 found that 52% of those surveyed think that the proposed action is a good thing for Guam and 88% expect the buildup to bring jobs and other economic benefits to Guam. The Guam Chamber of Commerce then conducted a follow-up survey in early 2009 and again found about a 70% favorable response, with slightly higher support among less affluent households (Tamondong 2009).

### **3.5.6 Quality of Life**

The concept “quality of life” overlaps with virtually all topics covered by this study, and concerns in general the ability of the island to adequately support the proposed action, including how it would affect the island’s general tranquility, quality of family and community relations, and standards of living.

The 2007 Guam Chamber of Commerce survey noted above found that 60% of polled Guam residents thought the proposed action would improve quality of life. However, there remain concerns that are heightened by the fact that military facilities are segregated from public facilities, and are ultimately seen as better quality than the latter. For instance, the DoD’s decision to establish its own school system in the late 1990s was interpreted as a “hostile” action by some elected officials (Underwood 1997), removing funding from a public school system to establish a separate, competing system. This feeling can be extended to health care infrastructure, housing costs and availability, access to recreational facilities, and competitive pricing (on-base versus off-base).



## CHAPTER 4.

# ENVIRONMENTAL CONSEQUENCES - GUAM

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### 4.1 PRESENTATION OF ANALYSIS

Many impacts in this SIAS receive separate attention for construction versus operational components. This is useful because construction impacts are most likely temporary, while operational or permanent component impacts would be long-term.

Peak impact years are considered the years that the construction and operational phases are scheduled to overlap (when construction activities continue after the initial arrival of military forces).

Each impact section begins with *Introductory Statements* defining objectives, terminology, specific methods not defined in the methodology section, and specific significance criteria.

To capture the differences and overlaps between construction and operational components, each section will then provide the following information, first for the unconstrained analysis, and then for the constrained analysis:

- *Construction Component Assumptions* defining variables that go into calculating construction-related impacts, including reasons and sources for these assumptions;
- *Operational Component Assumptions* defining variables that go into calculating impacts from the permanent military presence, including reasons and sources for these assumptions;
- *Estimation of Effects* showing year-by-year quantitative impact results, broken down by construction, operational, and total.

Certain sections might differ in their structure because they are more explanatory; are limited by nature just to construction or operations; or deal with qualitative topics.

### 4.2 POPULATION IMPACTS

#### 4.2.1 Project Related Population

##### 4.2.1.1 Introductory Statements

Project related population impacts predict all new populations on Guam related to the proposed action.

*Direct new populations* include construction workers from off-island and their dependents, active duty military, military dependents, new residents filling on-base civilian jobs and their dependents, and new residents filling jobs created by the first round of spending and their dependents.

*Indirect new populations* include new Guam residents who may move to Guam to fill jobs created by subsequent rounds of spending and their dependents.

As previously noted, the “unconstrained” population growth estimate in this section is generally a maximal-impact estimate. However, it does assume that as construction activity declines, the jobs associated with that activity would be lost, and the population associated with those jobs would quickly leave Guam.

Furthermore, if there are a significant number of “stay-behind” workers, the decline in population from the beginning of 2014 to the end of 2016 will not be as dramatic as shown in Table 4.2-5 and Table 4.2-6. If the “stay-behind” worker phenomenon leads to increased in-migration over time, then the population in

the years 2017 forward would increase at a faster rate than illustrated. Since it is expected that a large percentage of immigrant workers will originate from the Philippines, population growth related to “stay-behind” workers would likely, disproportionately, originate from there.

#### 4.2.1.2 Unconstrained Analysis

##### Construction Component Assumptions

Table 4.2-1 provides assumptions made in conducting population analysis for the construction phase, as well as the source of or rationale for those assumptions.

**Table 4.2-1. Construction Component Assumptions for Project Related Population Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Construction</b>		
Average number of dependents for in-migrating direct, on-site, construction jobs	0.20 - 0.35	Estimate based on contractor interviews.
Average number of dependents for in-migrating direct from purchases jobs	0.95 - 1.0	U.S Census national data on persons per jobs (U.S. Census 2000d) and GDoL interviews.
Average number of dependents for in-migrating indirect/induced jobs	0.95 - 1.0	U.S Census national data on persons per jobs (U.S. Census 2000d) and GDoL interviews.

##### Military Operational Component Assumptions

Table 4.2-2 provides assumptions made in conducting Population analysis for the operations phase, as well as the source of or rationale for those assumptions.

**Table 4.2-2. Operational Component Assumptions for Project Related Population Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Operations</b>		
Number of Marines by 2014.	8,552	Description of Proposed Action and Alternatives (EIS/OEIS)
Number of Marine dependents by 2014.	9,000	Description of Proposed Action and Alternatives (EIS/OEIS).
Number of rotational transient Marines by 2014.	2,000	Description of Proposed Action and Alternatives (EIS/OEIS)
Number of Army personnel by 2015.	630	Description of Proposed Action and Alternatives (EIS/OEIS)
Number of Army dependents by 2015.	950	Description of Proposed Action and Alternatives (EIS/OEIS)
Average number of dependents for in-migrating civilian military personnel.	0.95	U.S Census national data on persons per jobs (U.S. Census 2000d).
Average number of dependents for in-migrating direct from purchases jobs	0.95 - 1.0	U.S Census national data on persons per jobs (U.S. Census 2000d) and GDoL interviews.
Average number of dependents for in-migrating indirect/induced jobs	0.95 - 1.0	U.S Census national data on persons per jobs (U.S. Census 2000d) and GDoL interviews.

##### Estimation of Effects – Construction and Operational Phases

Table 4.2-3 indicates a 2014 peak-year total impact would result in population increase of 79,178, falling to 33,608 after construction ends in 2017.

**Table 4.2-3. Estimated Total Population Increase on Guam from Off-Island (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Direct DoD Population<sup>1</sup></b>											
Active Duty Marine Corps	510	1,570	1,570	1,570	10,552	10,552	10,552	10,552	10,552	10,552	10,552
Marine Corps Dependents	537	1,231	1,231	1,231	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Active Duty Navy <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0
Navy Dependents	0	0	0	0	0	0	0	0	0	0	0
Active Duty Army	0	50	50	50	50	630	630	630	630	630	630
Army Dependents	0	0	0	0	0	950	950	950	950	950	950
Civilian Military Workers	102	244	244	244	1,720	1,836	1,836	1,836	1,836	1,836	1,836
Civilian Military Worker Dependents	97	232	232	232	1,634	1,745	1,745	1,745	1,745	1,745	1,745
Off-Island Construction Workers (DoD Projects) <sup>3</sup>	3,238	8,202	14,217	17,834	18,374	12,140	3,785	0	0	0	0
Dependents of Off-Island Construction Workers (DoD Projects)	1,162	2,583	3,800	3,964	4,721	2,832	1,047	0	0	0	0
<b>Direct DoD Subtotal</b>	<b>5,646</b>	<b>14,112</b>	<b>21,344</b>	<b>25,125</b>	<b>46,052</b>	<b>39,685</b>	<b>29,545</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>
<b>Indirect and Induced Population</b>											
Off-Island Workers for Indirect/Induced Jobs <sup>3</sup>	2,766	7,038	11,773	14,077	16,988	12,940	6,346	4,346	4,346	4,482	4,482
Dependents of Off-Island Workers for Indirect/Induced Jobs	2,627	6,685	11,184	13,373	16,138	12,293	6,028	4,372	4,372	4,413	4,413
<b>Indirect/Induced Subtotal</b>	<b>5,393</b>	<b>13,723</b>	<b>22,957</b>	<b>27,450</b>	<b>33,126</b>	<b>25,233</b>	<b>12,374</b>	<b>8,718</b>	<b>8,718</b>	<b>8,895</b>	<b>8,895</b>
<b>Total Population</b>	<b><u>11,038</u></b>	<b><u>27,835</u></b>	<b><u>44,301</u></b>	<b><u>52,575</u></b>	<b><u>79,178</u></b>	<b><u>64,918</u></b>	<b><u>41,919</u></b>	<b><u>33,431</u></b>	<b><u>33,431</u></b>	<b><u>33,608</u></b>	<b><u>33,608</u></b>

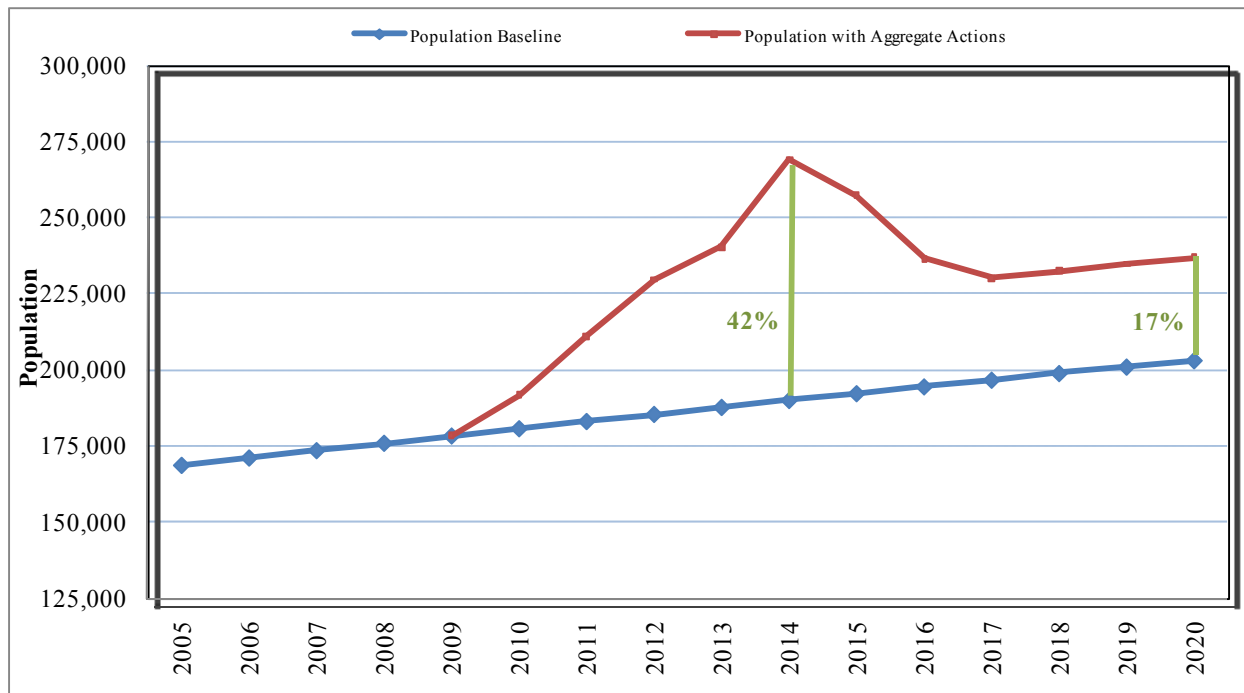
Notes: <sup>1</sup> DoD population includes military personnel, DoD civilian workers and dependents from off-island.

<sup>2</sup>The Navy rows do not include increases from the transient presence of aircraft carrier crew with its carrier strike group (CSG).

<sup>3</sup> Population figures do not include Guam residents who obtain employment as a result of the proposed action.

Figure 4.2-1 compares total population on Guam with and without the proposed action. At the 2014 peak, population with the proposed action is 42% higher than it otherwise would have been, without the project. At 2020, the difference declines to 17%.

**Figure 4.2-1. Project Related Population with and without Aggregate Actions (Unconstrained)**



4.2.1.3 Constrained Analysis

Construction Component Assumptions

Table 4.2-4 provides assumptions made in conducting population analysis for the construction phase under the constrained scenario, as well as the source of or rationale for those assumptions.

**Table 4.2-4. Construction Component Assumptions for Project Related Population Impacts (Constrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Construction</b>		
Average number of dependents for in-migrating direct from purchases jobs	0.40	2000 U.S Census data indicates .23 dependents for each in-migrant to HI. Assumed to be somewhat higher for Guam to reflect larger family/household sizes in Pacific Islands.
Average number of dependents for in-migrating indirect/induced jobs	0.40	2000 U.S Census data indicates .23 dependents for each in-migrant to HI. Assumed to be somewhat higher for Guam to reflect larger family/household sizes in Pacific Islands.

*Note:* Only assumptions differing from foregoing assumptions for the unconstrained analysis are shown here.

Military Operational Component Assumptions

Table 4.2-5 provides assumptions made in conducting population analysis for the operations phase under the constrained scenario, as well as the source of or rationale for those assumptions.

**Table 4.2-5. Operational Component Assumptions for Project Related Population Impacts (Constrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Operations</b>		
Average number of dependents for in-migrating direct from purchases jobs	0.40	2000 U.S Census data indicates .23 dependents for each in-migrant to HI. Assumed to be somewhat higher for Guam to reflect larger family/household sizes in Pacific Islands.
Average number of dependents for in-migrating indirect/induced jobs	0.40	2000 U.S Census data indicates .23 dependents for each in-migrant to HI. Assumed to be somewhat higher for Guam to reflect larger family/household sizes in Pacific Islands.

*Note:* Only assumptions differing from foregoing assumptions for the unconstrained analysis are shown here.

Estimation of Effects – Construction and Operational Phases

For the constrained scenario, Table 4.2-6 indicates a 2014 peak-year total impact would be 53,786 additional individuals, falling to 30,209 after construction ends.

**Table 4.2-6. Estimated Total Population Increase on Guam from Off-Island (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Direct DoD Population<sup>1</sup></b>											
Active Duty Marine Corps	510	1,570	1,570	1,570	10,552	10,552	10,552	10,552	10,552	10,552	10,552
Marine Corps Dependents	537	1,231	1,231	1,231	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Active Duty Navy <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0
Navy Dependents	0	0	0	0	0	0	0	0	0	0	0
Active Duty Army	0	50	50	50	50	630	630	630	630	630	630
Army Dependents	0	0	0	0	0	950	950	950	950	950	950
Civilian Military Workers	102	244	244	244	1,720	1,836	1,836	1,836	1,836	1,836	1,836
Civilian Military Worker Dependents	97	232	232	232	1,634	1,745	1,745	1,745	1,745	1,745	1,745
Off-Island Construction Workers (DoD Projects) <sup>3</sup>	3,238	8,202	14,217	17,834	18,374	12,140	3,785	0	0	0	0
Dependents of Off-Island Construction Workers (DoD Projects)	1,162	2,583	3,800	3,964	4,721	2,832	1,047	0	0	0	0
<b>Direct DoD Subtotal</b>	<b>5,646</b>	<b>14,112</b>	<b>21,344</b>	<b>25,125</b>	<b>46,052</b>	<b>39,685</b>	<b>29,545</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>	<b>24,713</b>
<b>Indirect and Induced Population</b>											
Off-Island Workers for Indirect/Induced Jobs <sup>3</sup>	419	1,154	2,074	2,828	3,966	3,703	3,440	2,818	2,818	2,818	2,818
Dependents of Off-Island Workers for Indirect/Induced Jobs	398	1,096	1,971	2,686	3,768	3,518	3,268	2,678	2,678	2,678	2,678
<b>Indirect/Induced Subtotal</b>	<b>816</b>	<b>2,251</b>	<b>4,045</b>	<b>5,514</b>	<b>7,734</b>	<b>7,221</b>	<b>6,708</b>	<b>5,496</b>	<b>5,496</b>	<b>5,496</b>	<b>5,496</b>
<b>Total Population</b>	<b>6,462</b>	<b>16,363</b>	<b>25,389</b>	<b>30,639</b>	<b>53,786</b>	<b>46,906</b>	<b>36,253</b>	<b>30,209</b>	<b>30,209</b>	<b>30,209</b>	<b>30,209</b>

Notes: <sup>1</sup> DoD population includes military personnel, DoD civilian workers and dependents from off-island.

<sup>2</sup>The Navy rows do not include increases from the transient presence of aircraft carrier crew with its CSG.

<sup>3</sup> Population figures do not include Guam residents who obtain employment as a result of the proposed action.

## 4.2.2 Demographics

### 4.2.2.1 Introductory Statements

New population on Guam related to the proposed action would have a different demographic composition than what currently exists on Guam, and will thus affect the island's demographic composition.

As previously explained, demographic impacts are presented in *employment component* and *military operational component* phases, as opposed to the construction and operational phase presentation of other impact analysis. Results from this analysis are compared to the demographic characteristics of Guam presented in the Affected Environment (Section 0).

### 4.2.2.2 Unconstrained Analysis

#### Employment Component Assumptions

Table 4.2-7 provides assumptions made about the demographic characteristics of population related to the employment component as well as the source of or rationale for those assumptions.

**Table 4.2-7. Employment Component Assumptions for Demographic Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Employment</b>		
Number of Cases Studied (Not born on Guam, moved to Guam for employment)	1,525	U.S. Census. Guam 10% PUMS data, 2000
Average Year of Entry	1987	U.S. Census. Guam 10% PUMS data, 2000.
Median Age when moved to Guam	32	U.S. Census. Guam 10% PUMS data, 2000. Reported median age adjusted for year of entry.
<b>Gender</b>		
Male	74.2%	U.S. Census. Guam 10% PUMS data, 2000.
Female	25.8%	U.S. Census. Guam 10% PUMS data, 2000.
<b>Ethnicity</b>		
Asian Alone	56.1%	U.S. Census. Guam 10% PUMS data, 2000.
Native Hawaiian/Other pacific Islander	24.8%	U.S. Census. Guam 10% PUMS data, 2000.
White Alone	13.1%	U.S. Census. Guam 10% PUMS data, 2000.
Other	6.0%	U.S. Census. Guam 10% PUMS data, 2000.
<b>Prominent Places of Birth</b>		
Philippines	44.8%	U.S. Census. Guam 10% PUMS data, 2000.
U.S.	18.1%	U.S. Census. Guam 10% PUMS data, 2000.
Micronesia	13.4%	U.S. Census. Guam 10% PUMS data, 2000.
Korea	5.6%	U.S. Census. Guam 10% PUMS data, 2000.
China	5.0%	U.S. Census. Guam 10% PUMS data, 2000.
Japan	3.9%	U.S. Census. Guam 10% PUMS data, 2000.
Palau	2.4%	U.S. Census. Guam 10% PUMS data, 2000.
CNMI	1.4%	U.S. Census. Guam 10% PUMS data, 2000.
<b>Educational Attainment (25 yrs. and older)</b>		
High School Grad.	42.5%	U.S. Census. Guam 10% PUMS data, 2000.
College Degree	33.4%	U.S. Census. Guam 10% PUMS data, 2000.

Military Operational Component Assumptions

Table 4.2-8 provides assumptions made about the demographic characteristics of population related to the military operational component as well as the source of or rationale for those assumptions.

**Table 4.2-8. Military Operational Component Assumptions for Demographic Characteristics Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Military</b>		
Number of Cases Studied (Military & military dependents)	1,995	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Median Age	24	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
<b>Gender</b>		
Male	56.7%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Female	43.3%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
<b>Ethnicity</b>		
White alone	61%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Asian alone	12%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Black or African American alone	7%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Some other race alone	5%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Two or more major race groups	12%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
<b>Prominent Places of Birth</b>		
U.S.	86.6%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Philippines	2.5%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Japan	1.8%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Germany	1.5%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Puerto Rico	1.1%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Korea	0.8%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
Guam	0.7%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
<b>Educational Attainment (25 yrs. and older)</b>		
High School Grad.	47.2%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.
College Degree	50.7%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates.



## Estimation of Effects

### *Employment Component*

Populations who move to Guam for employment purposes are made up of more males than females. Therefore, the proposed action would increase the percentage male population on Guam.

Populations who move to Guam for work have historically moved at an average age of 32. This is an older population than Guam's current population. Therefore this component of the proposed action would increase the average age of the Guam population slightly.

Populations who have moved to Guam for employment purposes in the past have relocated largely from Asian or Other Pacific Island areas, with places of birth located mainly in the Philippines, the U.S. or Micronesia. This component of the proposed action would thus result in the population of Guam being made up of a relatively smaller population of Chamorros and Guam-born individuals, and a relatively higher population of Filipinos, Caucasians from the U.S Mainland and Micronesians.

The educational attainment levels of people who move to Guam for employment purposes are fractured, displaying low levels of high school graduation but high levels of college graduation. This likely represents the historical type of employment available Guam (typically trades-related or requiring a specialty skill). Overall, the proxy group used in this analysis shows that the in-migrant population would have a similar educational attainment as those currently living on Guam (most would have at least a high school diploma).

### *Military Component*

The military component incoming population will have a higher ratio of males to females than currently reside on Guam. Therefore, the proposed action would increase the percentage male population on Guam.

The military component incoming population will generally be younger than Guam's population. Therefore this component of the proposed action would decrease the average age of the Guam population slightly.

The military component incoming population will be comprised of more Caucasian backgrounds than Guam's current population. This component of the proposed action would thus result in the population of Guam being made up of a relatively smaller population of Chamorros and Guam-born individuals, and a relatively higher population of Caucasians from the U.S Mainland.

There is a higher overall level of educational attainment among the expected military population than is currently present on Guam. Therefore the proposed action would increase the number of population on Guam who possess a college degree.

#### 4.2.2.3 Constrained Analysis

Under the constrained scenario the impacts of the employment component would likely be similar but apparent to a lesser extent. This is because fewer jobs would be available to people living outside of Guam. The impacts related to the military would be unchanged since the constrained scenario does not reduce the number of military and dependents who would move to Guam.

### **4.2.3 Household Characteristics**

#### 4.2.3.1 Introductory Statements

New population on Guam related to the proposed action would have a different household composition than what currently exists on Guam, and will thus affect the island's household composition.

As previously explained, household impacts are presented in *employment component* and *military operational component* phases, as opposed to the construction and operational phase presentation of other impact analysis. Results from this analysis are compared to the household characteristics of Guam presented in the Affected Environment.

#### 4.2.3.2 Unconstrained Analysis

##### Construction Component Assumptions

Table 4.2-9 provides assumptions made about the household characteristics of population related to the employment component as well as the source of or rationale for those assumptions.

**Table 4.2-9. Employment Component Assumptions for Household Characteristics Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Number of Cases Studied (Not born on Guam, moved to Guam for employment)	1,525	U.S. Census. Guam 10% PUMS data, 2000
Average Household Size	3.58	U.S. Census. Guam 10% PUMS data, 2000
Median Household Income	\$39,580	U.S. Census. Guam 10% PUMS data, 2000
Income per Household Member	\$11,055	U.S. Census. Guam 10% PUMS data, 2000
Family Households	80%	U.S. Census. Guam 10% PUMS data, 2000
Households with Children	42.4%	U.S. Census. Guam 10% PUMS data, 2000
% of Households Below the Poverty Line Below	23.3%	U.S. Census. Guam 10% PUMS data, 2000

##### Military Component Assumptions

Table 4.2-10 provides assumptions made about the household characteristics of population related to the construction component as well as the source of or rationale for those assumptions.

**Table 4.2-10. Military Component Assumptions for Household Characteristic Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Number of Cases Studied (Military & military dependents)	1,995	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates
Average Household Size	3.4	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates
Family Households	87.1%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates
Households with Children	31.9%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates
% of Households Below the Poverty Line Below	1.1%	U.S. Census American Community Survey, PUMS 2005-2007 3-yr estimates

## Estimation of Effects

### *Employment Component*

The household characteristics of populations who come to Guam for employment purposes are very similar to Guam overall. Households that include persons who moved to Guam for employment purposes have:

- only a slightly smaller number of people per household
- slightly more children per household
- the same rate of poverty
- slightly higher income per household

Impacts to Guam's overall household composition will be fairly negligible.

### *Military Component*

The expected military population will have:

- about one-half fewer persons per household
- fewer children

Median household income data gathered from the HI PUMS data is not comparable to Guam baseline data however it can be stated that military household income in HI was slightly lower than HI households overall – this may or may not be the case for the military population on Guam. In 2000, military household income was lower than Guam overall, however, income per household member was higher than Guam overall – the expected impact is that military households will have similar household income but higher income per household member.

Only 1.1% of military households lived below the poverty line. Thus, Guam's overall poverty rate will be lowered.

#### 4.2.3.3 Constrained Analysis

Under a constrained scenario the impacts from employment are likely to be similar but apparent to a lesser extent as fewer jobs would be available to people living outside of Guam.

The impacts related to the military would be unchanged since the constrained scenario does not reduce the number of military and dependents who would move to Guam.

## **4.3 ECONOMIC IMPACTS**

### **4.3.1 Employment and Income**

#### 4.3.1.1 Civilian Labor Force Demand

#### Introductory Statements

Labor Force "Demand" refers to the jobs created by the proposed action and the workers needed to fill them.

This section focuses on civilian jobs only, including federal civilian workers and other jobs from spin-off economic growth. Calculations are in terms of FTEs. For example, two half-time jobs would be counted as one FTE. The number of FTE jobs is assumed to be equal to the number of required workers.

### Unconstrained Analysis

#### Construction Component Assumptions

Table 4.3-1 provides assumptions made in conducting the civilian labor force demand analysis for the construction phase under the unconstrained scenario as well as the source of or rationale for those assumptions.

**Table 4.3-1. Construction Component Assumptions for Civilian Labor Force Demand (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Worker Requirement Factor	75 Workers Per \$10Mil Project Cost	Guam Contractors Association interviews
Supervisory Worker Requirement Factor	4 Supervisory Workers Per \$100Mil Project Cost (not additional to other workers)	Guam Contractors Association interviews
Labor Cost as % of Total Project Cost	21%	Calculated as verification of worker requirement factor. Consistent with contractor projections.
Current H2 Construction Labor on Guam	1,443	GDoL Employers Workplace Monthly Report Summary July, 2008.
Guam Construction Workforce	2,531	Average of two estimates. The first estimate is based on GDoL June 2008 Current Employment Report construction industry production workers (with present H-2B construction workers excluded). The second estimate is based on estimates made by contractors during interviews.
Percentage of On-Site Workforce from H-2B	56%-61%	Contractor interviews.

#### Military Operational Component Assumptions

Table 4.3-2 provides assumptions made in conducting the civilian labor force demand analysis for the operations phase, as well as the source of or rationale for those assumptions. The following Table 4.3-3 shows key intermediate calculations feeding into subsequent estimates of the impact on total labor force demand from operations under the unconstrained scenario.

**Table 4.3-2. Operational Component Assumptions for Labor Force Demand (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Civilian Military Workers per Active-Duty Military Personnel for Marines and Army	0.4	Description of Proposed Action and Alternatives (EIS/OEIS)

**Table 4.3-3. Intermediate Operations-Related Calculations for Civilian Labor Force Demand (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Civilian Military Employees	238	522	522	542	3,511	3,743	3,743	3,743	3,743	3,743	3,743

#### Estimation of Effects

Table 4.3-4 shows the proposed action would support a combined 43,278 workers at the 2014 peak, but only 6,930 after construction abates in 2016.

This suggests a sudden recession-like period. For many people on Guam, the end of construction would be a welcome “return to normalcy,” but some businesses would have to end or cut back, and many workers would have to out-migrate due to job loss.

Although the long-term job growth picture for Guam is strongly positive, the construction “bubble” is more problematic and also much more uncertain, due to factors previously discussed.

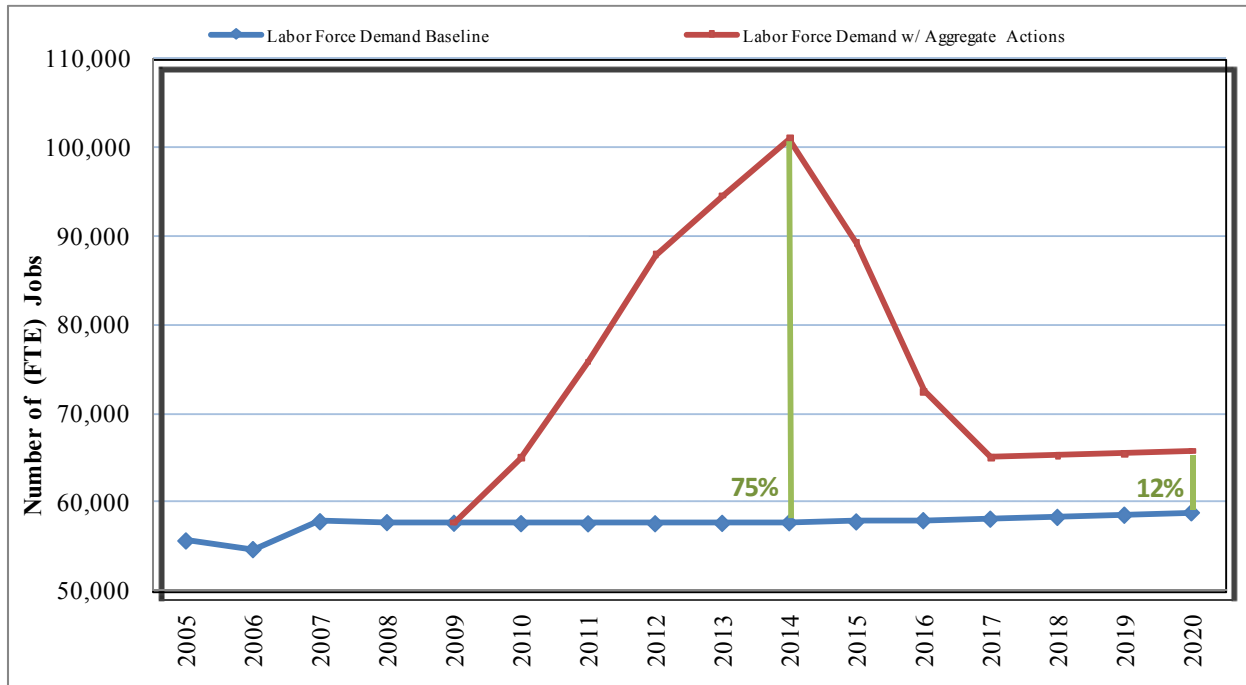
**Table 4.3-4. Impact on Civilian Labor Force Demand (FTE Jobs) (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	5,434	13,480	22,910	28,149	29,018	19,159	5,961	0	0	0	0
Indirect Construction Impact	1,519	3,760	6,389	7,825	8,076	5,323	1,648	0	0	0	0
<b>Total Construction Impact</b>	<b>6,952</b>	<b>17,240</b>	<b>29,299</b>	<b>35,974</b>	<b>37,094</b>	<b>24,483</b>	<b>7,609</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Direct Operations Impact	316	732	732	732	4,853	5,355	5,355	5,355	5,355	5,355	5,355
Indirect Operations Impact	99	220	220	220	1,331	1,576	1,576	1,576	1,576	1,576	1,576
<b>Total Operations Impact</b>	<b>415</b>	<b>951</b>	<b>951</b>	<b>951</b>	<b>6,184</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>
<b>Combined Direct Impact</b>	<b>5,750</b>	<b>14,212</b>	<b>23,641</b>	<b>28,881</b>	<b>33,871</b>	<b>24,514</b>	<b>11,315</b>	<b>5,355</b>	<b>5,355</b>	<b>5,355</b>	<b>5,355</b>
<b>Combined Indirect Impact</b>	<b>1,617</b>	<b>3,980</b>	<b>6,609</b>	<b>8,044</b>	<b>9,407</b>	<b>6,899</b>	<b>3,224</b>	<b>1,576</b>	<b>1,576</b>	<b>1,576</b>	<b>1,576</b>
<b>Combined Total Impact</b>	<b>7,367</b>	<b>18,192</b>	<b>30,250</b>	<b>36,925</b>	<b>43,278</b>	<b>31,413</b>	<b>14,539</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>	<b>6,930</b>

Notes: Portion assumed to be filled by Guam residents is not subtracted from these figures. Numbers may not add exactly due to rounding.

Figure 4.3-1 compares total labor force demand on Guam with and without the proposed action. At the 2014 peak, civilian labor force demand with the proposed action is 75% higher than it otherwise would have been, without the project. At 2020, the difference declines to 12%.

**Figure 4.3-1. Labor Force Demand with and without Aggregate Actions (Unconstrained)**



Constrained Analysis

*Constrained Analysis Assumptions*

The particular assumptions about Labor Force Demand made under the constrained scenario are no different than under the unconstrained scenario.

*Estimation of Effects*

Table 4.3-5 below shows the aggregate project would support a combined 38,441 workers at the 2014 peak, but only 6,469 after construction abates.

**Table 4.3-5. Impact on Civilian Labor Force Demand (FTE Jobs) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	5,445	13,508	22,957	28,206	29,078	19,198	5,972	0	0	0	0
Indirect Construction Impact	671	1,662	2,823	3,455	3,567	2,350	727	0	0	0	0
<b>Total Construction Impact</b>	<b>6,117</b>	<b>15,170</b>	<b>25,780</b>	<b>31,661</b>	<b>32,645</b>	<b>21,549</b>	<b>6,699</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Direct Operations Impact	316	732	732	732	4,853	5,355	5,355	5,355	5,355	5,355	5,355
Indirect Operations Impact	69	155	155	155	944	1,114	1,114	1,114	1,114	1,114	1,114
<b>Total Operations Impact</b>	<b>385</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>5,797</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>
<b>Combined Direct Impact</b>	<b>5,761</b>	<b>14,240</b>	<b>23,689</b>	<b>28,938</b>	<b>33,931</b>	<b>24,553</b>	<b>11,327</b>	<b>5,355</b>	<b>5,355</b>	<b>5,355</b>	<b>5,355</b>
<b>Combined Indirect Impact</b>	<b>741</b>	<b>1,817</b>	<b>2,978</b>	<b>3,610</b>	<b>4,511</b>	<b>3,465</b>	<b>1,842</b>	<b>1,114</b>	<b>1,114</b>	<b>1,114</b>	<b>1,114</b>
<b>Combined Total Impact</b>	<b>6,502</b>	<b>16,056</b>	<b>26,667</b>	<b>32,548</b>	<b>38,441</b>	<b>28,018</b>	<b>13,168</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>	<b>6,469</b>

Notes: Portion assumed to be filled by Guam residents is not subtracted from these figures. Numbers may not add exactly due to rounding.

#### 4.3.1.2 Probable Labor Supply Sources

##### Introductory Statements

Analysis was conducted to address the following two questions:

- How many of the civilian jobs (on a net basis) are likely to accrue to currently unemployed Guam residents?
- From what countries or regions are the rest of the workers likely to in-migrate?

The discussion of in-migration populations are divided between origins of direct on-site construction workers and other types of jobs. This is because more solid facts and historical experience are available for estimating the origins of direct on-site military construction workers (many of whom would be temporary foreign workers) than for any other type of new jobs. Thus, more specific conclusions about direct on-site military construction jobs can be made.

##### Unconstrained Analysis

Evidence for potential labor supply sources is provided for:

- direct on-site military construction
- other employment (direct construction jobs from purchases or civilian operational jobs, as well as indirect workers).

##### *Direct On-Site Military Construction Assumptions*

Table 4.3-6 presents assumptions about labor sources used in this analysis, and the source or rationale for these assumptions.

Table 4.3-9 reflects the numbers that would be derived from these assumptions for the origins of the direct construction labor force supply.



**Table 4.3-6. Assumptions for Origins of Direct On-Site Labor Force Construction Supply (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions – Labor Supply for Direct On-Site Military Construction</b>		
Construction employment	75 workers per \$10 million total construction cost	Guam Contractors Association interviews
Guam residents holding construction jobs	Up to 2,670 jobs at peak	GCA and Guam DOL employment by industry data
CONUS/HI/Japan % of workforce	4 supervisory workers from U.S. or Japan per \$10 million project cost.	Guam Contractors Association interviews
Supervisor/Labor split of CONUS/HI/Japan	4% / 96%	Guam Contractors Association interviews
Philippines/Other split of H-2B workforce	85% / 15%	Guam Contractors Association interviews
Other U.S. Pacific Island % of workforce	residuals of work force	Guam Contractors Association interviews
<b>Qualitative Assumptions – Labor Supply for Direct On-Site Military Construction</b>		
Fees for H-2B workers	They do not become an impediment to recruiting affordable labor	Project could founder if the economics are impractical
Competition for CONUS workers from federal stimulus spending	This would alone not be sufficient or widespread enough to deter at least some CONUS workers from Guam	This is a matter of great uncertainty, but there is a strong commitment by government to seek out U.S. workers

*Notes:* No assumption is made about the likely split of “Other Pacific Island” workforce among the CNMI, Federated States of Micronesia, Republic of the Marshall Islands, Palau, and American Samoa. This reflects conflicting evidence in the foregoing table and the general difficulty of predictions for specific small areas.

Possible sources for direct on-site military construction workers include:

*Current Guam Residents:* As of 2007, Guam had a total employed construction workforce of approximately 5,600 people, although only 4,600 were “production workers” and about 1,000 of these were temporary foreign workers (GDoL 2008). Many but not all of the remaining long-term Guam residents may be expected to roll over to military projects.

The GCA in late 2006 established a nonprofit “Trades Academy” to train residents for employment at all levels of the construction industry. In 2008, the Trades Academy established a partnership with, and began receiving support from, the GCC for training purposes. It also works with the GDoL, GPSS, GDYA, GDoC, and Drug Court to identify and recruit potential workers.

Current Guam residents who in-migrated (or whose parents in-migrated) from the FAS represent a special issue. Micronesians already on Guam tend to have fewer work skills or English-language familiarity, and often require a substantial amount of acculturation to function successfully in the workforce. The U.S. Census Bureau (U.S. Census Bureau 2009) estimated Guam had 18,305 “Compact of Free Association Migrants” as of late 2008. The Center for Micronesian Empowerment (CME) has obtained seed funding, and is seeking additional funds, to implement a program of both social assistance and job training (Appendix D - CME Interview). The GCA Trades Academy would make part of its 8,000-square-foot training facility available to the CME if the program is able to move forward.

*Temporary Foreign Workers:* Although laborers from the CNMI, other Pacific islands, and CONUS are expected to come to Guam looking for employment, the composition of the increased labor force for the proposed action would probably be primarily met with foreign workers on H-2B visas. U.S. Public Law 110-229, passed in 2008, allows unrestricted numbers of these H-2B workers into Guam.

In recent years, most H-2B workers on Guam came from the Philippines or the People's Republic of China. Historically, Guam contractors have had more positive experiences with recruitment of Filipino workers than of some other Asian countries (GCA 2008a) and training has already begun in some parts of the Philippines to take advantage of upcoming Guam construction opportunities (Philippines News Agency 2008).

*CNMI and Other U.S. Pacific Islands:* The CNMI, the political entity nearest to Guam, is undergoing an economic depression, and it may be assumed that some CNMI residents are already moving to Guam. However, a substantial part of the CNMI's private-sector workforce consists of "guest workers" who face repatriation as a result of the U.S. federalization of the country's immigration policy. Even with those guest workers, the construction workforce numbered just 1,640 as of 2005, (CNMI Department of Commerce 2008a).

Under the Compact of Free Association, residents of Palau, the Federated States of Micronesia (FSM), and the Republic of the Marshall Islands (RMI) – collectively known as the FAS – may move to Guam, even without the promise of employment or housing. American Samoa is also a potential U.S. Pacific island labor source. The following Table 4.3-7 might lead to different conclusions regarding which of these areas would likely provide relatively more construction workers. On the one hand, the FSM is the most populous state, has one of the most troubled economies, and has a strong out-migration track record. On the other hand, small Palau has a construction employment figure almost equal to the FSM. This makes it difficult to estimate exactly what the relative breakdown would likely be among these possible sources of labor supply.

**Table 4.3-7. Overview of FAS and American Samoa Population and Labor Force**

	<i>FSM</i>	<i>Republic of Marshall Islands (RMI)</i>	<i>Palau</i>	<i>American Samoa</i>
Population (2008 est.)	107,665	63,174	21,093	64,827
Pop. Growth Rate (2008 est.) %	-0.19	+2.14	+1.16	+1.24
In- or (Out-) Migration/1,000 Pop. (2008 est.)	(21.04)	(5.52)	0.9	(7.17)
GDP Real Growth Rate (2005 est.) %	0.3	3.5	5.5	3.0
Unemployment (2000 est.) %	22	31	4	30
Labor Force (2000)	37,410 (2/3 are govt. workers)	14,680	9,777	17,630
Construction Industry Employees (various years, as per sources below)	1,400	1,365	849	563

*Sources:* Central Intelligence Agency 2009 (for all information except final row); FSM, Department of Economic Affairs, Division of Statistics 1998; Republic of Palau, Office of Planning and Statistics 2005.

The GCA estimates there may be as many as 5,000 potential workers from the FAS and CNMI combined (roughly consistent with the total construction employment figures above). However, it is unlikely that all the FAS construction workers would move to Guam, and many untrained workers could come in hopes of construction jobs. The GCA has warned that, without sufficient training, many from the FAS could arrive, not find employment, and "become a strain on the Guam economy and local society" (GCA 2008b).

*Other Workers from CONUS or HI:* Supervisory and managerial labor would presumably come largely from the United States (and perhaps Japan). However, there are conflicting knowledgeable opinions about whether any substantial portion of the regular construction labor force is likely to come from the CONUS or HI. Guam contractors and other employers report that few non-managerial workers have either been attracted or have been willing to remain if they did venture to Guam (GCA 2008a, 2008b; Appendix D -

Guam Chamber of Commerce Interview). Although HI, the state nearest to Guam, is now experiencing a construction downturn, the executive director of a joint program of the 6,000-member HI Carpenters Union and its 400 signatory contractors doubts many workers from that state would be attracted to Guam (Pacific Resource Partnership 2009).

However, the GDoL is committed to attracting U.S. workers first if at all possible. The current economic downturn has resulted in substantial unemployment among construction workers throughout the country. And a labor broker from the southern U.S. reports that more than 700 non-union workers – more than half those interviewed at job fairs in areas such as Nevada or Louisiana – expressed interest in Guam work even when informed of prevailing wages. Many of these could be Americans of Hispanic origin. The company has established a Guam division and has entered into a partnership with a housing provider to offer various services to both American and H-2B workers on Guam, as well as the construction companies that would employ such workers (Appendix D - PPI Guam and El Dorado Resorts Interview).

#### *Other Employment Assumptions*

“Other Employment” means construction-related jobs other than direct on-site jobs (i.e., direct from purchases and indirect); direct federal civilian jobs associated with the military; and spin-off jobs.

*Guam Residents:* As of September 2007, Guam’s 8.3% unemployment rate included about 5,300 workers officially considered “unemployed” (GDoL 2007). The unemployment survey at that time found another 3,000 “discouraged workers” who indicated they had stopped looking for work; however, this number was considerably higher than the “discouraged worker” counts over the past few years’ surveys (800 to 1,800) and so may have been a statistical aberration.

It may be noted that the economic expansion associated with the military buildup could bring many former Guam residents, or their children born abroad, back home. In June 2006, the GBSP and the GDoL jointly developed a “Guam Employment Opportunities Database Program” to track former Guam residents or natives born abroad who expressed interest in returning to Guam for work. As of late January 2009, the GDoL website for this program had received 770 applications (Appendix D - GDoL Interview).

*Temporary Foreign Workers:* H-2B visa workers are not restricted to construction employment and would likely play some role in meeting additional non-construction labor demand.

In recent years, non-construction H-2B employees have accounted for about 10% to 12% of Guam’s overall H-2B workforce; many of these in the tourism industry, filling positions with foreign-language requirements. This industry may lose workers to higher-paying construction jobs, causing hotels and other employers to take advantage of Guam’s increased access to temporary foreign workers through, and possibly past, 2014 (Appendix D - Guam Chamber of Commerce Interview).

However, H-2B workers are somewhat expensive for employers because of fees, regulations, liabilities, and housing requirements. In fact, employers are required to offer similarly employed U.S. workers all benefits extended to H-2B workers, including provision of housing. The employers who may use them are larger companies (such as hotels) that are equipped to cope with the associated paperwork and housing requirements, although a serious labor shortage could possibly result in entrepreneurial labor brokers making arrangements with smaller companies. The GDoL does not expect H-2B workers to exceed 20% of the non-construction workforce during the construction peak itself, but believes the proportion may exceed 20% when construction finishes and the focus turns to service jobs for the expanded permanent population (Appendix D - GDoL Interview).

Another type of visa for temporary foreign workers, the E-2 “Treaty Investor” visa, under some conditions may help fill short-term needs for professional-level positions such as engineers or designers, who would be unlikely to in-migrate from the CONUS due to Guam’s lower salaries. The E-2 visa is available for professionals (and their dependents) working for companies that (a) are substantially owned by nationals from one of the 65 nations with whom the U.S. has commercial treaties; and (b) have made substantial investments in the United States (U.S. Department of State 2009). Treaty countries include Japan (whose companies include many investors on Guam’s tourism industry) and the Philippines.

*Other U.S. Pacific Islands:* Given its deteriorating economy, the CNMI is likely to provide Guam with a number of non-construction employees at all levels of the workforce, including civil servants. Among the more likely to go to Guam would be the CNMI’s non-Chamorro U.S. residents (among them many naturalized Filipinos) who cannot own land under current CNMI land laws.

The FAS islands are more likely to provide entry-level employees at the lower end of the pay scale – e.g., fast-food workers. Even for such positions, basic skills training would be needed. The GDoL, along with the U.S. DoI and aid organizations such as the Asian Development Bank, has been working with various Micronesian governments to encourage training programs there. As one example, the College of the Marshall Islands plans a workforce development program modeled after the GCA Trades Academy (College of the Marshall Islands 2009). A Regional Workforce Development Council has provided a framework for broader vocational training throughout the FAS, CNMI, and Guam.

*Other Workers from CONUS, Hawaii, or Okinawa Transfers:* Some federal civilian workers would transfer from Okinawa, and military spouses would also provide labor –about three-quarters of these jobs are likely to be filled by these labor sources. In normal times, workers from the CONUS or even HI would be unlikely to move to Guam because the prevailing wages are lower than in states, and the distance and cultural change has been sufficiently proved daunting in the past. These are not normal times, and the nation faces an atypically uncertain future. If the national economy does not improve, then outreach efforts by government, corporate human resources departments, or entrepreneurial labor brokers could find some success in bringing workers from areas of the CONUS with particularly poor economies, comparable climates, and socioeconomic groups not strongly attached to their current homes.

Given the extreme uncertainties involved for various potential off-island labor sources, this analysis is restricted to assumptions and estimates strictly about “on-island” and “off-island” labor force sources (Table 4.3-8).

**Table 4.3-8. Assumptions for Origins (On vs. Off-Island) of Labor Force Supply for Employment Other Than Direct On-Site Construction (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Sources of direct federal civilian employment.	50% Okinawa transfers, 25% military spouses, 25% other off-island.	Planning assumption provided by NAVFAC Pacific
Absorption of Guam’s pool of unemployed workers.	By 2014, Guam’s unemployment rate would decline to 4.0%, then gradually rise somewhat thereafter.	For analysis/modeling purposes, currently unemployed Guam residents were assigned to Indirect employment

*Direct On-Site Military Construction: Estimation of Effects*

The following numbers are estimated from the various sources and assumptions above (Table 4.3-9):

**Table 4.3-9. Estimated Origin of Workers Constructing Military Facilities (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016
<b>TOTAL</b>	<b>3,930</b>	<b>9,760</b>	<b>16,600</b>	<b>20,420</b>	<b>21,040</b>	<b>13,900</b>	<b>4,330</b>
<b>GUAM</b>	<b>690</b>	<b>1,560</b>	<b>2,380</b>	<b>2,590</b>	<b>2,670</b>	<b>1,760</b>	<b>550</b>
<b>OFF-ISLAND</b>	<b>3,240</b>	<b>8,200</b>	<b>14,220</b>	<b>17,830</b>	<b>18,370</b>	<b>12,140</b>	<b>3,780</b>
H-2B Workers	2,300	5,840	10,320	12,970	13,280	8,660	2,690
<i>Philippines</i>	1,950	4,960	8,770	11,020	11,290	7,360	2,280
<i>Other</i>	340	880	1,550	1,950	1,990	1,300	400
CONUS/HI/Japan	510	1,290	2,080	2,620	2,790	1,960	620
<i>Supervisor (U.S., Japan)</i>	20	60	110	130	130	80	30
<i>Labor</i>	480	1,230	1,970	2,490	2,660	1,870	590
Other U.S. Pacific Islands	430	1,070	1,810	2,230	2,300	1,520	470

Note: Numbers may not add exactly due to rounding.

*Other Employment: Estimation of Effects*

Table 4.3-10 indicates that Guam residents are expected to capture 3,216 jobs at the 2014 construction peak and 2,661 jobs from 2019 on, while workers from off-island (Table 4.3-11) would be needed for 19,021 non-construction spin-off jobs at the 2014 peak of the unconstrained scenario, dropping to a more steady 4,270 from 2019 on.

**Table 4.3-10. Estimated Numbers of On-Island Workers for Various Job Categories Excluding Direct On-Site Construction (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Jobs, Excluding Direct Military Construction, for On-Island Workers</b>	<b>571</b>	<b>1,164</b>	<b>1,719</b>	<b>2,264</b>	<b>3,216</b>	<b>3,085</b>	<b>2,751</b>	<b>2,752</b>	<b>2,752</b>	<b>2,661</b>	<b>2,661</b>

Note: Demand is in terms of FTE jobs, and assumes one worker per FTE job.

**Table 4.3-11. Estimated Numbers of Off-Island Workers for Various Job Categories Excluding Direct On-Site Construction (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Jobs, Excluding Direct Military Construction, for Off-Island Workers</b>	<b>2,864</b>	<b>7,261</b>	<b>11,931</b>	<b>14,237</b>	<b>19,021</b>	<b>14,427</b>	<b>7,455</b>	<b>4,180</b>	<b>4,180</b>	<b>4,270</b>	<b>4,270</b>

Note: Demand is in terms of FTE jobs, and assumes one worker per FTE job.

Constrained Analysis

The constrained analysis was based on:

- lower constrained-scenario labor force demand figures
- different assumptions about labor supply

*Direct On-Site Military Construction Assumptions*

Both assumptions and results would be identical to those in the unconstrained analysis above.

*Other Employment Assumptions*

Again, “other employment” means construction-related jobs other than direct on-site jobs (i.e., direct from purchases and indirect); direct federal civilian jobs associated with the military; and spin-off jobs – direct from purchases and indirect from operations.

*Direct On-Site Military Construction Estimation of Effects*

Both assumptions and results would be identical to those in the unconstrained analysis above.

*Other Employment Estimation of Effects*

Table 4.3-12 indicates that Guam residents are expected to capture 7,559 jobs at the 2014 construction peak and 2,419 of the non-military-construction jobs from 2017 on.

Workers from off-island (Table 4.3-13) would be needed for 9,840 non-construction spin-off jobs at the 2014 peak, dropping to a more steady 4,050 after construction ends.

Analysis was not possible to estimate exact numbers for various possible off-island labor sources as was done in the analysis above. While more specific conclusions could be made about the share of employment (non-military construction direct jobs and indirect jobs) going to Guam residents, there were considerably more uncertainties in projecting the breakdown of how in-migrant workers would divide up job opportunities.

**Table 4.3-12. Estimated Numbers of On-Island Workers for Various Job Categories Other Than Direct On-Site Construction (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Jobs</b> , Excluding Direct Military Construction, for On-Island Workers	1,309	3,241	5,359	6,536	7,559	5,986	2,415	2,419	2,419	2,419	2,419

*Note:* Demand is in terms of FTE jobs, and assumes one worker per FTE job.

**Table 4.3-13. Estimated Numbers of Off-Island Numbers of Workers for Various Job Categories Other Than Direct On-Site Construction (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Jobs</b> , Excluding Direct Military Construction, for Off-Island Workers	1,260	3,050	4,710	5,590	9,840	8,130	6,420	4,050	4,050	4,050	4,050

*Note:* Demand is in terms of FTE jobs, and assumes one worker per FTE job.

## 4.3.1.3 Civilian Labor Force Income

Introductory Statements

Civilian labor force income refers to the cumulative gross wages and salaries (before deductions for taxes) earned by the categories of workers noted in the preceding section.

This information is important for the subsequent GovGuam revenue calculations. Dollar amounts thus apply to the additional labor force as a whole, rather than to the situation of individual workers. Qualitative discussion of implications for individuals in regard to cost of living is provided in subsequent Section 4.3.1.4.

Unconstrained Analysis*Construction Component Assumptions*

Table 4.3-14 provides assumptions made in conducting civilian labor force income analysis for the construction phase, and the source or rationale for these assumptions.

**Table 4.3-14. Construction Component Assumptions for Civilian Labor Force Income (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Non-Supervisory Worker Annual Wage	\$27,999	GDoL Current Employment Report June, 2008. Construction Industry Average Weekly Earnings multiplied by 52.
Supervisory Worker Annual Wage	\$85,830	U.S. Bureau of Labor Statistics Occupational Employment Statistics. Mean annual wage for "Construction Managers."

*Military Operational Component Assumptions*

Table 4.3-15 provides assumptions made in conducting the civilian labor force income analysis for the operations phase, and the source or rationale for these assumptions.

**Table 4.3-15. Operational Component Assumptions for Civilian Labor Force Income (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Civilian Military Worker Average Total Income.	\$51,793	Median value of GS Summary Table.

*Notes:* GS stands for General Schedule, pay scale for federal Employees and is developed by the U.S. Office of Personnel Management (OPM). The OPM produces a table with Grade level on the vertical axis and Time-in-Grade on the horizontal axis. The median value pinpoints the mid-point of the Grade axis and the mid-point of the Time-in-Grade.

*Estimation of Effects*

Table 4.3-16 shows that the peak figure for this unconstrained analysis is \$1.51 billion in 2014, falling back to \$278 million after construction ends in 2017.

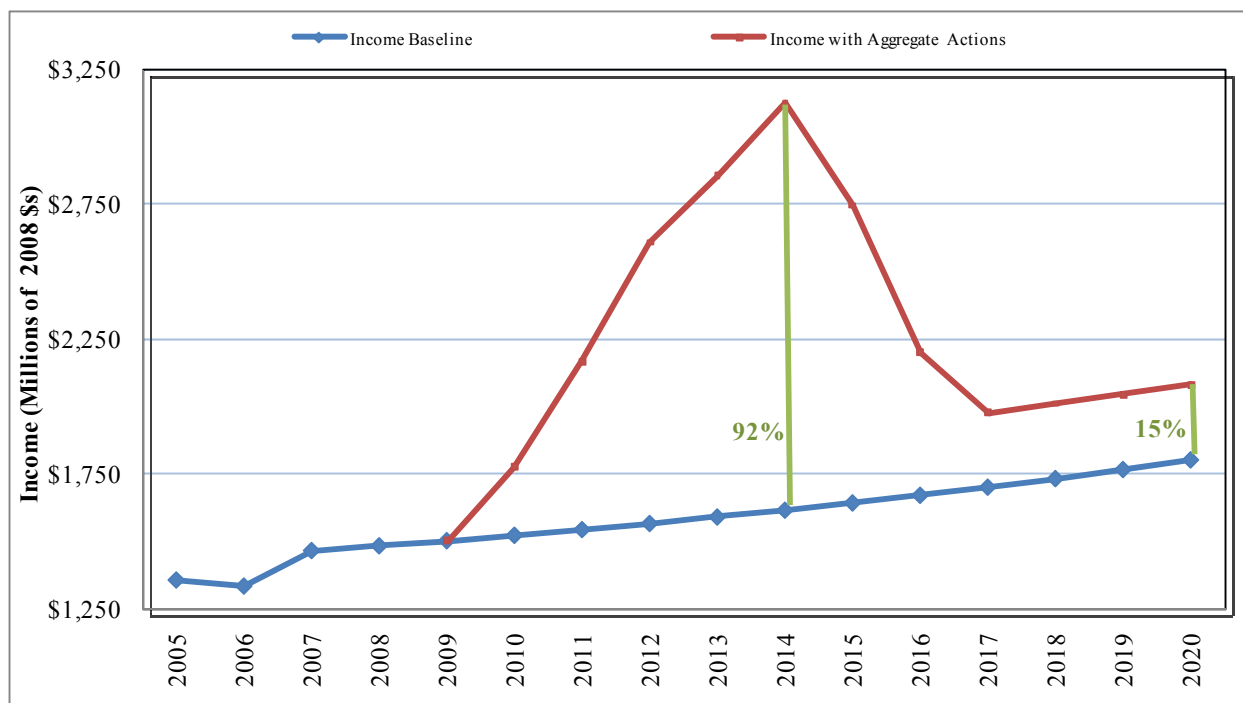
**Table 4.3-16. Impact on Civilian Labor Force Income (Millions of 2008 \$s) (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$167	\$414	\$712	\$869	\$898	\$586	\$179	\$0	\$0	\$0	\$0
Indirect/Induced Construction Impact	\$69	\$170	\$291	\$356	\$365	\$239	\$74	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$236</b>	<b>\$584</b>	<b>\$1,003</b>	<b>\$1,225</b>	<b>\$1,263</b>	<b>\$825</b>	<b>\$253</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$13	\$30	\$30	\$30	\$197	\$217	\$217	\$217	\$217	\$217	\$217
Indirect/Induced Operations Impact	\$4	\$9	\$9	\$9	\$51	\$60	\$60	\$60	\$60	\$60	\$60
<b>Total Operations Impact</b>	<b>\$17</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$248</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>
<b>Combined Direct Impact</b>	<b>\$180</b>	<b>\$444</b>	<b>\$742</b>	<b>\$899</b>	<b>\$1,095</b>	<b>\$803</b>	<b>\$396</b>	<b>\$217</b>	<b>\$217</b>	<b>\$217</b>	<b>\$217</b>
<b>Combined Indirect Impact</b>	<b>\$73</b>	<b>\$179</b>	<b>\$300</b>	<b>\$364</b>	<b>\$416</b>	<b>\$299</b>	<b>\$134</b>	<b>\$60</b>	<b>\$60</b>	<b>\$60</b>	<b>\$60</b>
<b>Combined Total Impact</b>	<b>\$253</b>	<b>\$623</b>	<b>\$1,042</b>	<b>\$1,264</b>	<b>\$1,510</b>	<b>\$1,102</b>	<b>\$531</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>	<b>\$278</b>

*Note:* Numbers may not add exactly due to rounding.

Figure 4.3-2 compares total income on Guam with and without the proposed action. At the 2014 peak, civilian labor force income with the proposed action is 92% higher than it otherwise would have been, without the project. At 2020, the difference declines to 15%.

**Figure 4.3-2. Labor Force Income with and without Aggregate Actions (Unconstrained)**



Constrained Analysis

*Constrained Analysis Assumptions*

The particular assumptions about labor force income made under the constrained scenario are no different than under the unconstrained scenario (Table 4.3-14 and Table 4.3-15).

*Estimation of Effects*

Table 4.3-17 shows that the peak figure for this constrained analysis is \$1.305 billion in 2014, falling back to \$260 million after construction ends in 2017.

**Table 4.3-17. Impact on Civilian Labor Force Income (Millions of 2008 \$) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$168	\$416	\$714	\$872	\$900	\$588	\$179	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$29	\$75	\$128	\$155	\$172	\$115	\$31	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$197</b>	<b>\$491</b>	<b>\$842</b>	<b>\$1,026</b>	<b>\$1,072</b>	<b>\$703</b>	<b>\$211</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operation Impact	\$13	\$30	\$30	\$30	\$197	\$217	\$217	\$217	\$217	\$217	\$217
Indirect Construction Impact	\$3	\$6	\$6	\$6	\$36	\$43	\$43	\$43	\$43	\$43	\$43
<b>Total Operations Impact</b>	<b>\$16</b>	<b>\$36</b>	<b>\$36</b>	<b>\$36</b>	<b>\$233</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>
<b>Combined Direct Impact</b>	<b>\$181</b>	<b>\$445</b>	<b>\$744</b>	<b>\$902</b>	<b>\$1,097</b>	<b>\$805</b>	<b>\$397</b>	<b>\$217</b>	<b>\$217</b>	<b>\$217</b>	<b>\$217</b>
<b>Combined Indirect Impact</b>	<b>\$32</b>	<b>\$81</b>	<b>\$134</b>	<b>\$161</b>	<b>\$208</b>	<b>\$158</b>	<b>\$74</b>	<b>\$43</b>	<b>\$43</b>	<b>\$43</b>	<b>\$43</b>
<b>Combined Total Impact</b>	<b>\$213</b>	<b>\$527</b>	<b>\$878</b>	<b>\$1,062</b>	<b>\$1,305</b>	<b>\$963</b>	<b>\$471</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>	<b>\$260</b>

Note: Numbers may not add exactly due to rounding.

4.3.1.4 Potential Effects on Standard of Living

Introductory Statements

Standard of living is a measure of purchasing power. If the standard of living increases for a person it means they can purchase more goods and services. If the standard of living declines for that person, he or she can purchase fewer goods and services.



Changes in a person's standard of living are determined by their income and the prices of the goods and services they tend to purchase. A person's standard of living will increase if their income rises faster than the prices of goods and services they tend to purchase. A person's standard of living will decline if the prices of goods and services they tend to purchase rise faster than the person's income.

In both the construction and operational components, the average wage of workers would increase as a function of greater demand for labor. However, the price of goods and services purchased by individuals would rise as well.

It cannot be definitively predicted whether wages or the price of goods and services would increase at a faster pace. If wages earned by a particular household rise more quickly than the price of goods and services, then the standard of living would increase. If the price of goods and services rises more quickly than wages, the standard of living would decrease.

For households on fixed incomes, the result would be reduced purchasing power. Those with the ability to quickly renegotiate their wages will have a better chance at maintaining or increasing their standard of living.

### Unconstrained Analysis

#### *Construction Component Wage Calculations*

The average FTE salary for jobs related to the construction phase (including indirect jobs) is estimated to be around \$33,500 per year. This estimate was derived using current construction worker wages and outputs from the I-O. The total income of new jobs (direct and indirect) created was divided by the total number of jobs created.

#### *Military Operational Component Wage Calculations*

The average FTE salary for jobs related to the military operational phase (including indirect jobs) is expected to be around \$40,000 per year. This estimate was based on estimated civilian military worker current incomes and incomes derived in the modeling process.

#### *Estimation of Effects*

Guam incomes are expected to rise. The estimated average FTE salary for jobs related to the construction phase (\$33,500) can be compared to the 2007 Guam average FTE salary of \$28,150. The average FTE salary for jobs related to the military operational phase (\$40,000) can be compared to the 2007 Guam average FTE salary of \$28,150.

Construction component salaries are expected to be higher due to the creation of higher-paying jobs in the architecture and engineering, wholesale trade, and health services industries. With a rapid increase in economic activity and a limited pool of on-island labor, there would likely be competition for labor and thus upward pressure on wage rates. The market wage may also increase to a higher level than the estimated \$33,500 due to the fact that the estimation procedure has no basis for estimating the extent of upward pressure on rates.

Operational component salaries are expected to be higher, in large part, due to additional higher-paying on-base civilian military jobs. As noted in Section 4.3.1.1, most civilian military jobs would likely go to either spouses of new active duty personnel or to labor brought in from off-island; only about 25% of civilian military jobs are expected to be filled by current Guam residents.

Overall, the military buildup will bring more high skilled, high paying jobs that provide employees more flexibility to have their wages adjusted to meet price increases.

In terms of cost of living, from 2000 to 2008 Guam workers have seen their standard of living decline by 30% and there is no reason to expect the military buildup to reverse that trend – Guam workers will likely to continue to see the cost of goods and services rise faster than their incomes. While the proposed action may not represent a reversal of this trend, it will slow the rate of decline in the standard of living that has been prevalent since 2000.

#### Constrained Analysis

The constrained analysis would have similar impacts as the unconstrained analysis.

#### 4.3.1.5 Unemployment

##### Introductory Statements

The proposed action would bring many new jobs to Guam but it would also bring a large new population from off-island. Analysis was done to determine how these two factors would affect the unemployment rate on Guam.

##### Unconstrained Analysis

###### *Construction Component Unemployment Assumptions*

The large influx of new jobs will provide employment opportunities for most that seek them. Therefore, the unemployment rate during the construction component will be lower than current levels and full-employment should be reached or exceeded.

###### *Military Operational Component Unemployment Assumptions*

Though not as many new jobs will be available during the operational component as during the construction component there will be many more jobs than at present. Therefore, the impact will result in a generally lower rate of unemployment than there otherwise would have been.

###### *Estimation of Effects*

It is projected that the impact of the buildup will be to reduce the rate of unemployment on Guam from the most recently published rate of 8.3% (GDoL, 2007). Guam's unemployment rate would ultimately be lowered by the construction and operational phases of the proposed action.

#### Constrained Analysis

The constrained analysis projects a *lower* rate of unemployment than the unconstrained analysis. This is because a lower number of off-island workers is expected under the constrained scenario.

#### **4.3.2 Housing**

Analysis first addresses the number of required housing units that would be *required* for the in-migrating Guam civilian population. It then provides possible scenarios of the *supply* of housing in response to these requirements.

##### 4.3.2.1 Civilian Housing Demand

###### Introductory Statements

The housing unit demand in this section is an estimate of the number of *required* units (demand) for the in-migrating Guam civilian population. For discussion of the *supply* of housing in response to these requirements, see the immediately following Section 4.3.2.2.

It should be noted that the Guam Housing and Urban Renewal Authority (GHURA) has recently released a detailed housing needs assessment study. The supply estimates presented herein are therefore provisional and may be revised and further informed based on the more detailed housing study by GHURA (GHURA 2009).

The primary focus of this analysis is demand and supply for the private-sector Guam housing market affected by in-migrating civilian populations.

#### General Exclusions to Analysis

The following additional factors are important to note in this introduction, but are *not* included in the rest of the analysis:

- “Stay-Behind” Worker Housing
- Housing for on-base active-duty military and dependents
- Household formation for additional Guam residents

#### *“Stay-Behind” Worker Housing*

Currently, stay-behind workers are not included in quantitative housing analysis. If there are a significant number of stay-behind workers who break off of contractor roles and enter the private housing market, then the decline in civilian housing demand from the beginning of 2014 to the end of 2016 will not be as large as shown below.

Also if the stay-behind worker phenomenon leads to increased immigration over-time, then civilian housing demand growth, in the years 2017 forward, would proceed at a faster rate than shown below.

#### *Active-Duty Military Housing*

Current plans are for on-base housing to be provided for all military personnel and thus this population is not included in the housing analysis.

#### *New Household Formation by Guam Residents*

Since workers hired from the existing Guam labor force would already have housing on Guam, no additional housing for them would be required.

Only minor exceptions might arise: Guam residents who might earn sufficiently more from their new employment to leave their housing units, previously shared with families or friends, and form new households.

It is impossible to reliably estimate the number of such new household formations that would occur attributable to construction, as even U.S. Census 2000 data do not provide a basis for such estimation. However, new project-induced household formations by Guam residents are likely to be small in number compared to the demand from new population originating from off the island.

#### Unconstrained Analysis

##### *Construction Component Assumptions*

Construction phase impacts on private market housing would arise primarily from the in-migration of:

- non-H-2B workers who are directly employed at the various military construction sites
- non-H-2B workers who take other direct or indirect construction-related jobs.

Table 4.3-18 shows critical assumptions under the unconstrained scenario, as well as the source or rationale of those assumptions.

**Table 4.3-18. Construction Component Assumptions for Civilian Housing Demand (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions</b>		
Average Household Population for in-migrants.	3.89	U.S. Census Bureau Guam 2000 average
<b>Qualitative Assumptions</b>		
H-2B worker housing.	To be provided by employer and would involve predominantly new construction of quarters, with negligible conversion of existing housing stock to H-2B housing. Military policy requires all construction contractors to provide housing for their H-2B employees.	Employers of H-2B workers are allowed to deduct only a limited amount from H-2B workers' paychecks for housing costs (currently, \$320 per month). This very low allowance means almost all H-2B workers are housed dormitory-style.
New household formation by Guam residents.	Negligible effect.	Guam residents directly or indirectly employed due to the proposed action would, on average, make somewhat more money than without the project. However, the number of residents previously living with family or friends to save money, who would move to their own housing units due to the increased pay, is likely to be minimal.

#### *Military Operational Component Assumptions*

Under the specifications of the proposed action, all Marines and their dependents would be housed on-base and thus no off-base housing demand would stem directly from that population.

The housing demand during the operations phase is generated rather by:

- civilian military workers
- in-migrating direct and indirect workers

Table 4.3-19 provides assumptions made in conducting the housing analysis for the operations phase, as well as the source or rationale for those assumptions.

**Table 4.3-19. Operational Component Assumptions for Housing Demand (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative</b>		
Average Household Population for in-migrants.	3.89	U.S. Census Bureau Guam 2000 average
<b>Qualitative</b>		
Military personnel off-base housing impact.	All military personnel would be housed on-base.	Master Planning Assumption

*Estimation of Effects*

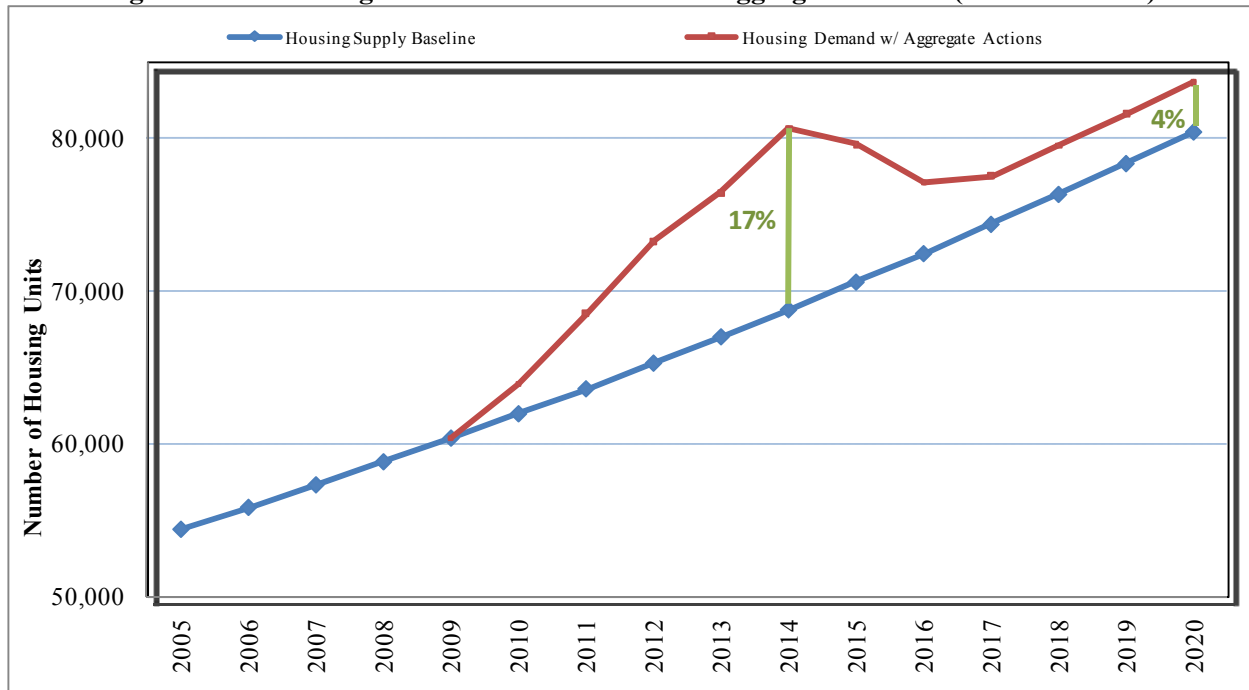
Table 4.3-20 indicates the combined total impact of the military buildup would be a demand for 11,893 new units in the peak year of 2014, falling to 3,205 by 2020.

**Table 4.3-20. Demand for New Civilian Housing Units (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	1,283	3,104	5,109	6,112	6,291	4,195	1,304	0	0	0	0
Indirect/Induced Construction Impact	544	1,468	2,542	2,990	3,260	2,077	334	0	0	0	0
<b>Total Construction Impact</b>	<b>1,826</b>	<b>4,572</b>	<b>7,651</b>	<b>9,102</b>	<b>9,551</b>	<b>6,272</b>	<b>1,638</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Direct Operations Impact	107	241	241	241	1,565	1,720	1,720	1,720	1,720	1,720	1,720
Indirect/Induced Operations Impact	43	105	104	97	777	1,032	1,292	1,440	1,440	1,485	1,485
<b>Total Operations Impact</b>	<b>150</b>	<b>346</b>	<b>345</b>	<b>339</b>	<b>2,342</b>	<b>2,752</b>	<b>3,011</b>	<b>3,159</b>	<b>3,159</b>	<b>3,205</b>	<b>3,205</b>
<b>Combined Direct Impact</b>	<b>1,390</b>	<b>3,345</b>	<b>5,350</b>	<b>6,353</b>	<b>7,856</b>	<b>5,914</b>	<b>3,023</b>	<b>1,720</b>	<b>1,720</b>	<b>1,720</b>	<b>1,720</b>
<b>Combined Indirect Impact</b>	<b>587</b>	<b>1,573</b>	<b>2,646</b>	<b>3,088</b>	<b>4,037</b>	<b>3,110</b>	<b>1,626</b>	<b>1,440</b>	<b>1,440</b>	<b>1,485</b>	<b>1,485</b>
<b>Combined Total Impact</b>	<b>1,976</b>	<b>4,918</b>	<b>7,996</b>	<b>9,441</b>	<b>11,893</b>	<b>9,024</b>	<b>4,649</b>	<b>3,159</b>	<b>3,159</b>	<b>3,205</b>	<b>3,205</b>

Figure 4.3-3 compares total housing demand on Guam with and without the proposed action. At the 2014 peak, housing demand with the proposed action is 17% higher than it otherwise would have been, without the project. At 2020, the difference declines to 4%.

**Figure 4.3-3. Housing Demand with and without Aggregate Actions (Unconstrained)**



Constrained Analysis

*Constrained Analysis Assumptions*

The particular assumptions about Civilian Housing Demand made under the constrained scenario are no different than under the unconstrained scenario (Table 4.3-18 and Table 4.3-19).

*Estimation of Effects*

Table 4.3-21 below indicates the combined total impact of the military buildup would be a demand for 5,367 new units in the peak year of 2014, falling to 2,331 after construction ends.

**Table 4.3-21. Demand for New Civilian Housing Units (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	601	1,497	2,488	3,063	3,374	2,774	730	0	0	0	0
Indirect Construction Impact	136	335	561	682	767	724	168	0	0	0	0
<b>Total Construction Impact</b>	<b>737</b>	<b>1,832</b>	<b>3,049</b>	<b>3,744</b>	<b>4,141</b>	<b>3,498</b>	<b>898</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Direct Operations Impact	78	179	178	178	1,195	1,473	1,473	1,473	1,473	1,473	1,473
Indirect Operations Impact	19	43	42	42	258	373	373	373	373	373	373
<b>Total Operations Impact</b>	<b>97</b>	<b>222</b>	<b>220</b>	<b>220</b>	<b>1,453</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>
<b>Combined Direct Impact</b>	<b>679</b>	<b>1,676</b>	<b>2,666</b>	<b>3,241</b>	<b>4,569</b>	<b>4,247</b>	<b>2,203</b>	<b>1,473</b>	<b>1,473</b>	<b>1,473</b>	<b>1,473</b>
<b>Combined Indirect Impact</b>	<b>155</b>	<b>378</b>	<b>603</b>	<b>724</b>	<b>1,025</b>	<b>1,097</b>	<b>541</b>	<b>373</b>	<b>373</b>	<b>373</b>	<b>373</b>
<b>Combined Total Impact</b>	<b>834</b>	<b>2,053</b>	<b>3,269</b>	<b>3,965</b>	<b>5,594</b>	<b>5,345</b>	<b>2,744</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>	<b>1,846</b>

#### 4.3.2.2 Implications for Housing Supply, Deficits, and Prices

##### Introductory Statements

Impact analysis (unconstrained and constrained) is presented as a range of outcomes, in order to take into account the following two housing supply scenarios:

- *Under-supply Future*: a scenario where little or no construction occurs to meet civilian market demand during the military construction period
- *Over-supply Future*: a scenario where the demand is met, but results in a subsequent over-supply of housing, as population declines when construction ends. This scenario assumes that no alternative uses (such as conversion to commercial use) are found for this excess housing.

First, tables present possible under-supply and over-supply futures for both the unconstrained and constrained scenarios.

It should be noted that the estimates provided in these impact tables are theoretical, and meant to be indicative of the amount of housing construction that would be needed to satisfy the increased demand.

This possibility is not actually very likely. If the construction of new housing actually fully responded to the demand, the result would be an over-supply of housing following the construction period. This sort of over-supply would drive housing prices down for residents, but would likely mean substantial losses for developers and landlords, as well as problems associated with maintenance of large numbers of unoccupied units. In addition, housing cost inflation would be a near certainty, due to the substantial increase in demand for construction labor and materials. Outcomes of increased crowding, illegal units, and homelessness would also occur as responses to substantial increases in housing costs, albeit at lower levels of magnitude than under housing shortages.

Section 4.3.2.3 provides additional information on both the factors affecting actual outcomes and the probable likely actual outcomes of housing supply and demand issues.

## Unconstrained Analysis

### Assumptions

Table 4.3-22 provides assumptions made in conducting housing supply analysis for both the construction and military operational phases of the proposed action, and the source or rationale for these assumptions.

**Table 4.3-22. Assumptions for Civilian Housing Supply (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Number of currently vacant, for-rent housing units.	1,915	GBSP (2008)
Current vacant, for sale housing units.	467	Multiple Listing Service data provided by Bank of Guam (2009)
Housing units with building permits but that currently have not been completed.	500	There are approximately 2,000 such building permits currently, but most are viewed as unlikely to have construction complete at the start of project construction. A factor of 25% was applied.
Core total housing vacancy rate.	4%	Reflects market delays in matching renters with landlords, and administrative and maintenance factors that would result in some units always being vacant.

*Notes:* Of the 467 units vacant for sale, 273 are single-family units (Bank of Guam 2009). Many units current for sale are “executive units” (priced above \$500,000) that would not be suitable for all but a handful of the expected new population generated by the proposed action.

### Estimation of Effects

Based on the unconstrained scenario assumptions, the stock of likely available housing was estimated at 2,787 units at the start of project construction in 2010.

Table 4.3-23 below shows two possible futures. The first (“Under-supply Future”) indicates the possible housing deficits (shortfall) in construction years. The alternative (“Over-supply Future”) shows the estimated housing surplus in subsequent years if the market were to provide all the needed construction-period housing.



**Table 4.3-23. Demand and Supply Needed for New Civilian Housing Units (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Action Total Impact	1,976	4,918	7,996	9,441	11,893	9,024	4,649	3,159	3,159	3,205	3,205
Annual Change in Demand	1,976	2,942	3,078	1,445	2,452	(2,869)	(4,375)	(1,490)	0	46	0
Available Housing Supply (vacant, likely available)	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787
<b>Under-Supply Future: New Demand minus Current Available Housing Supply</b>	<b>0</b>	<b>2,131</b>	<b>5,209</b>	<b>6,654</b>	<b>9,106</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Annual Construction Needed to Eliminate Housing Deficit	0	2,131	3,078	1,445	2,452	0	0	0	0	0	0
<b>Over-Supply Future: Surplus Units if Supply Increases to Eliminate Deficit</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,869</b>	<b>7,244</b>	<b>8,734</b>	<b>8,734</b>	<b>8,688</b>	<b>8,688</b>

Constrained Analysis*Constrained Analysis Assumptions*

The particular assumptions about Civilian Housing Demand made under the constrained scenario are no different than under the unconstrained scenario (Table 4.3-20).

*Estimation of Effects*

Table 4.3-24 has two “bottom lines.” The first (Under-supply Future) indicates the estimated housing deficits in construction years based on the foregoing assumptions. The “Over-supply Future” shows the estimated housing surplus in subsequent years if the market were to provide all the needed construction-period housing, and no alternative uses (such as conversion to commercial use) are feasible.

**Table 4.3-24. Demand and Supply Needed for New Civilian Housing Units (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Action Total Impact	801	1,970	3,138	3,804	5,367	5,688	3,191	2,331	2,331	2,331	2,331
Annual Change in Demand	801	1,169	1,168	666	1,563	(972)	(1,204)	(860)	0	0	0
Available Housing Supply (vacant, likely available)	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787	2,787
<b>Under-supply Future: New Demand minus Current Available Housing Supply</b>	<b>0</b>	<b>0</b>	<b>351</b>	<b>1,017</b>	<b>2,580</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Annual Construction Needed to Eliminate Housing Deficit	0	0	351	666	1,563	0	0	0	0	0	0
<b>Over-supply Future: Surplus Units if Supply Increases to Eliminate Deficit</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>972</b>	<b>2,176</b>	<b>3,036</b>	<b>3,036</b>	<b>3,036</b>	<b>3,036</b>

#### 4.3.2.3 Likely Actual Outcomes of Supply and Demand Issues

It is unlikely that construction of new housing would fully respond to the demand to eliminate a housing deficit. The main challenges to increase housing supply in the face of projected rapid demand increases would occur mostly during the construction phase, and generally fall into three categories:

- Scarcities of labor and materials to build new housing (supply bottlenecks)
- Financial feasibility of constructing housing for short-term demand increases
- Bottlenecks in the Guam housing permitting system to accommodate rapid increases in permit demand

Another factor that should be recognized is the possibility of a typhoon disaster. If a typhoon were to hit Guam, some currently available housing units may be destroyed, creating higher demand for new housing units than shown in tables. Higher demand would stem from a lower number of currently available housing units and a possible spike due to the presence of temporary relief workers.

#### Scarcities of Labor and Materials

During the construction period, since such a large amount of materials will be used for military base construction, building materials for other projects such as civilian housing will be in short supply.

Anecdotal evidence is that shortages of cement (a primary ingredient of concrete, and obtained from Japan, Korea and Taiwan) were already evident in 2008 (Taitano 2008). A new four-to-six silo cement storage facility at the Port of Guam is projected to be completed by mid-2010 (Perez Brothers 2009), but whether this facility alone would be sufficient to consistently meet any rapid spikes in demand from the Marine Corps Relocation, particularly its indirect effects, is questionable.

Labor supply is also expected to be an issue. The requirement for construction workers to build civilian housing is an increment above and beyond labor demands described in Section 4.3.1.

### Financial Viability of New Construction

An overriding issue regarding the response of housing supply to demand is the willingness of the housing construction industry, or even individual owners contemplating home additions, to invest for very short-run profit windows.

The spike in housing demand is expected to last only from 2010 to 2014. As shown in the impact tables above, should housing supply construction accommodate the short-term housing demands fully, substantial vacancy rates can be expected after the year 2015 and a significant housing glut is possible. This short window of high demand means those building rental housing might expect only up to four years to gain adequate returns on their investment, with longer-term prospects being highly speculative.

### Permitting Bottlenecks

The third factor that could impede a full response by the housing construction sector is the capability of Guam permitting agencies to review and issue housing construction permits sufficiently quickly to meet demand. Guam's development permitting system, centered in its GDPW and GDLM, is understaffed. This system would need to be updated to fully account for the cost of processing building permit applications under the Marine Corps Relocation.

### Likely Outcomes

Taking these factors into account, it is most likely that construction of a sufficient number of legal, permitted housing units simply would not occur.

The most likely outcome is a partial response of housing construction to demand. Housing construction companies would have general knowledge of the housing demands projected as long-run consequences of the proposed action's operational component, and general knowledge of the status of their competition. Building to long-run (rather than the larger, temporary, construction-period) demands would likely make financial sense to most housing providers, that implies only a partial response to construction-period housing demand. If sufficient housing is not supplied, this would lead to increased:

- Crowding of housing (more persons per unit)
- Construction of illegal (non-permitted) housing
- Illegal rentals
- Homelessness

Housing supply during the post-construction timeframe would be less challenging because local contractors and housing supply materials would have been freed up to meet housing demand more competitively than during the construction period.

#### 4.3.2.4 Temporary Workforce Housing

Temporary workforce housing is not included in the above analyses because it is assumed that all H-2B worker housing would be provided by construction contractors and would not generate demand in the private-market. (Note the analysis *does* assume in-migrating construction workers who are U.S. citizens or FAS residents etc. would affect private-market housing.). Immigration law requires that employers provide housing for each H-2B worker they bring in.

With 13,270 H-2B workers expected at peak, a large number new of workforce housing units will be required.

There are a number of ways that this demand may be met, including:

- New worker housing.
- Retrofit existing vacant construction workers housing (from past construction booms) or vacant residential apartments.
- Construct new apartment structures.
- Convert large shipping containers into temporary housing units.

DoD would rely on construction contractors, who have significant expertise in the areas of workforce housing and logistics, to support temporary foreign worker housing requirements. While GovGuam and federal agencies would retain their authority to conduct inspections and enforce laws, DoD contract provisions would require aspects of quality control and oversight and contractors with proven track records. Well thought-out plans related to workforce housing, including quality of life requirements, would be given award preference. Contract provisions would also include requirements provide workforce medical, dining, transportation and safety/security. There will be health screening of all workers to reduce health risk to the Guam population. Contractors will be required to provide health care either by supplementing local Guam staff and resources or building their own clinic.

Contractors anticipating Navy contract awards will likely proceed with plans on how to provide housing for their temporary workers prior to the Record of Decision.

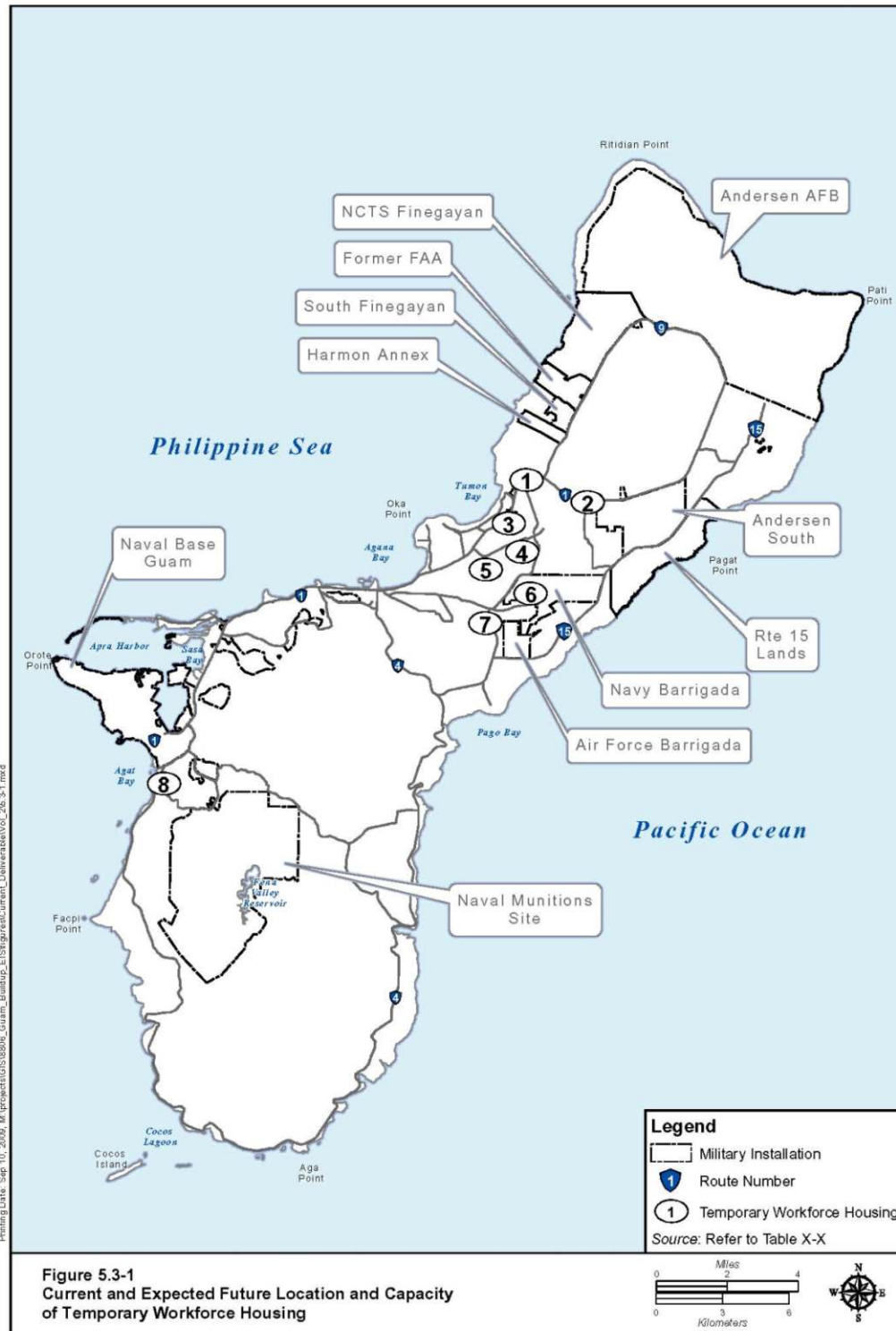
Table 4.3-25 and Figure 4.3-4 provide further information on existing and planned temporary workforce housing units. The largest planned facility would be located in North Tumon, near Two Lovers Point, and would be built on a currently undeveloped 250 acre parcel of land; the planned facility has the potential to house up to 18,000 temporary workers.

**Table 4.3-25. Temporary Workforce Housing Locations and Attributes  
(Map Key for Figure 4.3-4)**

<i>Figure 5.3-1 Key</i>	<i>Name/Location</i>	<i>Estimated Worker Capacity</i>	<i>Planned/Existing/Retrofit</i>	<i>Site is Developed/Paved? (Yes/No)</i>
1	North Tumon, (Near Two Lovers Point)	2,000-18,000	Planned (250 Acre Parcel)	No
3	Upper Tumon, (Former Tumon Village, El Dorado Apts.)	3,500-4,000	Retrofit	Yes
4	Harmon Industrial Park	1,900	Existing	Yes
6	Barrigada, Former Naval Air Station Barracks	1,600	Retrofit	Yes
2	Dededo	1,800	Existing	Yes
5	Tamuning		Existing	Yes
7	Yona		Existing	Yes
8	Agat		Existing	Yes

Source: JGPO and NAVFAC Pacific 2009.

Figure 4.3-4. Current and Future Locations of Temporary Workforce Housing



### 4.3.3 Estimated Local Government Revenues

#### 4.3.3.1 Introductory Statements

This section is intended to provide “rough-order-of-magnitude” (approximate) revenues accruing to GovGuam from the primary sources previously identified in Section 3.3.3.

The following analysis does not attempt to specify all governmental costs but does note likely differences in timing between costs and revenues. Government revenue sources that are analyzed include gross receipts tax, corporate income tax, and personal income tax. These taxes are collected quarterly or annually and there may be a time lag between when government revenues are needed and when they are actually available for use. The analysis assumes GovGuam collects all tax revenues that it would be owed.

#### 4.3.3.2 Unconstrained Analysis

##### Assumptions

Table 4.3-26 provides assumptions made in conducting local government revenue analysis for the construction and operational phases, as well as the source or rationale for these assumptions.

**Table 4.3-26. Assumptions for Local Government Revenue (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
GRT	0.04	GovGuam GRT tax rate.
Profit	0.06	Assumed based on market conditions.
Corporate income tax rate	0.17	Based on GovGuam Corporate Income tax rate.
Personal income tax rate (applies to military as well as to civilians)	0.15	Based on IRS Tax tables.

*Notes:* Guam residents do not pay federal income taxes. Instead, GovGuam taxes resident income at the federal rates, and passes the money to the federal government, the federal government then passes the same amount back. Military personnel income taxes are also returned.

##### Estimation of Effects

Table 4.3-27 provides summary GovGuam tax revenue impact summary data. Year-by-year impacts can be found in the tables noted.

**Table 4.3-27. Impact on GovGuam Tax Revenue Summary (Thousands of 2008 \$) (Unconstrained)**

<i>Tax</i>	<i>Peak Impact</i>	<i>Steady Impact</i>	<i>Table with year by Year Break-down</i>
GRT	\$145,434	\$10,013	Table 4.3-28
Corporate Income	\$37,086	\$2,553	Table 4.3-29
Personal Income	\$240,752	\$91,683	Table 4.3-30
Total	\$423,272	\$104,249	

**Table 4.3-28. Impact on Gross Receipts Tax Revenue (Thousands of 2008 \$) (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$20,978	\$52,079	\$88,521	\$108,913	\$112,221	\$74,144	\$23,110	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$4,650	\$11,515	\$19,564	\$23,957	\$24,727	\$16,299	\$5,046	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$25,628</b>	<b>\$63,594</b>	<b>\$108,084</b>	<b>\$132,870</b>	<b>\$136,948</b>	<b>\$90,443</b>	<b>\$28,157</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$342	\$758	\$758	\$758	\$4,514	\$5,336	\$5,336	\$5,336	\$5,336	\$5,336	\$5,336
Indirect Operations Impact	\$288	\$648	\$648	\$648	\$3,972	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677	\$4,677
<b>Total Operations Impact</b>	<b>\$630</b>	<b>\$1,406</b>	<b>\$1,406</b>	<b>\$1,406</b>	<b>\$8,486</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>
<b>Combined Direct Impact</b>	<b>\$21,320</b>	<b>\$52,837</b>	<b>\$89,279</b>	<b>\$109,671</b>	<b>\$116,735</b>	<b>\$79,480</b>	<b>\$28,446</b>	<b>\$5,336</b>	<b>\$5,336</b>	<b>\$5,336</b>	<b>\$5,336</b>
<b>Combined Indirect Impact</b>	<b>\$4,938</b>	<b>\$12,162</b>	<b>\$20,211</b>	<b>\$24,604</b>	<b>\$28,700</b>	<b>\$20,976</b>	<b>\$9,723</b>	<b>\$4,677</b>	<b>\$4,677</b>	<b>\$4,677</b>	<b>\$4,677</b>
<b>Combined Total Impact</b>	<b>\$26,258</b>	<b>\$65,000</b>	<b>\$109,490</b>	<b>\$134,276</b>	<b>\$145,434</b>	<b>\$100,455</b>	<b>\$38,170</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>	<b>\$10,013</b>

**Table 4.3-29. Impact on Corporate Income Tax Revenue (Thousands of 2008 \$) (Unconstrained)**

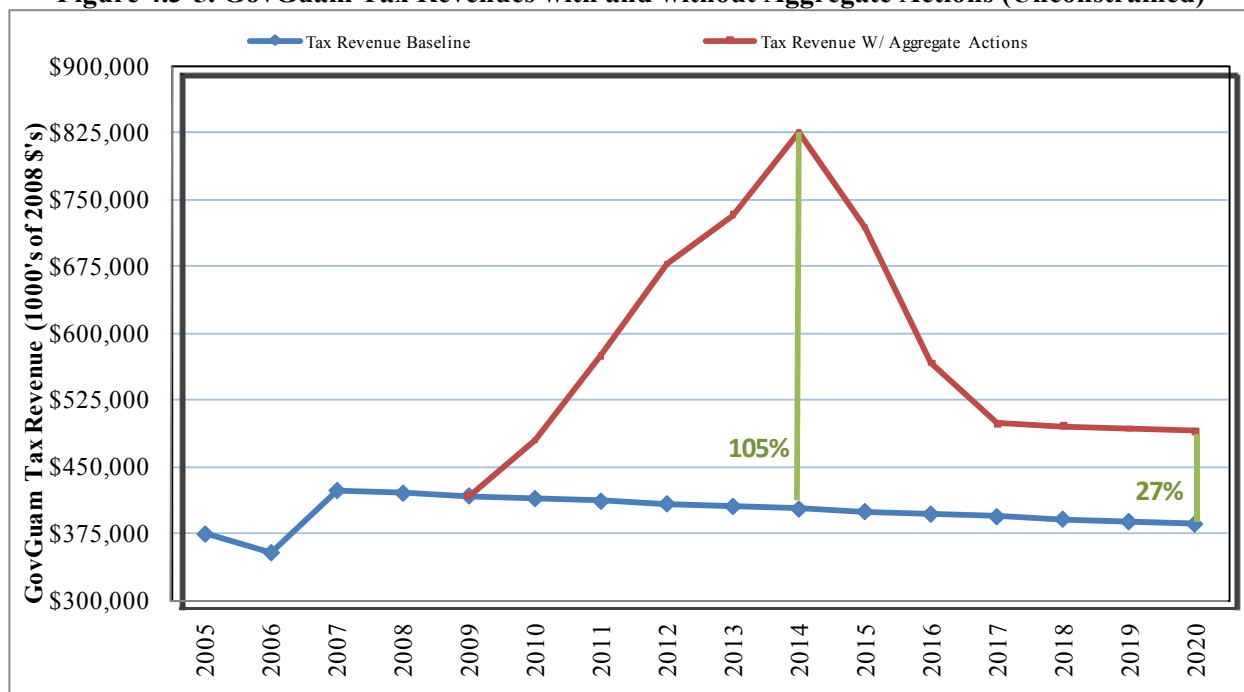
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$5,349	\$13,280	\$22,573	\$27,773	\$28,616	\$18,907	\$5,893	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$1,186	\$2,936	\$4,989	\$6,109	\$6,305	\$4,156	\$1,287	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$6,535</b>	<b>\$16,216</b>	<b>\$27,562</b>	<b>\$33,882</b>	<b>\$34,922</b>	<b>\$23,063</b>	<b>\$7,180</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$87	\$193	\$193	\$193	\$1,151	\$1,361	\$1,361	\$1,361	\$1,361	\$1,361	\$1,361
Indirect Operations Impact	\$73	\$165	\$165	\$165	\$1,013	\$1,193	\$1,193	\$1,193	\$1,193	\$1,193	\$1,193
<b>Total Operations Impact</b>	<b>\$161</b>	<b>\$359</b>	<b>\$359</b>	<b>\$359</b>	<b>\$2,164</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>
<b>Combined Direct Impact</b>	<b>\$5,437</b>	<b>\$13,474</b>	<b>\$22,766</b>	<b>\$27,966</b>	<b>\$29,767</b>	<b>\$20,267</b>	<b>\$7,254</b>	<b>\$1,361</b>	<b>\$1,361</b>	<b>\$1,361</b>	<b>\$1,361</b>
<b>Combined Indirect Impact</b>	<b>\$1,259</b>	<b>\$3,101</b>	<b>\$5,154</b>	<b>\$6,274</b>	<b>\$7,318</b>	<b>\$5,349</b>	<b>\$2,479</b>	<b>\$1,193</b>	<b>\$1,193</b>	<b>\$1,193</b>	<b>\$1,193</b>
<b>Combined Total Impact</b>	<b>\$6,696</b>	<b>\$16,575</b>	<b>\$27,920</b>	<b>\$34,240</b>	<b>\$37,086</b>	<b>\$25,616</b>	<b>\$9,733</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>	<b>\$2,553</b>

**Table 4.3-30. Impact on Personal Income Tax Revenue (Thousands of 2008 \$) (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$20,070	\$49,729	\$85,464	\$104,331	\$107,731	\$70,328	\$21,481	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$8,285	\$20,409	\$34,943	\$42,697	\$46,686	\$31,529	\$8,889	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$28,355</b>	<b>\$70,139</b>	<b>\$120,407</b>	<b>\$147,027</b>	<b>\$154,417</b>	<b>\$101,858</b>	<b>\$30,370</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$3,623	\$8,487	\$8,487	\$8,487	\$58,370	\$62,708	\$62,708	\$62,708	\$62,708	\$62,708	\$62,708
-- Active Duty	\$2,063	\$4,895	\$4,895	\$4,895	\$34,757	\$36,634	\$36,634	\$36,634	\$36,634	\$36,634	\$36,634
Indirect Operations Impact	\$472	\$2,887	\$2,887	\$2,887	\$27,965	\$28,975	\$28,975	\$28,975	\$28,975	\$28,975	\$28,975
<b>Total Operations Impact</b>	<b>\$4,095</b>	<b>\$11,374</b>	<b>\$11,374</b>	<b>\$11,374</b>	<b>\$86,335</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>
<b>Combined Direct Impact</b>	<b>\$23,693</b>	<b>\$58,216</b>	<b>\$93,951</b>	<b>\$112,818</b>	<b>\$166,101</b>	<b>\$133,036</b>	<b>\$84,189</b>	<b>\$62,708</b>	<b>\$62,708</b>	<b>\$62,708</b>	<b>\$62,708</b>
<b>Combined Indirect Impact</b>	<b>\$8,757</b>	<b>\$23,297</b>	<b>\$37,831</b>	<b>\$45,584</b>	<b>\$74,651</b>	<b>\$60,504</b>	<b>\$37,863</b>	<b>\$28,975</b>	<b>\$28,975</b>	<b>\$28,975</b>	<b>\$28,975</b>
<b>Combined Total Impact</b>	<b>\$32,450</b>	<b>\$81,513</b>	<b>\$131,782</b>	<b>\$158,402</b>	<b>\$240,752</b>	<b>\$193,540</b>	<b>\$122,052</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>	<b>\$91,683</b>

Figure 4.3-5 compares total GovGuam tax revenue with and without the proposed action. At the 2014 peak, tax revenues with the proposed action are 105% higher than they otherwise would have been, without the project. At 2020, the difference declines to 27%.

**Figure 4.3-5. GovGuam Tax Revenues with and without Aggregate Actions (Unconstrained)**



4.3.3.3 Constrained Analysis

Constrained Analysis Assumptions

The particular assumptions about Estimated Local Government Revenues made under the constrained scenario are no different than under the unconstrained scenario (Table 4.3-26).

Estimation of Effects

Table 4.3-31 provides summary GovGuam tax revenue impact summary data. Year-by-year impacts can be found in the tables noted.

**Table 4.3-31. Impact on GovGuam Tax Revenue Summary (Thousands of 2008 \$) (Constrained)**

Tax	Peak Impact	Steady Impact	Table with year by Year Break-down
GRT	\$130,237	\$8,690	Table 4.3-32
Corporate Income	\$33,210	\$2,216	Table 4.3-33
Personal Income	\$191,420	\$68,366	Table 4.3-34
Total	\$354,867	\$79,272	



**Table 4.3-32. Impact on Gross Receipts Tax Revenue (Thousands of 2008 \$) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$20,978	\$52,079	\$88,521	\$108,913	\$112,221	\$74,144	\$23,110	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$2,004	\$4,961	\$8,428	\$10,311	\$10,646	\$7,014	\$2,169	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$22,982</b>	<b>\$57,040</b>	<b>\$96,949</b>	<b>\$119,224</b>	<b>\$122,867</b>	<b>\$81,158</b>	<b>\$25,279</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$342	\$758	\$758	\$758	\$4,514	\$5,336	\$5,336	\$5,336	\$5,336	\$5,336	\$5,336
Indirect Operations Impact	\$204	\$462	\$462	\$462	\$2,856	\$3,354	\$3,354	\$3,354	\$3,354	\$3,354	\$3,354
<b>Total Operations Impact</b>	<b>\$547</b>	<b>\$1,221</b>	<b>\$1,221</b>	<b>\$1,221</b>	<b>\$7,370</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>
<b>Combined Direct Impact</b>	<b>\$21,320</b>	<b>\$52,837</b>	<b>\$89,279</b>	<b>\$109,671</b>	<b>\$116,735</b>	<b>\$79,480</b>	<b>\$28,446</b>	<b>\$5,336</b>	<b>\$5,336</b>	<b>\$5,336</b>	<b>\$5,336</b>
<b>Combined Indirect Impact</b>	<b>\$2,209</b>	<b>\$5,423</b>	<b>\$8,890</b>	<b>\$10,773</b>	<b>\$13,502</b>	<b>\$10,368</b>	<b>\$5,523</b>	<b>\$3,354</b>	<b>\$3,354</b>	<b>\$3,354</b>	<b>\$3,354</b>
<b>Combined Total Impact</b>	<b>\$23,529</b>	<b>\$58,261</b>	<b>\$98,169</b>	<b>\$120,445</b>	<b>\$130,237</b>	<b>\$89,848</b>	<b>\$33,969</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>	<b>\$8,690</b>

**Table 4.3-33. Impact on Corporate Income Tax Revenue (Thousands of 2008 \$) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$5,349	\$13,280	\$22,573	\$27,773	\$28,616	\$18,907	\$5,893	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$511	\$1,265	\$2,149	\$2,629	\$2,715	\$1,789	\$553	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$5,861</b>	<b>\$14,545</b>	<b>\$24,722</b>	<b>\$30,402</b>	<b>\$31,331</b>	<b>\$20,695</b>	<b>\$6,446</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$87	\$193	\$193	\$193	\$1,151	\$1,361	\$1,361	\$1,361	\$1,361	\$1,361	\$1,361
Indirect Operations Impact	\$52	\$118	\$118	\$118	\$728	\$855	\$855	\$855	\$855	\$855	\$855
<b>Total Operations Impact</b>	<b>\$139</b>	<b>\$311</b>	<b>\$311</b>	<b>\$311</b>	<b>\$1,879</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>
<b>Combined Direct Impact</b>	<b>\$5,437</b>	<b>\$13,474</b>	<b>\$22,766</b>	<b>\$27,966</b>	<b>\$29,767</b>	<b>\$20,267</b>	<b>\$7,254</b>	<b>\$1,361</b>	<b>\$1,361</b>	<b>\$1,361</b>	<b>\$1,361</b>
<b>Combined Indirect Impact</b>	<b>\$563</b>	<b>\$1,383</b>	<b>\$2,267</b>	<b>\$2,747</b>	<b>\$3,443</b>	<b>\$2,644</b>	<b>\$1,408</b>	<b>\$855</b>	<b>\$855</b>	<b>\$855</b>	<b>\$855</b>
<b>Combined Total Impact</b>	<b>\$6,000</b>	<b>\$14,856</b>	<b>\$25,033</b>	<b>\$30,713</b>	<b>\$33,210</b>	<b>\$22,911</b>	<b>\$8,662</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>	<b>\$2,216</b>

**Table 4.3-34. Impact on Personal Income Tax Revenue (Thousands of 2008 \$) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$20,125	\$49,863	\$85,693	\$104,604	\$108,019	\$70,516	\$21,536	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$3,492	\$9,043	\$15,313	\$18,564	\$20,647	\$13,816	\$3,736	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$23,617</b>	<b>\$58,906</b>	<b>\$101,005</b>	<b>\$123,168</b>	<b>\$128,666</b>	<b>\$84,332</b>	<b>\$25,272</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$3,623	\$8,528	\$8,528	\$8,528	\$58,411	\$63,218	\$63,218	\$63,218	\$63,218	\$63,218	\$63,218
<i>Active Duty</i>	\$2,063	\$4,935	\$4,935	\$4,935	\$34,797	\$37,144	\$37,144	\$37,144	\$37,144	\$37,144	\$37,144
Indirect Operations Impact	\$332	\$733	\$733	\$733	\$4,344	\$5,148	\$5,148	\$5,148	\$5,148	\$5,148	\$5,148
<b>Total Operations Impact</b>	<b>\$3,955</b>	<b>\$9,261</b>	<b>\$9,261</b>	<b>\$9,261</b>	<b>\$62,755</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>
<b>Combined Direct Impact</b>	<b>\$23,748</b>	<b>\$58,391</b>	<b>\$94,220</b>	<b>\$113,132</b>	<b>\$166,429</b>	<b>\$133,733</b>	<b>\$84,754</b>	<b>\$63,218</b>	<b>\$63,218</b>	<b>\$63,218</b>	<b>\$63,218</b>
<b>Combined Indirect Impact</b>	<b>\$3,824</b>	<b>\$9,776</b>	<b>\$16,046</b>	<b>\$19,297</b>	<b>\$24,991</b>	<b>\$18,964</b>	<b>\$8,884</b>	<b>\$5,148</b>	<b>\$5,148</b>	<b>\$5,148</b>	<b>\$5,148</b>
<b>Combined Total Impact</b>	<b>\$27,572</b>	<b>\$68,167</b>	<b>\$110,266</b>	<b>\$132,429</b>	<b>\$191,420</b>	<b>\$152,697</b>	<b>\$93,638</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>	<b>\$68,366</b>

#### 4.3.4 Gross Island Product

##### 4.3.4.1 Introductory Statements

GIP for Guam represents the total market value of all final goods and services produced in a given year. The concept is generally referred to as Gross Domestic Product or GDP and it the most commonly used benchmark to assess the overall strength of an economy; when the term economic growth is mentioned it usually refers to an increase in Gross Product from one time period to another.

##### 4.3.4.2 Unconstrained Analysis

###### Construction Component Assumptions

Table 4.3-35 provides assumptions made in conducting the GIP analysis (including intermediate calculations) for the construction phase.

**Table 4.3-35. Construction Component Assumptions for GIP (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Gross value of military contracts – 2010	\$524 million	NAVFAC Pacific 2009
Gross value of military contracts – 2011	\$1,302 million	NAVFAC Pacific 2009
Gross value of military contracts – 2012	\$2,213 million	NAVFAC Pacific 2009
Gross value of military contracts – 2013	\$2,722 million	NAVFAC Pacific 2009
Gross value of military contracts – 2014	\$2,806 million	NAVFAC Pacific 2009
Gross value of military contracts – 2015	\$1,854 million	NAVFAC Pacific 2009
Gross value of military contracts – 2016	\$578 million	NAVFAC Pacific 2009
Percent of expenditures made on Guam – Equipment	6%	Interviews with GCA
Percent of expenditures made on Guam – Design	2%	Interviews with GCA
Percent of expenditures made on Guam – Materials	5%	Interviews with GCA
Percent of expenditures made on Guam – Supplies	6%	Interviews with GCA
Construction employment.	75 workers per \$10 million total construction cost	Interviews with GCA
Average construction wages – Supervisory	\$85,830/yr.	U. S. BLS Occupational Employment Statistics
Average construction wages – overall	\$27,999/yr.	GDoL
Percent of gross pay spent in Guam economy – Guam workers	47%	State of HI I-O PCE, adjusted by John M. Knox & Associates
Percent of gross pay spent on Guam economy – High-skilled construction and construction in-migrants from CONUS/FAS/HI	45%	State of HI I-O model PCE, adjusted by John M. Knox & Associates
Percent of gross pay spent on Guam economy – Construction H-2B workers	20%	State of HI I-O model PCE, adjusted by John M. Knox & Associates
Ratio of GIP to Output	0.75	Output is always larger than GIP as GIP represents only final purchases. Output adjusted downward to represent GIP. Based on ratio of total sales from 2002 economic census to Guam GIP from 2002 Bureau of Statistics and Plans.

Table 4.3-36 shows key intermediate calculations feeding into subsequent estimates of the impact on GIP from construction.

**Table 4.3-36. Intermediate Construction-Related Calculations for GIP (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Non-Labor Construction Spending on Guam Economy	\$92	\$228	\$387	\$476	\$491	\$324	\$101	N/A	N/A	N/A	N/A
Personal Spending of Direct, On-Site, Construction Workers on Guam	\$24	\$59	\$101	\$121	\$125	\$82	\$25	N/A	N/A	N/A	N/A

Note: All figures are in millions of 2008 dollars.

### Military Operational Component Assumptions

Table 4.3-37 provides assumptions made in conducting the GIP analysis (including intermediate calculations) for the operations phase. Table 4.3-38 shows key intermediate calculations feeding into subsequent estimates of the impact on GIP from operations.

**Table 4.3-37. Operational Component Assumptions for GIP (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative</b>		
Total expenditure, base operations – 2010	\$4.7 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Total expenditure, base operations – 2011	\$8.7 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Total expenditure, base operations – 2012	\$9.4 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Total expenditure, base operations – 2013	\$9.9 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Total expenditure, base operations – 2014	\$47.8 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Annual gross value military contracts, base operations	\$476.2 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Total expenditure, base operations – 2015-2020	\$52.4 million	Estimate based on historical Guam military (USAspending.gov 2008) contracts data scaled over time according to estimated change in on-base population
Percent of military operations contracts awarded to Guam firms	17%	Historical local contract award expert advice, provided by GCA.
Average annual wages of enlisted personnel	\$28,895	Western Pacific Alignment Plan (WAP)
Average annual wages of military support personnel	\$41,435	Estimate based on Government Service (GS) pay scale (Office of Personnel Management 2008)

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Percent wages spent on Guam economy, enlisted military	12%	State of HI I-O model, adjusted by John M. Knox & Associates
Percent wages spent on Guam economy, military support	47%	State of HI I-O model, adjusted by John M. Knox & Associates
Federal Military Output Multipliers	1.7	HI 2005 I-O Model
Personal Expenditures Output multiplier	1.89	Based on various multipliers from HI I-O Model weighted by expenditures category.
Ratio of Output to GIP	0.75	Output is always larger than GIP as GIP represents only final purchases. Output adjusted downward to represent GIP. Based on ratio of total sales from 2002 economic census to Guam GIP from 2002 Bureau of Statistics and Plans.
<b>Qualitative</b>		
Total relocation of all active-duty military personnel to Guam	Complete by 2014.	DoD policy – necessary to meet agreement with Government of Japan.

**Table 4.3-38. Intermediate Operations-Related Calculations for GIP (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Base Operational Expenditures on Guam	\$5	\$9	\$9	\$10	\$48	\$52	\$52	\$52	\$52	\$52	\$52
On-Base Personnel (includes Active Duty and Civilian Military Employees) Direct Personal Expenditures in Guam economy	\$1.7	\$4.0	\$4.0	\$4.0	\$28.3	\$38.1	\$38.1	\$38.1	\$38.1	\$38.1	\$38.1

Note: All figures are in millions of 2008 dollars.

### Estimation of Effects

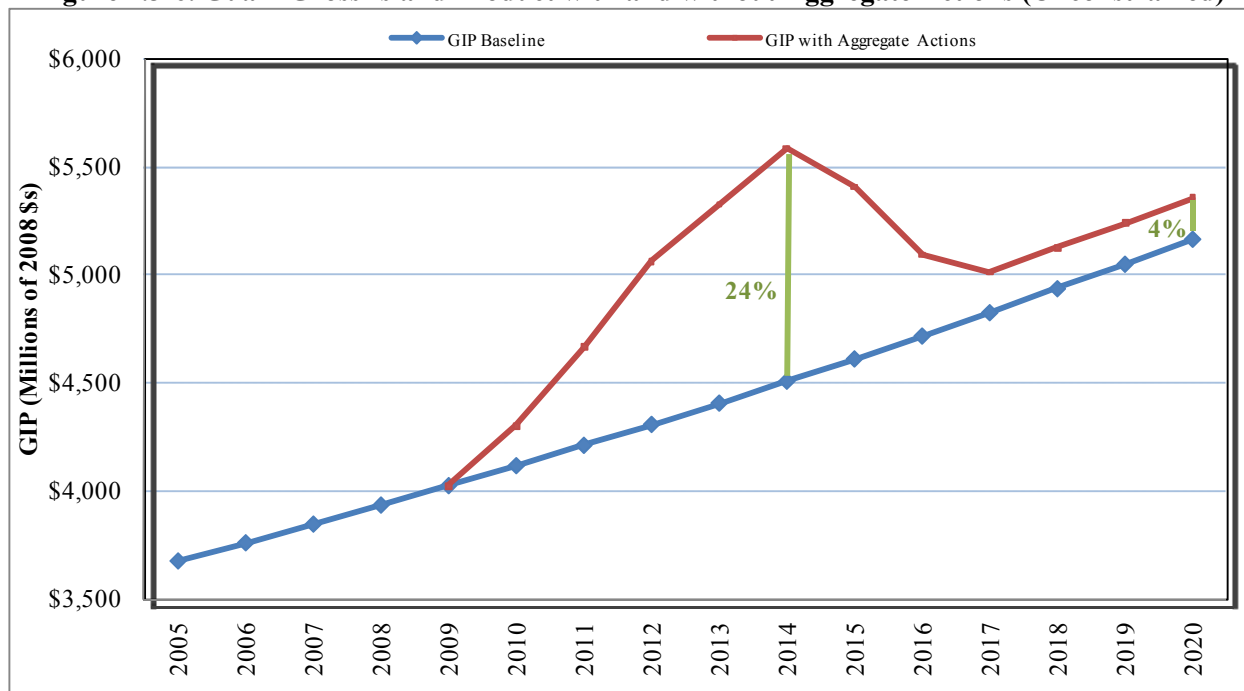
Table 4.3-39 shows the combined total impact on GIP would be \$1,080 million (nearly \$1.1 billion) in 2014, declining to a stable figure of \$187 million beginning in 2017 during the steady-state operational phase.

**Table 4.3-39. Impact on GIP (Millions of 2008 \$) (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$87	\$214	\$364	\$445	\$460	\$303	\$94	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$87	\$215	\$365	\$447	\$462	\$304	\$94	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$173</b>	<b>\$429</b>	<b>\$729</b>	<b>\$893</b>	<b>\$921</b>	<b>\$607</b>	<b>\$188</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$6	\$14	\$14	\$14	\$84	\$100	\$100	\$100	\$100	\$100	\$100
Indirect Operations Impact	\$5	\$12	\$12	\$12	\$74	\$87	\$87	\$87	\$87	\$87	\$87
<b>Total Operations Impact</b>	<b>\$12</b>	<b>\$26</b>	<b>\$26</b>	<b>\$26</b>	<b>\$158</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>
<b>Combined Direct Impact</b>	<b>\$93</b>	<b>\$228</b>	<b>\$378</b>	<b>\$460</b>	<b>\$544</b>	<b>\$403</b>	<b>\$193</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>
<b>Combined Indirect Impact</b>	<b>\$92</b>	<b>\$227</b>	<b>\$377</b>	<b>\$459</b>	<b>\$536</b>	<b>\$391</b>	<b>\$181</b>	<b>\$87</b>	<b>\$87</b>	<b>\$87</b>	<b>\$87</b>
<b>Combined Total Impact</b>	<b>\$185</b>	<b>\$455</b>	<b>\$755</b>	<b>\$919</b>	<b>\$1,080</b>	<b>\$794</b>	<b>\$375</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>	<b>\$187</b>

Figure 4.3-6 compares Guam’s GIP with and without the proposed action. At the 2014 peak, GIP with the proposed action is 24% higher than they otherwise would have been, without the project. At 2020, the difference declines to 4%.

**Figure 4.3-6. Guam Gross Island Product with and without Aggregate Actions (Unconstrained)**



#### 4.3.4.3 Constrained Analysis

Constrained figures are generally about 70% of the unconstrained ones, with most of the difference attributable to lower indirect impacts.

#### Constrained Analysis Assumptions

The particular assumptions about Gross Island Product made under the constrained scenario are no different than under the unconstrained scenario.

#### Estimation of Effects

Table 4.3-40 shows the combined total impact would be \$800 million in 2014, declining to a stable figure of \$162 million thereafter.

**Table 4.3-40. Impact on GIP (Millions of 2008 \$) (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Direct Construction Impact	\$87	\$216	\$367	\$449	\$464	\$305	\$94	\$0	\$0	\$0	\$0
Indirect Construction Impact	\$37	\$93	\$157	\$192	\$199	\$131	\$40	\$0	\$0	\$0	\$0
<b>Total Construction Impact</b>	<b>\$125</b>	<b>\$309</b>	<b>\$524</b>	<b>\$642</b>	<b>\$662</b>	<b>\$436</b>	<b>\$135</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Direct Operations Impact	\$6	\$14	\$14	\$14	\$84	\$100	\$100	\$100	\$100	\$100	\$100
Indirect Operations Impact	\$4	\$9	\$9	\$9	\$53	\$63	\$63	\$63	\$63	\$63	\$63
<b>Total Operations Impact</b>	<b>\$10</b>	<b>\$23</b>	<b>\$23</b>	<b>\$23</b>	<b>\$138</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>
<b>Combined Direct Impact</b>	<b>\$94</b>	<b>\$230</b>	<b>\$381</b>	<b>\$463</b>	<b>\$548</b>	<b>\$405</b>	<b>\$194</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>	<b>\$100</b>
<b>Combined Indirect Impact</b>	<b>\$41</b>	<b>\$101</b>	<b>\$166</b>	<b>\$201</b>	<b>\$252</b>	<b>\$194</b>	<b>\$103</b>	<b>\$63</b>	<b>\$63</b>	<b>\$63</b>	<b>\$63</b>
<b>Combined Total Impact</b>	<b>\$135</b>	<b>\$331</b>	<b>\$547</b>	<b>\$664</b>	<b>\$800</b>	<b>\$599</b>	<b>\$297</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>	<b>\$162</b>

### 4.3.5 Utility Rates

#### 4.3.5.1 Introductory Statements

At time of analysis, little or limited information was available on this topic. Only general statements are made using what information was available.

#### 4.3.5.2 Unconstrained Analysis

##### Power

Potential effects on ratepayers are unknown at this time and would depend in large part on agreements reached between the Department of Navy (Navy) and Guam Power Authority (GPA). The current Customer Agreement was originally adopted in 1992, has since been updated, and is scheduled to end in 2012.

This agreement would likely need to be renegotiated. The outcome of the negotiations would determine, among other factors, whether new DoD facilities would feed into the GPA grid or not and, if they do feed into the GPA grid, whether the power generated by DoD facilities or upgrades would be deemed (via pricing) to serve only DoD entities or whether new power would be shared among DoD entities and Guam's private consumers.

If new power generated was to be consumed by only DoD entities then it is likely that power rates for Guam's private consumers would increase. If the power is shared, then it is likely that power rates for Guam's private consumers would decline.

##### Water

New DoD water facilities are likely to be operated separately from the system operated by Guam Water Authority (GWA) and hence, no impacts to Guam rate payers are expected from use by DoD facilities. However, civilian military workers and other direct and indirect workers would be impacted as GWA embarks on a major capital improvement projects that GWA is financing, partly through rate increases.

##### Wastewater

GWA has been working under two federal waivers to the Clean Water Act; the waivers have relieved GWA of the requirement to conduct secondary sewage treatment (a process to degrade the biological content of sewage). As of October, 2009 the USEPA has denied the renewal of these waivers (GWA is appealing the ruling). Without the waivers GWA will be required to upgrade existing facilities so that they are equipped to conduct secondary treatment. Upgrading the facilities will be costly and drive wastewater rates higher. In the future, if the GWA appeal is not successful, Guam ratepayers should

expect higher wastewater rates. The rate increases however, would occur with or without the proposed action.

### Solid Waste

Population increases as a result of the proposed action will increase the level of solid waste service that will need to be provided along with the total cost of providing services. The increased costs, though, will be spread over a larger group of ratepayers. It is possible that, as the level of service increases the services will become more efficiently operated and rates for individuals will decline. It is more likely, however, that rates will be little changes as a result of the proposed action.

#### 4.3.5.3 Constrained Analysis

Given the current limits of information, it is not possible to make additional comments about impacts under the constrained scenario.

### **4.3.6 Local Business Contract Opportunities and Constraints**

#### 4.3.6.1 Introductory Statements

Guam businesses have historically expressed concern about being under-bid by Alaskan contractors using minority-owned small-business status. To address such concerns, this section provides information on relevant legalities, and possible opportunities and constraints.

### Legal Parameters

Recent legal changes have resulted in practice, a switch from ethnically-based preferences in contracting to geographically-based preferences.

Historically, the contracting process for the DoD included the Small Disadvantaged Business (SDB) program, made up of Section 8 and Section 1207 of the Small Business Act. The program set a goal of 5% of DoD procurement and service contracts being awarded to SDBs each year. Section 8 of the Small Business Act defined small businesses as “disadvantaged” primarily based on the ethnicity of the business ownership. Contractors in Juneau and Anchorage were reportedly taking on American Indian and part-Indian (or Aleut) partners to take advantage of the program’s incentives, though the ownership and workforce was primarily non-Indian (Guam Chamber of Commerce 2008).

In 2008 however, the U.S. Court of Appeals for the Federal Circuit ruled Section 1207 and subsequent revisions unconstitutional on equal protection grounds (U.S. Court of Appeals for the Federal Circuit 2008). Therefore, most federal procurement offices, DoD included, have switched from the SDB program to an alternate program: Historically Underutilized Business Zones (HUBZones), administered by the Small Business Administration. A U.S. small business is eligible under the HUBZone definition if it, including at least 35% of its workforce, is located in a HUBZone.

Eligible HUBZone businesses are eligible for much the same terms of the former SDB program. This includes non-bid procurement and service contracts (under \$5,000,000 for manufacturing businesses and under \$3,000,000 for any other business) or a 10% price evaluation preference in open bidding.

The entireties of Guam and the CNMI are geographically categorized as HUBZones. Thus more than 160 businesses (Murphy 2009) should benefit in this shift from SDB to HUBZones, and will gain an advantage in comparison to competing contractors based in large mainland cities. Indian reservations are automatically considered HUBZones. However the 35% residence requirement for workers makes it difficult for contractors in locations such as Alaska to use the preferences to gain an advantage in bidding.



With these legal parameters in mind, NAVFAC Pacific is creating a system of preferences worth \$1 billion for small and local businesses specific to the proposed action (Murphy 2009). The incentives in this system would hold valid for the duration of the action. Also, the Defense Logistics Agency is providing \$386,000 to establish the new Guam Procurement Technical Assistance Center at the UoG School of Business and Public Administration. The Procurement Technical Assistance Center would help small businesses on Guam navigate the DoD's procurement bureaucracy in hopes of increasing the share of contracts awarded (Hodai 2008).

#### 4.3.6.2 Construction Component

The main driver of local business impacts during the construction phase would be the specific preferences written by NAVFAC Pacific, especially their application of the Price Evaluation Adjustments on bidding for smaller contracts based on the HUBZones program. These preferences would determine how much of the total construction budget is awarded to Guam companies.

There may also be service contract opportunities (especially food and supplies), for H-2B worker camps. As of March 2009, NAVFAC Pacific was using the legal framework described above to map out set-asides for small businesses on Guam during the construction phase.

#### 4.3.6.3 Military Operational Component

Guam businesses tend to compete better for military *service* contracts, as opposed to *construction* contracts (Guam Chamber of Commerce Panel 2008). Therefore, the operational phase may bring more significant business opportunities for Guam companies. Although all supplies and products are imported from off-island services, local companies can manage service facilities such as gyms, libraries, and fast food franchises (Appendix D - Global Facilities Services Interview).

### 4.3.7 Tourism

#### 4.3.7.1 Introductory Statements

Guam's resort hub, Tumon Bay, is located in the central part of Guam and much of the commercial marine tourism activities (e.g., water skiing or scuba diving) also occur in the central area or Apra Harbor. However, both optional tour activities and the economic effects of tourism are island wide in nature.

Scoping comments included concern about impacts on tourism. Tourism is Guam's second largest private industry (GVB 2007) and is likely Guam's primary private-sector source of outside dollars injected into the economy.

While the GVB and the Guam Hotel and Restaurant Association (GHRA) generate substantial data about the industry in general and key Asian leisure market segments in particular, they have little or no data about the historical economic importance of key components of the military buildup on tourism:

- Construction activities/workers and associated business travelers
- Operational military segments (e.g., visiting friends and family of active-duty personnel, outside military coming for rest and recreation, or business travelers coming on military contracts)

Without such data, analysis is qualitative and based largely on interviews with industry leaders in 2008 and early 2009 (Appendix D).

The subsequent analysis indicates that most tourism impacts are associated with the sheer volume of the military buildup rather than unique attributes of any particular service (i.e., Marines, Navy, or Army).

However, the Navy component has some elements that will result specific tourism concerns. These are called out when appropriate.

The Army AMDTF action in and of itself would be sufficiently small that it would be unlikely to have any impacts on tourism, either in construction or operational components. However, because the Army action is occurring in conjunction with other aspects of the overall military buildup, it would somewhat magnify many of the previously discussed impacts.

#### 4.3.7.2 Unconstrained Analysis

Table 4.3-41 identifies potential impact topics for the construction and operations components, based on scoping inputs and interviews. Although more negative than positive consequences have been identified, industry leaders stressed they are not opposed to the military buildup but wish to work with the military on concerns and impacts.

**Table 4.3-41. Topics for Tourism Impact Analysis**

<i>Construction</i>	<i>Operations</i>
More airline and hotel business from planning and construction supervisory travelers.	More airline and hotel business from military friends and family, R&R, military business travelers.
Eventual island-wide infrastructure improvement.	Growth in businesses that support marine-based tourism and recreation.
Loss of workers to construction and/or pressure to increase wages (eroding competitive position).	Market loss due to conflict between military image and new branding of Guam as authentic Chamorro cultural experience.
Impacts on ocean-based tourism from environmental degradation.	Impacts on ocean-based tourism from greater competition between activities.
Blocked growth of new Chinese and Russian markets due to increased concern over Homeland Security.	Blocked growth of new Chinese and Russian markets due to increased concern over Homeland Security.
Loss of historic, cultural, or recreational attractions from land acquisition.	Loss of historic, cultural, or recreational attractions from land acquisition.
Market loss due to construction chaos, traffic, etc.	

Table 4.3-42 details the impacts that would be specifically impacted by the berthing of a U.S. Navy carrier at Apra Harbor. The bolded impact is the only impact during the operations phase that would be a result of the Navy action only (and not the Marine or Army action).

**Table 4.3-42. Topics for Tourism Impact Analysis (Aircraft Carrier Berthing)**

<i>Construction</i>	<i>Operations</i>
Impacts on ocean-based tourism from environmental degradation.	Impacts on hotel revenues and occupancy taxes from timing of large-scale exercises.
	More airline and hotel business from military friends and family, R&R, military business travelers.
	Impacts on ocean-based tourism from greater competition between activities.

#### Construction Component

##### *Increased Construction-Related Business Travel*

Hoteliers and other industry leaders interviewed for this SIAS reported an increasing amount of recent new business associated with planning for construction. They anticipate additional business from construction contract managers as military construction begins. Until recently, business travel received little attention from the visitor industry. For 2005, the GVB's study on tourism's economic impact (GVB 2007) found the vast majority (almost 96%) of expenditures from travelers came from leisure tourists, with only a little over 4% from combined government, investment, or "personal and business" travelers.

### *Infrastructure Improvement*

Infrastructure improvement is an over-arching consideration that would result in positive impacts for all business on Guam.

### *Loss of Workforce and/or Wage Increases*

The possibility of wage increases or loss of labor to higher-paying jobs during the construction component is a highly likely outcome, as wages in the construction sector are larger than those in the tourism sector. As of June 2008, average weekly earnings for hotel/lodging employees were \$277.81 (and \$345.65 for all categories of service workers combined) versus \$538.44 for the overall construction sector (GDoL 2008).

The Guam tourism industry would first seek American replacement labor for lost workers, including FAS workers. However it is reasonable to assume that some larger hotel employers may find it practical to import H-2B alien workers, who may work for lower wages, on a temporary basis during the construction period in an effort to control cost increases.

A limited increases in wages – to some point where the industry and its jobs are not imperiled – would be considered a positive outcome for workers, as would the opportunity for individuals to move from lower-paying service jobs to higher-paying construction or other jobs. Additionally, the overall quality of the Guam workforce may benefit from training and skills acquired during the construction effort.

### *Impacts on Ocean-Based Tourism from Environmental Degradation*

Guam's warm water attracts tourists to commercial activities such as scuba diving and submarine rides.

The greatest focus of concern would be from dredging at Apra Harbor. Because of rough waters outside the harbor and in many other parts of Guam's shoreline close to the main resort area of Tumon Bay, Apra Harbor is the single most popular site for both recreational divers and commercial (mainly tourist-oriented) diving operations. Siltation from dredging already affects visibility and has diving operations concerned about possible permanent coral loss (Appendix D - Marianas Yacht Club Interview 1).

There are also potential issues from run-off at various construction sites.

### *Blocked Growth of Chinese and Russian Markets*

Historically, Guam has operated its own version of a Visa Waiver Program (VWP), and the CNMI administered its own Visitor Entry Permit program that has led to substantial growth in Russian and Chinese tourism to the CNMI.

Chinese and Russian tourist access to Guam and CNMI has now become limited due to a new national VWP. The VWP permits visitors from approved countries to enter the U.S. or specified territories without a visa, thus encouraging more tourism from those countries. However, the initial list of approved countries for the VWP posted by the Department of Homeland Security in late 2008, due to security concerns and other factors, excludes the People's Republic of China and Russia for both Guam and the CNMI (for purposes of this program, Guam and the CNMI are grouped together by the Consolidated Natural Resources Act of 2008 [U.S. Public Law 110-229]).

It should be noted that the exclusion of China and Russia from the new national VWP can only be seen as a being partially caused by the proposed action. While the DoD did argue for exclusion of People's Republic of China and Russian tourists from the VWP, a military (Naval and Air Force) presence already existed on Guam prior to the proposed action and thus any defense considerations that led to these exclusions would not have been an impact of the proposed action alone.

Immediate consequences appear less serious for Guam than for the CNMI. As of 2008, air arrivals from the People's Republic of China comprised less than 0.2% of Guam's total air arrivals from all sources, and the GVB counted just 100 tourists from Russia all year (GVB 2008). However, factors such as aging demographics and competition from less expensive destinations have led Guam industry leaders to conclude their current major markets of Japan and Korea are likely to stagnate or decline, and that one of the best long-term growth prospects would be the People's Republic of China.

Various approaches to this issue are being explored. A joint Guam-CNMI task force in the summer of 2008 took the position that both Guam and the CNMI should have access to Russian and Chinese markets (Marianas Integrated Immigration Task Force 2008). Based on a GVB economic impact study (GVB 2007), the following projections were presented in a statement to the Department of Homeland Security:

Without the VWP for China and Russia, Guam can foresee a further estimated 30% decline in Japanese visitors by 2013, and another 10% decrease from current numbers by 2018, for a combined loss, respectively, of \$119.5 million and \$172.2 million in payroll, hotel lodging, and gross receipts taxes ... (Camacho 2008).

Exclusion of Chinese and Russian tourists from the VWP may not be lasting. A Department of Homeland Security "interim final rule" opened the door to eventual inclusion of the People's Republic of China and Russia in the Guam-CNMI VWP if there are "additional layered security measures, that may include but are not limited to, electronic travel authorization to screen and approve potential visitors prior to arrival on Guam and the CNMI ... (Federal Register, 74(11), 16 January 2009, p. 2827)".

The GVB is currently trying to facilitate discussions between the U.S. and People's Republic of China governments on topics such as machine-readable processing, bonding, and repatriation provisions (GVB 2009).

#### *Loss of Possible Tourism Attractions from DoD Acquisition of New Land*

There is some concern that DoD acquisition of new land would affect tourism assets. Although a direct function of new security measures following the September 11, 2001 attacks, the effective closure of Tarague and Jinapsan Beaches (below Andersen AFB) to tour groups and convenient resident access remains a lingering issue on Guam.

When considering the proposed acquisition sites however, no specific tourism assets have yet been identified in those locations. However, the GVB (Appendix D – GVB Interview) specified the Guam International Raceway as a prime focus of concern due both to its economic role in attracting racers from Asia and also because of its general social value as a place where military and civilians mingle and a venue for keeping young hot-rodders off the public roads.

#### *Tourism Market Loss Due to Construction*

Although there was initial concern about this issue, industry leaders interviewed for this SIAS now consider it a minimal risk. Historical evidence also shows that the hotel construction boom during the 1980s and 1990s was centered in the Tumon Bay resort district itself, and the tourism market was able to grow nevertheless.

## Military Operational Component

### *Increased Operations-Related Business and Leisure Travel*

It is likely that a significant increase in military personnel would generate more visits from friends and family, as well as more business travel. With an average weighted 2008 hotel occupancy of just 64% (and declining – GVB 2008), Guam hoteliers look forward to diversification of their markets and new sources of business.

Additionally, off-duty military personnel and their families are likely to patronize retail and restaurants island wide, including the central entertainment district of Tumon Bay.

Tourism organizations and hoteliers indicated that past aircraft carrier visits have always contributed positively to occupancy levels, since friends and families fly to Guam to visit off-duty Sailors. They welcome the prospect of more carrier operations for this reason (Appendix D - Guam Chamber of Commerce, GVB, GHRA Interviews).

Historically, there have also been positive economic impacts on ocean-based tourism during times of shore-leave from aircraft carriers. Dive companies fly instructors out to carriers to initiate basic instruction for open-water certifications (the entry-level step for novice scuba divers), allowing what is normally a week-long process to be completed during the Sailors' compressed time on Guam (Marianas Yacht Club 2009a).

### *Growth in Support Businesses for Ocean-Related Tourism*

Population increases are likely to provide expanded markets for support businesses. Examples suggested by officers of the Marianas Yacht Club (Appendix D – Marianas Yacht Club Interview) included the probability of a sufficient market base for:

- local retail outlet to sell smaller sailboats or parts on Guam;
- private commercial small boat repair service haul-out facility that could encourage cruising yachts to stay longer and spend more money, and would also be used by smaller commercial businesses such as dive boats and commercial fishermen.

### *Market Loss Due to Conflict Between “Militarization” of Guam and Cultural Tourism*

There is a concern that publicity of the proposed action on Guam and an increase in military activities and imagery on the island would affect visitors' on-island experiences, supplanting the desired tourism branding with a “military base brand” instead. For example, Western Guam's main thoroughfare, Marine Drive, was recently renamed “Marine Corps Drive.”

In late January 2009, the GVB launched a rebranding of Guam tourism focused away from the traditional sun-and-sand marketing and focused instead on Chamorro cultural and historical assets that are unique to Guam. The “I Am Guam” campaign is focused not just on attracting higher-spending cultural tourists to Guam, but also on encouraging the residents of Guam to help promote tourism on a personal basis by more inclusion of visitors in events such as village fiestas, explaining local culture to English-speaking tourists, etc.

The supplanting of a cultural tourism branding for one that is more militarized appears to be a strong possibility, as Japan remains the source of 80% of Guam's visitors, and there has been extensive publicity in Japan about the proposed action. However, a maximum potential adverse outcome is not inevitable. Among the factors that could determine what does actually happen would be:

- Military cooperation in exposing personnel to Chamorro culture and history themselves
- Visible presence of military police in tourist areas frequented by many off-duty Marines, to reassure Japanese visitors with negative perceptions from media accounts
- Overall military-civilian relations and communications efforts (see Section 4.5.3) that would also affect a sense of partnership with the visitor industry

#### *Impacts on Ocean-Based Tourism from More Population and Competition*

Military personnel and their families, as well as additional population from spin-off economic growth, would generate both more business for ocean-based commercial activities and also more participants in non-commercial activities such as boating and diving.

Positive effects on ocean-based tourism volume are countered by the prospect of more conflicts between various activities due to the limited number of calm-water sites on Guam as well as increased congestion in the Apra Harbor area. Tourism-based companies such as commercial submarines utilize a mooring at the Navy Base. Guam's two major dive companies, as well as many of the smaller ones, boat out of Apra Harbor and dock at Cabras Marina, going past the commercial port. This represents a choke point that is anticipated to worsen with the berthing of aircraft carriers (Appendix D - Marianas Yacht Club Interview 2).

In HI, another island environment where population growth has generated these conflicts, state government has spent a considerable amount of time attempting to mediate conflicts and work out informal or formal rules for assuring equitable access to sites equally attractive to commercial scuba dive groups, motorized boat tours, rental jet-ski users, paragliders, snorkelers, board surfers, body surfers, and swimmers (Hawaii State Department of Business, Economic Development, and Tourism 2004). Such regulatory efforts would eventually be needed on Guam over time as the visitor, military and civilian population grows, but the rapid military buildup could require such actions much more quickly.

#### *Navy Specific Impact: Impacts on Hotels from Timing of Large-Scale Exercises*

“Large-scale military exercises” do not necessarily involve aircraft carriers but often do. The issue set forth by some industry representatives (Guam Chamber of Commerce 2008; Appendix D - GVB Interview) is that active-duty military personnel on Guam are exempt from hotel occupancy taxes and may also qualify for lower rates, displacing higher-paying tourists. The relative importance of this for the industry and for the GovGuam depends on the season. It is problematic in the peak tourist seasons but less so in the industry's “elbow” (off-peak) seasons, such as spring.

#### 4.3.7.3 Constrained Analysis

The unconstrained analysis of tourism impacts is almost completely based upon direct, military or military construction, activities. These activities are just as apparent in the constrained scenario as they are in the unconstrained scenario; thus there is no discernable difference between the unconstrained and constrained impacts for tourism.

## 4.4 PUBLIC SERVICE IMPACTS

The primary focus of the public service impacts section is on estimation of required additional key professional staff stemming from the proposed action.

Estimates are based on agency surveys (Appendix C). These surveys also asked about:

- Existing conditions in regard to office or other facilities

- Issues related to staff turnover and recruitment
- Any problems attributed to the early effects of the announcement of the proposed action

The first part of this section gives an overview of agency responses to these latter three topics. The remainder of the section presents impact analysis and additional discussion on:

- Public Education Service Impacts
- Public Health and Human Services Impacts
- Public Safety Service Impacts
- Other Selected Service Agency Impacts
- Growth Permitting and Regulatory Agency Impacts

All noted impacts are independent of any needs that may result from non-project related general population growth.

#### 4.4.1 Overview of GovGuam Agency Staffing and Facility Capacities

Although agency responses to surveys were uneven, Table 4.4-1 provides an overview of the responses received that address agency staffing and facility capacities.

A general trend shown in these responses is difficulty in replacing staff or hiring new staff due to a long-term lack of funding and pay scales lower than federal employment, private-sector employment, and employment in comparable state institutions in the CONUS.

The responses also show specific Guam public agencies, particularly those involved in permitting and regulatory activities, losing skilled personnel to federal agencies or private-sector companies coming to Guam for purposes related to the proposed action.

Questions about facilities were reported at varying levels of capacity, and should be analyzed on an agency by agency basis.

It should be noted that the table does not include a few agencies mentioned in subsequent pages. That is because those agencies did not complete surveys. For these few agencies, the ratio of service population to staff was determined through interviews or other documents such as agency annual reports.

**Table 4.4-1. Summary of Agency Survey Comments on Existing Facility and Staffing Challenges**

<i>Agency</i>	<i>Capacity of Agency Facilities</i>	<i>Staffing Problems (Recruitment or Turnover)</i>	<i>Staffing Problems Attributed to Proposed Action</i>
<b>Public Education</b>			
GPSS	No response	(See Appendix C for comprehensive listing)	
GCC	Additional capacity available	No current shortages; however, recruiting nurses required higher pay scales	
UoG	A majority of facilities at maximum capacity (see Appendix C for comprehensive listing)	Hiring new employees is difficult primarily due to funding constraints, not the military buildup; however . . .	... four employees have left for private sector or federal work related to the military buildup.
<b>Public Health and Human Services</b>			
GMHA	Lack of acute treatment beds	Hiring qualified applicants is difficult due to low pay scales	
GDPHSS, BCDC	No response	No current shortages	
GDPHSS, DEH	Main facility at maximum capacity	Hard to recruit and keep professional field personnel	

<i>Agency</i>	<i>Capacity of Agency Facilities</i>	<i>Staffing Problems (Recruitment or Turnover)</i>	<i>Staffing Problems Attributed to Proposed Action</i>
GDPHSS, BFHNS	Mixed capacity at existing facilities	A nurse's aide, three nurses, and a pediatrician are needed	
GDPHSS, BPC	Additional capacity available	Hiring new employees is difficult due to funding constraints and low pay scales	
GDPHSS, Division of Public Welfare	A majority of facilities at maximum capacity	Management, eligibility specialist, social workers, program coordinators, and management analysts are needed	N/A
GDMHSA	Additional capacity possible	No current shortages	N/A
GDISID	Additional capacity possible	No funds for additional staff – social workers, program coordinators, and counselors are needed	N/A
<b>Public Safety</b>			
GPD	No response	A psychologist is needed; otherwise, no current shortage	N/A
GFD	Mixed capacity at existing facilities	No current shortage	N/A
GDoC	Mixed capacity at existing facilities	Hiring new officers is difficult due to low pay scales as compared to other law enforcement agencies	N/A
GDYA	Mixed capacity at existing facilities	Youth service workers and clerical and program personnel	N/A
<b>Selected Other Agencies</b>			
(GDPR)	Chronic under-funding has led to deferred maintenance	Hiring qualified applicants is difficult, primarily due to low pay scales	A staff archeologist is planning to leave for higher pay scale in the private/federal sector
GPLS	Additional capacity possible	Qualified librarians have to be recruited from outside Guam because the UoG lacks a Master's degree in Library Science; otherwise, hiring new employees is difficult due to funding constraints	N/A
<b>Permitting Agencies</b>			
Guam Coastal Zone Management (aka Guam Coastal Resource Management Program)	N/A	A biologist, GIS specialists, and planners are needed	(The needs to left were identified as military-related, but no further explanation was given as to why this was due to the military rather than other factors.)



Agency	Capacity of Agency Facilities	Staffing Problems (Recruitment or Turnover)	Staffing Problems Attributed to Proposed Action
GDLM	N/A	No response	
GWA	N/A	Hiring qualified applicants is difficult due to low pay scale in comparison to new private sector engineering firms	The influx of new engineering firms followed the DoD buildup announcement
GDPR, HPO	N/A	Hiring qualified applicants is difficult due to low pay scales	A staff archeologist is planning to leave for higher pay scale in the private/federal sector
GDPHSS	N/A	No current shortage	N/A
GFD, Fire Prevention Bureau	N/A	Hiring necessary employees is difficult due to funding constraints	N/A
GPA	N/A	Hiring qualified applicants is difficult due to low pay scales	A Surveyor Supervisor recently left to work at a private engineering firm in anticipation of the buildup.

Notes: The surveys of permitting agencies were done separately and focused solely on staffing issues. Agency survey reproduced in Appendix C. Some agency interviews reproduced in Appendix D also address these issues.

#### 4.4.2 Public Education Service Impacts

##### 4.4.2.1 Introductory Statements

Impacts on public primary, secondary, and high schools run by GPSS and on GCC and UoG were analyzed. In particular, quantitative analysis was conducted on the proposed action's impact on:

- Student population numbers
- GPSS teacher and GCC and UoG non-adjunct faculty requirements

The capacity of private or military schooling on Guam was not analyzed, although the presence of such resources was taken into account when analyzing impact on public facilities.

The impacts discussed are independent of any needs that may result from non-project related general population growth.

##### 4.4.2.2 Unconstrained Analysis

###### Construction Component Assumptions

Table 4.4-2 presents the key construction component assumptions used in analysis of impacts as well as the source or rationale of these assumptions. These include:

- Analysis used the current teacher to student ratios determined through agency surveys.
- The most recent available statistics were used to determine the percentage breakdown of the new *civilian* population that would attend GPSS and private schools at the various levels as well as UoG and GCC.
- Analysis assumed no H-2B population impact on primary, secondary or higher education.

**Table 4.4-2. Construction Component Assumptions for Public Education Agency Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Elementary Teacher : Student Ratio	1 : 14	GPSS elementary teacher to student ratio (2005-2008). This ratio is supported by the agreement between the Guam Federation of Teachers AFT Local 1581 AFL-CIO and the Guam Education Policy Board (GEPB) contract requirements that mandates specific GPSS teacher to student ratios. (Agreement between the Guam Federation of Teachers AFT Local 1581 AFL-CIO and the Guam Education Policy Board for GPSS Teachers).
Middle School Teacher : Student Ratio	1 : 14	GPSS middle school teacher to student ratio (2005-2008). Remained at 1:14 from 2005 - 2008. This ratio is supported by the GEPB agreement mentioned above.
High School Teacher : Student Ratio	1 : 19	GPSS high school teacher to student ratio (2005 – 2008). Remained at 1:19 from 2005 through 2008. This ratio is supported by the GEPB agreement mentioned above.
GCC Non-adjunct Faculty : Post-Secondary Student Ratio	1 : 18	2007 GCC non-adjunct faculty to post-secondary student ratio. (GCC 2007)
UoG Non-adjunct Faculty : Post-Secondary Student Ratio	1 : 18	2000-2007 non-adjunct faculty to student ratios remained relatively steady at 1:18 (University of Guam Survey [Appendix C]).
% civilian island population composed of primary, middle and high school age youth	Primary – 14% Middle – 5% High – 6%	Primary school age used: 5-11 years old Middle school age used: 12-14 years old High school age used: 15-18 years old (U.S. Census Bureau 2000)
% civilian school-age population attending public and private schools	Public – 86% Private – 14%	1991-2004 Guam public and private school enrollments. (Guam Statistics 2005)
% adult (18 years and above) civilian population attending GCC or UoG	GCC – 2% UoG – 3%	2007 GCC and UoG enrollment (GCC and UoG Surveys [Appendix C] compared with 2007 adult civilian population estimate.
Number of school-age dependents accompanying H-2B workers	0	Interviews with contractors, GCA, and GDoL (Appendix D)
Number of H-2B workers attending GCC or UoG	0	Although H-2B workers are able to access some continuing education classes, their numbers are not tracked. To the extent that GCC might accommodate cohorts of H-2B workers in continuing education classes such as ESL, these cohorts would most likely be arranged by sponsoring construction companies and GCC and staffing for the classes taken care of on an as-needed basis. (GCC Interview [Appendix D]).

#### Military Operational Component Assumptions

The Table below presents the key *operational component* assumptions used in analysis of impacts, as well as the source or rationale of these assumptions. Assumptions include:

- The assumption that increases in DoD school population will be absorbed by existing or new DDESS schools.
- The most recent available statistics were used to determine the percentage breakdown of the new *military* population that would take classes at UoG and GCC. Operational Component

**Table 4.4-3. Operational Component Assumptions for Public Education Agency Impacts**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
All quantitative assumptions for construction component also apply for the operational component, unless negated by the assumptions listed below.		
% of civilian DoD workers whose dependents would be attending DDESS schools.	75%	Assumption is that 50% of civilian DoD workers would be from off-island. Additionally, 25% of civilian DoD workers would be the spouses of active duty military. The dependents of these individuals would be eligible for education through the DDESS system. See above labor section for rationale of DoD worker percentage assumptions.
% students eligible to attend DDESS schools that would go to GPSS schools instead.	0%	Assumption is that – of those dependents of active duty military and DoD civilian workers eligible to attend DDESS schools – none would attend GPSS schools, although some might choose to attend faith-based or other private schools. (Guam DDESS and Guam Public School System Interviews [Appendix D]).
% of active duty military population enrolled in UoG classes.	0.2%	Number of 2005 UoG active duty military enrollments and total 2005 active duty military population numbers. (UoG Survey [Appendix C]).
% of military dependent population enrolled in UoG classes.	0.3%	Analysis of 2005 UoG military dependent enrollment statistics and total military dependent population numbers.

#### Estimation of Effects

##### *Effects on GPSS Student Populations*

Table 4.4-3 provides an overview of the proposed action's impacts on GPSS student populations for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-3. GPSS Student Population Impacts Summary (Unconstrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GPSS Elementary	14,436	2014	4,018	28%	932	6%	Table 4.4-4
GPSS Middle	6,887	2014	1,685	24%	391	6%	Table 4.4-5
GPSS High	9,661	2014	2,234	23%	518	5%	Table 4.4-6

**Table 4.4-4. Impact on GPSS Elementary Student Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	440	1,066	1754	2099	2,160	1,440	448	0	0	0	0
	Indirect Construction	172	467	823	976	983	548	38	0	0	0	0
	<b>Total Construction Impact</b>	<b>612</b>	<b>1,533</b>	<b>2,578</b>	<b>3,075</b>	<b>3,143</b>	<b>1,989</b>	<b>486</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	37	112	113	112	686	720	720	720	720	720	720
	Indirect Operations	11	34	34	34	188	212	212	212	212	212	212
	<b>Total Operations Impact</b>	<b>48</b>	<b>146</b>	<b>147</b>	<b>146</b>	<b>875</b>	<b>932</b>	<b>932</b>	<b>932</b>	<b>932</b>	<b>932</b>	<b>932</b>
	<b>Combined Direct Impact</b>	<b>477</b>	<b>1,178</b>	<b>1,867</b>	<b>2,211</b>	<b>2,847</b>	<b>2,160</b>	<b>1,168</b>	<b>720</b>	<b>720</b>	<b>720</b>	<b>720</b>
	<b>Combined Indirect Impact</b>	<b>183</b>	<b>501</b>	<b>857</b>	<b>1,010</b>	<b>1,171</b>	<b>760</b>	<b>250</b>	<b>212</b>	<b>212</b>	<b>212</b>	<b>212</b>
	<b>Combined Total Impact</b>	<b>661</b>	<b>1,679</b>	<b>2,725</b>	<b>3,221</b>	<b>4,018</b>	<b>2,920</b>	<b>1,418</b>	<b>932</b>	<b>932</b>	<b>932</b>	<b>932</b>

**Table 4.4-5. Impact on GPSS Middle School Student Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	185	447	736	880	906	604	188	0	0	0	0
	Indirect Construction	72	196	345	410	412	230	16	0	0	0	0
	<b>Total Construction Impact</b>	<b>257</b>	<b>643</b>	<b>1081</b>	<b>1290</b>	<b>1,319</b>	<b>834</b>	<b>204</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	15	47	47	47	288	302	302	302	302	302	302
	Indirect Operations	5	14	14	14	79	89	89	89	89	89	89
	<b>Total Operations Impact</b>	<b>20</b>	<b>61</b>	<b>62</b>	<b>61</b>	<b>367</b>	<b>391</b>	<b>391</b>	<b>391</b>	<b>391</b>	<b>391</b>	<b>391</b>
	<b>Combined Direct Impact</b>	<b>200</b>	<b>494</b>	<b>783</b>	<b>927</b>	<b>1,194</b>	<b>906</b>	<b>490</b>	<b>302</b>	<b>302</b>	<b>302</b>	<b>302</b>
	<b>Combined Indirect Impact</b>	<b>77</b>	<b>210</b>	<b>360</b>	<b>424</b>	<b>491</b>	<b>319</b>	<b>105</b>	<b>89</b>	<b>89</b>	<b>89</b>	<b>89</b>
	<b>Combined Total Impact</b>	<b>277</b>	<b>704</b>	<b>1,143</b>	<b>1,351</b>	<b>1,685</b>	<b>1,225</b>	<b>595</b>	<b>391</b>	<b>391</b>	<b>391</b>	<b>391</b>

**Table 4.4-6. Impact on GPSS High School Student Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	245	593	976	1,167	1,201	801	249	0	0	0	0
	Indirect Construction	96	260	458	543	547	305	21	0	0	0	0
	<b>Total Construction Impact</b>	<b>340</b>	<b>852</b>	<b>1,433</b>	<b>1,710</b>	<b>1,748</b>	<b>1,106</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	20	62	63	62	382	400	400	400	400	400	400
	Indirect Operations	6	19	19	19	105	118	118	118	118	118	118
	<b>Total Operations Impact</b>	<b>27</b>	<b>81</b>	<b>82</b>	<b>81</b>	<b>486</b>	<b>518</b>	<b>518</b>	<b>518</b>	<b>518</b>	<b>518</b>	<b>518</b>
	<b>Combined Direct Impact</b>	<b>265</b>	<b>655</b>	<b>1,038</b>	<b>1,230</b>	<b>1,583</b>	<b>1,201</b>	<b>649</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>
	<b>Combined Indirect Impact</b>	<b>102</b>	<b>279</b>	<b>477</b>	<b>562</b>	<b>651</b>	<b>423</b>	<b>139</b>	<b>118</b>	<b>118</b>	<b>118</b>	<b>118</b>
	<b>Combined Total Impact</b>	<b>367</b>	<b>934</b>	<b>1,515</b>	<b>1,791</b>	<b>2,234</b>	<b>1,624</b>	<b>788</b>	<b>518</b>	<b>518</b>	<b>518</b>	<b>518</b>

*Effects on GPSS Teacher Requirements*

Table 4.4-7 provides an overview of the proposed action's impacts on GPSS staffing for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-7. Primary and Secondary Education Teacher Requirements Impacts Summary (Unconstrained)**

<i>Agency</i>	<i>Current Teacher Numbers</i>	<i>Peak Year</i>	<i>Peak Year Teacher Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady State Teacher Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GPSS Elementary	1035	2014	290	28%	67	6%	Table 4.4-8
GPSS Middle	504	2014	123	24%	29	6%	Table 4.4-9
GPSS High	514	2014	119	23%	28	5%	Table 4.4-10

**Table 4.4-8. Additional GPSS Elementary Teachers Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:14</b>										
Additional Capacity Required	Direct Construction	32	77	127	151	156	104	32	0	0	0	0
	Indirect Construction	12	34	59	70	71	40	3	0	0	0	0
	<b>Total Construction Impact</b>	<b>36</b>	<b>93</b>	<b>147</b>	<b>180</b>	<b>191</b>	<b>129</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	3	8	8	8	50	52	52	52	52	52	52
	Indirect Operations	1	2	2	2	14	15	15	15	15	15	15
	<b>Total Operations Impact</b>	<b>3</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>63</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>
	<b>Combined Direct Impact</b>	<b>34</b>	<b>85</b>	<b>135</b>	<b>160</b>	<b>205</b>	<b>156</b>	<b>84</b>	<b>52</b>	<b>52</b>	<b>52</b>	<b>52</b>
	<b>Combined Indirect Impact</b>	<b>13</b>	<b>36</b>	<b>62</b>	<b>73</b>	<b>84</b>	<b>55</b>	<b>18</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>
	<b>Combined Total Impact</b>	<b>48</b>	<b>121</b>	<b>197</b>	<b>232</b>	<b>290</b>	<b>211</b>	<b>102</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>

**Table 4.4-9. Additional GPSS Middle School Teachers Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:14</b>										
Additional Capacity Required	Direct Construction	14	33	54	64	66	44	14	0	0	0	0
	Indirect Construction	5	14	25	30	30	17	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>15</b>	<b>39</b>	<b>62</b>	<b>77</b>	<b>81</b>	<b>55</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	3	3	3	21	22	22	22	22	22	22
	Indirect Operations	0	1	1	1	6	6	6	6	6	6	6
	<b>Total Operations Impact</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>27</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>
	<b>Combined Direct Impact</b>	<b>15</b>	<b>36</b>	<b>57</b>	<b>68</b>	<b>87</b>	<b>66</b>	<b>36</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>
	<b>Combined Indirect Impact</b>	<b>6</b>	<b>15</b>	<b>26</b>	<b>31</b>	<b>36</b>	<b>23</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
	<b>Combined Total Impact</b>	<b>20</b>	<b>52</b>	<b>84</b>	<b>99</b>	<b>123</b>	<b>90</b>	<b>44</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>

**Table 4.4-10. Additional GPSS High School Teachers Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:19</b>										
Additional Capacity Required	Direct Construction	13	32	52	62	64	43	13	0	0	0	0
	Indirect Construction	5	14	24	29	29	16	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>15</b>	<b>38</b>	<b>60</b>	<b>74</b>	<b>78</b>	<b>53</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	3	3	3	20	21	21	21	21	21	21
	Indirect Operations	0	1	1	1	6	6	6	6	6	6	6
	<b>Total Operations Impact</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>26</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>
	<b>Combined Direct Impact</b>	<b>14</b>	<b>35</b>	<b>55</b>	<b>65</b>	<b>84</b>	<b>64</b>	<b>35</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>
	<b>Combined Indirect Impact</b>	<b>5</b>	<b>15</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>22</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
	<b>Combined Total Impact</b>	<b>20</b>	<b>50</b>	<b>81</b>	<b>95</b>	<b>119</b>	<b>86</b>	<b>42</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>

Effects on GCC and UoG Student Populations and Non-Adjunct Faculty Requirements

Table 4.4-11 and Table 4.4-12 provide overviews of the proposed action’s impacts on GCC and UoG student populations and non-adjunct faculty requirements for the action’s peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-11. Higher Education Student Population Impacts Summary (Unconstrained)**

Agency	Current Service Population	Peak Year	Peak Year Additional Service Population	Peak Year Percentage Increase	Steady Additional Service Population (going forward)	Steady Requirements Percentage Increase	Table with year by Year Break-down
GCC	1,806	2014	565	31%	170	9%	Table 4.4-13
UoG	3,282	2014	989	30%	268	8%	Table 4.4-14

**Table 4.4-12. Higher Education Faculty Requirement Impacts Summary (Unconstrained)**

Agency	Current Non-adjunct Faculty Numbers	Peak Year	Peak Year Non-adjunct Faculty Requirements	Peak Year Percentage Increase	Steady Non-adjunct Faculty Requirements (going forward)	Steady Requirements Percentage Increase	Table with Year by Year Break-down
GCC	100	2014	31	31%	9	9%	Table 4.4-13
UoG	185	2014	56	30%	15	8%	Table 4.4-14

**Table 4.4-13. Impact on Post-Secondary Student Population at GCC and Additional Non-Adjunct GCC Faculty Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:18</b>										
Increase in Service Population	Direct Construction	62	153	255	306	314	206	59	0	0	0	0
	Indirect Construction	17	45	79	92	93	51	3	0	0	0	0
	<b>Total Construction Impact</b>	<b>79</b>	<b>198</b>	<b>333</b>	<b>398</b>	<b>406</b>	<b>257</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	8	23	23	23	145	154	154	154	154	154	154
	Indirect Operations	1	2	2	2	13	16	16	16	16	16	16
	<b>Total Operations Impact</b>	<b>9</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>158</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>
	<b>Combined Direct Impact</b>	<b>71</b>	<b>176</b>	<b>278</b>	<b>329</b>	<b>459</b>	<b>360</b>	<b>214</b>	<b>154</b>	<b>154</b>	<b>154</b>	<b>154</b>
	<b>Combined Indirect Impact</b>	<b>17</b>	<b>47</b>	<b>81</b>	<b>94</b>	<b>106</b>	<b>67</b>	<b>19</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	<b>Combined Total Impact</b>	<b>88</b>	<b>223</b>	<b>358</b>	<b>423</b>	<b>565</b>	<b>427</b>	<b>233</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>
Additional Capacity Required	Direct Construction	3	8	14	17	17	11	3	0	0	0	0
	Indirect Construction	1	3	4	5	5.1	2.8	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>4</b>	<b>9</b>	<b>15</b>	<b>18</b>	<b>19</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	1	1	1	8	9	9	9	9	9	9
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
	<b>Combined Direct Impact</b>	<b>4</b>	<b>10</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>20</b>	<b>12</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>5</b>	<b>12</b>	<b>20</b>	<b>23</b>	<b>31</b>	<b>24</b>	<b>13</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>

**Table 4.4-14. Impact on UoG Student Population and Additional Non-Adjunct UoG Faculty Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:18</b>										
Increase in Service Population	Direct Construction	114	278	463	555	570	374	108	0	0	0	0
	Indirect Construction	30	82	143	167	168	93	6	0	0	0	0
	<b>Total Construction Impact</b>	<b>144</b>	<b>360</b>	<b>606</b>	<b>722</b>	<b>738</b>	<b>467</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	13	37	37	37	230	244	244	244	244	244	244
	Indirect Operations	1	3	3	3	21	25	25	25	25	25	25
	<b>Total Operations Impact</b>	<b>14</b>	<b>41</b>	<b>41</b>	<b>41</b>	<b>251</b>	<b>268</b>	<b>268</b>	<b>268</b>	<b>268</b>	<b>268</b>	<b>268</b>
	<b>Combined Direct Impact</b>	<b>126</b>	<b>315</b>	<b>500</b>	<b>592</b>	<b>800</b>	<b>618</b>	<b>352</b>	<b>244</b>	<b>244</b>	<b>244</b>	<b>244</b>
	<b>Combined Indirect Impact</b>	<b>31</b>	<b>86</b>	<b>146</b>	<b>171</b>	<b>189</b>	<b>118</b>	<b>31</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>
	<b>Combined Total Impact</b>	<b>158</b>	<b>401</b>	<b>646</b>	<b>763</b>	<b>989</b>	<b>736</b>	<b>382</b>	<b>268</b>	<b>268</b>	<b>268</b>	<b>268</b>
Additional Capacity Required	Direct Construction	6	16	26	31	32	21	6	0	0	0	0
	Indirect Construction	2	5	8	9	9	5	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>7</b>	<b>17</b>	<b>27</b>	<b>33</b>	<b>35</b>	<b>24</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	13	14	14	14	14	14	14
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>
	<b>Combined Direct Impact</b>	<b>7</b>	<b>18</b>	<b>28</b>	<b>33</b>	<b>45</b>	<b>35</b>	<b>20</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Combined Indirect Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Combined Total Impact</b>	<b>9</b>	<b>23</b>	<b>36</b>	<b>43</b>	<b>56</b>	<b>41</b>	<b>22</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	

4.4.2.3 Constrained Analysis

Assumptions

The unconstrained assumptions apply to this analysis. The differences between the unconstrained and constrained analyses are due to the difference in service population estimates under the two scenarios.

Estimation of Effects

*Effects on GPSS Student Populations*

Table 4.4-15 provides an overview of the proposed action’s impacts on GPSS student populations for the action’s peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-15. Impact on GPSS Elementary Student Population Summary (Constrained)**

Agency	Current Service Population	Peak Year	Peak Year Additional Service Population	Peak Year Percentage Increase	Steady Additional Service Population (going forward)	Steady Requirements Percentage Increase	Table with year by Year Break-down
GPSS Elementary	14,436	2014	2,021	28%	785	5%	Table 4.4-16
GPSS Middle	6,887	2014	848	24%	329	5%	Table 4.4-17
GPSS High	9,661	2014	927	23%	398	4%	Table 4.4-18



**Table 4.4-16. Impact on GPSS Elementary Student Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	198	493	820	1,010	1,112	914	241	0	0	0	0
	Indirect Construction	45	110	185	225	253	239	55	0	0	0	0
	<b>Total Construction Impact</b>	243	604	1,005	1,234	1,365	1,153	296	0	0	0	0
	Direct Operations	26	89	89	89	549	651	651	651	651	651	651
	Indirect Operations	6	19	19	19	107	134	134	134	134	134	134
	<b>Total Operations Impact</b>	32	108	108	108	655	785	785	785	785	785	785
	<b>Combined Direct Impact</b>	224	583	909	1,099	1,661	1,565	891	651	651	651	651
	<b>Combined Indirect Impact</b>	50	129	204	244	360	373	190	134	134	134	134
	<b>Combined Total Impact</b>	275	712	1,113	1,342	2,021	1,938	1,081	785	785	785	785

**Table 4.4-17. Impact on GPSS Middle School Student Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	83	207	344	423	467	384	101	0	0	0	0
	Indirect Construction	19	46	78	94	106	100	23	0	0	0	0
	<b>Total Construction Impact</b>	102	253	422	518	573	484	124	0	0	0	0
	Direct Operations	11	38	37	37	230	273	273	273	273	273	273
	Indirect Operations	2	8	8	8	45	56	56	56	56	56	56
	<b>Total Operations Impact</b>	13	45	45	45	275	329	329	329	329	329	329
	<b>Combined Direct Impact</b>	94	244	381	461	697	657	374	273	273	273	273
	<b>Combined Indirect Impact</b>	21	54	85	102	151	156	80	56	56	56	56
	<b>Combined Total Impact</b>	115	299	467	563	848	813	453	329	329	329	329

**Table 4.4-18. Impact on GPSS High School Student Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	94	225	358	456	463	395	124	0	0	0	0
	Indirect Construction	20	47	75	94	101	100	28	0	0	0	0
	<b>Total Construction Impact</b>	113	272	433	550	564	495	152	0	0	0	0
	Direct Operations	15	48	48	48	304	333	333	333	333	333	333
	Indirect Operations	3	10	10	10	59	65	65	65	65	65	65
	<b>Total Operations Impact</b>	18	59	58	58	363	398	398	398	398	398	398
	<b>Combined Direct Impact</b>	108	273	407	504	767	728	457	333	333	333	333
	<b>Combined Indirect Impact</b>	23	58	85	105	160	165	93	65	65	65	65
	<b>Combined Total Impact</b>	131	330	491	609	927	893	550	398	398	398	398

*Effects on GPSS Teacher Requirements*

Table 4.4-19 provides an overview of the proposed action's impacts on GPSS staffing for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-19. Primary and Secondary Education Impacts Summary (Constrained)**

<i>Agency</i>	<i>Current Teacher Numbers</i>	<i>Peak Year</i>	<i>Peak Year Teacher Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Teacher Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GPSS Elementary	1035	2014	146	14%	57	5%	Table 4.4-20
GPSS Middle	504	2014	62	12%	24	5%	Table 4.4-21
GPSS High	514	2014	49	10%	21	4%	Table 4.4-22

**Table 4.4-20. Additional GPSS Elementary Teachers Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:14</b>										
Additional Capacity Required	Direct Construction	14	36	59	73	80	66	17	0	0	0	0
	Indirect Construction	3	8	13	16	18	17	4	0	0	0	0
	<b>Total Construction Impact</b>	<b>15</b>	<b>37</b>	<b>59</b>	<b>74</b>	<b>85</b>	<b>75</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	2	6	6	6	40	47	47	47	47	47	47
	Indirect Operations	0	1	1	1	8	10	10	10	10	10	10
	<b>Total Operations Impact</b>	<b>2</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>47</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>57</b>
	<b>Combined Direct Impact</b>	<b>16</b>	<b>42</b>	<b>66</b>	<b>79</b>	<b>120</b>	<b>113</b>	<b>64</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>47</b>
	<b>Combined Indirect Impact</b>	<b>4</b>	<b>9</b>	<b>15</b>	<b>18</b>	<b>26</b>	<b>27</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
	<b>Combined Total Impact</b>	<b>20</b>	<b>51</b>	<b>80</b>	<b>97</b>	<b>146</b>	<b>140</b>	<b>78</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>57</b>

**Table 4.4-21. Additional GPSS Middle School Teachers Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:14</b>										
Additional Capacity Required	Direct Construction	6	15	25	31	34	28	7	0	0	0	0
	Indirect Construction	1	3	6	7	8	7	2	0	0	0	0
	<b>Total Construction Impact</b>	<b>6</b>	<b>16</b>	<b>25</b>	<b>32</b>	<b>36</b>	<b>32</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	3	3	3	17	20	20	20	20	20	20
	Indirect Operations	0	1	1	1	3	4	4	4	4	4	4
	<b>Total Operations Impact</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>20</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>
	<b>Combined Direct Impact</b>	<b>7</b>	<b>18</b>	<b>28</b>	<b>34</b>	<b>51</b>	<b>48</b>	<b>27</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
	<b>Combined Indirect Impact</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Total Impact</b>	<b>8</b>	<b>22</b>	<b>34</b>	<b>41</b>	<b>62</b>	<b>59</b>	<b>33</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>

**Table 4.4-22. Additional GPSS High School Teachers Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:19</b>										
New Capacity Required	Direct Construction	5	12	19	24	25	21	7	0	0	0	0
	Indirect Construction	1	3	4	5	5	5	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>6</b>	<b>14</b>	<b>23</b>	<b>29</b>	<b>30</b>	<b>26</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	3	3	3	16	18	18	18	18	18	18
	Indirect Operations	0	1	1	1	3	3	3	3	3	3	3
	<b>Total Operations Impact</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>19</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>
	<b>Combined Direct Impact</b>	<b>6</b>	<b>15</b>	<b>22</b>	<b>27</b>	<b>41</b>	<b>39</b>	<b>24</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>9</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	<b>Combined Total Impact</b>	<b>7</b>	<b>18</b>	<b>26</b>	<b>32</b>	<b>49</b>	<b>48</b>	<b>29</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>

*Effects on GCC and UoG Student Populations and Non-Adjunct Faculty Requirements*

Table 4.4-23 and Table 4.4-24 provide an overview of the proposed action's impacts on GCC and UoG student populations and non-adjunct faculty requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-23. Higher Education Student Population Impacts Summary (Constrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GCC	1,806	2014	306	17%	151	8%	Table 4.4-25
UoG	3,282	2014	520	16%	234	7%	Table 4.4-26

**Table 4.4-24. Higher Education Faculty Requirement Impacts Summary (Constrained)**

<i>Agency</i>	<i>Current Non-adjunct Faculty Numbers</i>	<i>Peak Year</i>	<i>Peak Year Non-adjunct Faculty Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Non-adjunct Faculty Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GCC	100	2014	17	17%	8	8%	Table 4.4-25
UoG	185	2014	29	16%	13	7%	Table 4.4-26

**Table 4.4-25. Impact on Post-Secondary Student Population at GCC and Additional Non-Adjunct GCC Faculty Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:18</b>										
Increase in Service Population	Direct Construction	28	70	117	145	159	131	34	0	0	0	0
	Indirect Construction	3	8	13	15	18	19	4	0	0	0	0
	<b>Total Construction Impact</b>	<b>31</b>	<b>78</b>	<b>130</b>	<b>160</b>	<b>176</b>	<b>149</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	6	19	19	19	123	142	142	142	142	142	142
	Indirect Operations	0	1	1	1	7	9	9	9	9	9	9
	<b>Total Operations Impact</b>	<b>7</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>130</b>	<b>151</b>	<b>151</b>	<b>151</b>	<b>151</b>	<b>151</b>	<b>151</b>
	<b>Combined Direct Impact</b>	<b>35</b>	<b>90</b>	<b>137</b>	<b>164</b>	<b>282</b>	<b>272</b>	<b>176</b>	<b>142</b>	<b>142</b>	<b>142</b>	<b>142</b>
	<b>Combined Indirect Impact</b>	<b>3</b>	<b>9</b>	<b>14</b>	<b>16</b>	<b>24</b>	<b>28</b>	<b>13</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
	<b>Combined Total Impact</b>	<b>38</b>	<b>98</b>	<b>150</b>	<b>180</b>	<b>306</b>	<b>300</b>	<b>189</b>	<b>151</b>	<b>151</b>	<b>151</b>	<b>151</b>
Additional Capacity Required	Direct Construction	2	4	7	8	9	7	2	0	0	0	0
	Indirect Construction	0	0	1	1	1	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	1	1	1	7	8	8	8	8	8	8
	Indirect Operations	0	0	0	0	0	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>
	<b>Combined Direct Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>16</b>	<b>15</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>17</b>	<b>17</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>

**Table 4.4-26. Impact on UoG Student Population and Additional Non-Adjunct UoG Faculty Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:18</b>										
Increase in Service Population	Direct Construction	51	128	213	263	289	237	62	0	0	0	0
	Indirect Construction	6	14	23	27	32	34	7	0	0	0	0
	<b>Total Construction Impact</b>	<b>57</b>	<b>142</b>	<b>236</b>	<b>290</b>	<b>321</b>	<b>271</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	10	30	30	30	189	220	220	220	220	220	220
	Indirect Operations	1	2	2	2	10	14	14	14	14	14	14
	<b>Total Operations Impact</b>	<b>10</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>199</b>	<b>234</b>	<b>234</b>	<b>234</b>	<b>234</b>	<b>234</b>	<b>234</b>
	<b>Combined Direct Impact</b>	<b>61</b>	<b>158</b>	<b>243</b>	<b>293</b>	<b>478</b>	<b>457</b>	<b>282</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>220</b>
	<b>Combined Indirect Impact</b>	<b>6</b>	<b>16</b>	<b>24</b>	<b>29</b>	<b>42</b>	<b>48</b>	<b>21</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Combined Total Impact</b>	<b>67</b>	<b>174</b>	<b>268</b>	<b>322</b>	<b>520</b>	<b>505</b>	<b>303</b>	<b>234</b>	<b>234</b>	<b>234</b>	<b>234</b>
Additional Capacity Required	Direct Construction	3	7	12	15	16	13	4	0	0	0	0
	Indirect Construction	0	1	1	2	2	2	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>14</b>	<b>16</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	11	12	12	12	12	12	12
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
	<b>Combined Direct Impact</b>	<b>3</b>	<b>9</b>	<b>14</b>	<b>16</b>	<b>27</b>	<b>26</b>	<b>16</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>4</b>	<b>10</b>	<b>15</b>	<b>18</b>	<b>29</b>	<b>28</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>

#### 4.4.2.4 Additional Public Education Services Discussion

While the above quantitative analysis focuses on the proposed action's impact on required teachers and non-adjunct faculty for GPSS, GCC and UoG, there are important factors regarding the impact of the proposed action on Guam's public education system, detailed here.

##### GPSS Teacher to Student Ratios

The current GPSS baseline existing teacher to student ratios are within the U.S. national average of teacher to student ratios in public elementary and secondary schools (1:15.5) (School Data Direct 2009).

However, these GPSS ratios do not capture problems with teacher absenteeism. Reports in 2008 indicate the absenteeism of Guam teachers overtook that of students and that on an average school day on Guam 12% of GPSS employees were absent versus less than 7% of GPSS students (Guam Department of Education 2008).

A related difficulty is that these GPSS teacher to student ratios are maintained because they are preserved by an Education Policy Board union contract. The adherence to these ratios can sometimes decrease GPSS's ability to divert its budget to other areas of need (Appendix D – GPSS Interview).

### GPSS Teacher Recruitment

GPSS's ability to meet the demand for new GPSS teachers shown in the tables above depends on a number of factors.

Firstly, Guam's teacher supply must be adequate. Administrators believe that the expansion of the DDESS system to meet the increasing educational needs of Guam's military population might siphon off GPSS teachers (Appendix D – GPSS Interview). Normally, DDESS teachers in other countries are hired through the federal system; however, DDESS teachers on Guam are mostly local and are attracted to better pay and benefits than offered by GPSS (Appendix D – GPSS Interview).

On the other hand, the proposed action brings the benefit that some incoming military spouses might be qualified to teach in the public schools.

### GPSS Administrative Staffing

Other staff positions in GPSS represent an important aspect not included in the analysis above. Examples of these positions include: principals and assistants, administrators, health counselors, cafeteria, custodial/maintenance, and school aides.

Survey results (Appendix C – GPSS Survey) indicate that there is an approximate 2:1 ratio between teachers and administrative staff in the GPSS school system. Thus the number of required additional teachers indicated in the tables above could be cut in half to indicate the number of additional GPSS administrative staffing that would be required.

### GPSS Facilities

GPSS facilities also should be considered in a discussion of the proposed action's impact. There is an existing need for improvement of GPSS classrooms. As of the fall semester of 2008, parts of 20 schools had been shut down, and five schools were forced to open late due to health and safety concerns (Kelman 2008). Three new schools are currently being planned. These schools are most required in the north and central areas, areas of current school over-crowding (for example JFK and George Washington high schools). Schools in the southern region, on the other hand, often have vacant spaces (Appendix D – GPSS Interview).

Guam Public Law 28-009 "Limitations on Capacity Levels for the Construction of New Public Schools" (Guam Code Annotated Title 17 Sec. 7113) specifies the following capacity levels for GPSS schools and indicates that the proposed action's impact on public school student populations requires the construction of new schools. Furthermore, the GDPHSS DEH "Rules to Regulations Pertaining to School Sanitation" (GDPHSS Division of Environmental Services 1984) indicate general per-child square footage regulations when building schools.

Additional facilities and supplies requirements are provided in GDPHSS DEH document mentioned above, as well as in the Agreement between the Guam Federation of Teachers American Federation of Teachers (AFT) Local 1581 American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) and the Guam Education Policy Board for GPSS Teachers mentioned in the assumptions tables above.

### Additional GCC Service Population

The analysis does not analyze GCC's secondary school age population, that represents almost 50% of its student body. In 2007, GCC employed 32 faculty and 4 counselors in its secondary school program.

It also does not take into account any changes in GCC classes offered that may be determined by the need for additional career and technical education workers and the demand for such classes from buildup-related industries such as construction, or an increase in enrollment that might occur due to the opening of GCC's new allied health building in September of 2009.

There remain concerns that, as institutes of higher and technical education, GCC and UoG would be unable to train the local workforce needed to meet the needs of the proposed action.

#### GCC and UoG Adjunct Faculty and Administrative Staffing

Adjunct faculty are not included in the GCC or UoG calculations, and may be used to meet some of the noted requirements for additional faculty. In 2007, GCC employed 59 adjunct faculty, making up 37% of the GCC faculty population (GCC 2007). Survey results show that in 2007, UoG employed 62 adjunct faculty, making up about 25% of the UoG faculty population (Appendix C – UoG Survey).

GCC and UoG have some flexibility in hiring adjunct faculty to meet specific needs. GCC only hires such faculty if there is a need in upcoming adult education, apprenticeship or continuing education courses (Appendix D – GCC Interview).

Administrative staffing numbers are also not included in the tables above. In 2007, GCC faculty made up 46% of its full-time employee pool. Staff made up another 39% and Administrators the remaining 16% (GCC 2007). In 2008, UoG employed a total of 550 full-time employees. Of these 182 were faculty, 104 performed clerical and secretarial functions, 34 were administrators, and the remaining performed a variety of professional, technical or maintenance jobs.

#### GCC and UoG Facilities

Survey results show that the GCC main campus is currently able to support the number of students being educated there (Appendix C – GCC Survey). An increase in study population however would require expansion and renovation of the existing facilities.

UoG survey results show that of 21 listed University facilities, all except one (the community lecture hall) are currently able to meet the needs of the student population, and a majority would be able to meet the needs of an expanded student population (Appendix C – UoG Survey).

### **4.4.3 Public Health and Human Services Impact**

#### 4.4.3.1 Introductory Statements

Analysis was performed on impact on the following GovGuam public health and human service agencies:

- Guam Memorial Hospital Authority (GMHA)
- Guam Department of Public Health and Social Services (GDPHSS)
- Guam Department of Mental Health and Substance Abuse (GDMHSA)
- Guam Department of Integrated Services for Individuals with Disabilities (GDISID)

In particular, quantitative analysis was conducted on the proposed action's impact on:

- Service population numbers
- Key public health and human services staffing requirements

The capacity of private or military health care facilities on Guam were not analyzed, although the presence of such resources were taken into account when analyzing impact on public facilities, and are discussed as they pertain to possible overflow into health service demands on public service agencies.



The impacts discussed are independent of any needs that may result from non-project related general population growth.

#### 4.4.3.2 Unconstrained Analysis

##### Construction Component Assumptions

Table 4.4-27 presents the key *construction component* assumptions used in analysis of impacts, and the source or rationale for these assumptions. These include:

- Analysis used the current Health Professional to Service Population ratios determined through agency surveys.
- The percentages of *civilian* population are considered part of the service population for the various Health and Human Service agencies of GovGuam.
- The service population of GDPHSS and GDMHSA was defined as 37.5% of Guam's total island population, the percentage of Guam's population that is underinsured (as estimated by GDPHSS), and are thus likely to utilize the services of these two agencies. The term underinsured is used to mean individuals that possess health coverage that does not adequately protect them from high medical expenses.

**Table 4.4-27. Construction Component Assumptions for Public Health Agency Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
% of Guam's civilian population supported by GMHA services	100%	All incoming population would be part of the service population of GMHA. Although some may choose to access services from private or GDPHSS clinics, they are still considered part of the public and, if in case of medical emergency, would be seen at GMHA. Assumption derived from GMHA Interview (Appendix D).
% total island population supported by GDPHSS and GDMHSA Services	37.5%	This is the % total population on Guam that is uninsured or underinsured (GDPHSS estimate). These are the most likely populations to access services from GDPHSS and GDMHSA and the results of this analysis was used as the estimated service population for all impact analyses for GDPHSS and GDMHSA. Assumption derived from GDPHSS and GDMHSA Interviews (Appendix D).
% of Guam's civilian population supported by GDISID services	100%	All incoming civilian populations would be part of the service population of GDISID, as the agency would provide services to anyone on the island that is or becomes disabled and meets agency criteria. Assumption derived from GDISID Interview (Appendix D).
GMHA Physician : Service Population Ratio	1 : 2,821	2008 GMHA physician to island civilian population ratio. Staffing data provided in GMHA Survey (Appendix C).
GMHA Nurse/Allied Health Staff : Service Population Ratio	1 : 453	2008 GMHA nurse and allied health staff to island civilian population ratio. Staffing data provided in GMHA Survey (Appendix C).
GDPHSS Bureau of Primary Care Ratio of Providers and Nursing Staff : Service Population Ratio	1 : 1,499	2008 agency bureau provider and nursing staff numbers to service population estimates. Data from GDPHSS Bureau of Primary Care Survey (Appendix C)
GDPHSS BCDC Ratio of Communicable Disease Prevention Specialists :	1 : 1,999	2008 agency specialist numbers to service population estimates. Data from GDPHSS BCDC Survey (Appendix C).

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Service Population Ratio		
GDPHSS BFHNS Ratio of Nursing Personnel : Service Population Ratio	1 : 2,915	Midpoint of agency bureau nursing personnel numbers (2005-2008) of staffing data provided in GDPHSS BFHNS Survey (Appendix C).
GDMHSA Ratio of Mental Health Professionals : Service Population Ratio	1 : 507	Midpoint of GDMHSA mental health professional numbers (2000-2008) to service population estimate. Data from GDMHSA Survey (Appendix C).
GDISID Ratio of Social Workers and Counselors : Service Population Ratio	1 : 12,086	2008 agency staffing data to service population ratio. Data provided in GDISID Survey (Appendix C).

#### Military Operational Component Assumptions

Table 4.4-28 presents the key *operational component* assumptions used in the analysis of impacts, and the source or rationale for these assumptions. These include:

- No military or dependents are considered part of the service population of GMHA.

**Table 4.4-28. Operational Component Assumptions for Public Health Agency Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
All quantitative assumptions for construction component also apply for the operational component, unless negated by the assumptions listed below		
% active duty military and military dependent population supported by GMHA	0%	Although there is anecdotal information mentioned in the text below that indicates active duty military and their dependents would sometimes access GMHA services, no quantitative data were available to support this analysis as in general GMHA does not record whether a patient is military or civilian. In certain circumstances, when GMHA does knowingly serve a military individual, they can bill TRICARE for the services.
% of civilian DoD workers supported by GMHA	25%	Assumption is that 50% of civilian DoD workers would be from off-island. Additionally, 25% of civilian DoD workers would be the spouses of active duty military. It is assumed that these populations would be eligible for medical services from the Naval Hospital. The other 25% would be serviced by GMHA. Assumption derived from labor force analysis in above sections.

#### Estimation of Effects

##### *Service Population Impacts*

Table 4.4-29 provides an overview of the proposed action's impacts on GMHA, GDPHSS, GDMHSA and GDISID service populations for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-29. Impact on Public Health and Human Services, Service Population Summary  
(Unconstrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GMHA	160,797	2014	54,639	34%	6,088	4%	Table 4.4-30
GDPHSS	65,954	2014	28,662	43%	11,135	17%	Table 4.4-31
GDMHSA	65,954	2014	28,662	43%	11,135	17%	Table 4.4-31
GDISID	169,209	2014	67,880	40%	21,141	12%	Table 4.4-32

**Table 4.4-30. Impact on Guam Memorial Hospital Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	7,291	17,923	30,211	36,764	37,770	24,986	7,763	0	0	0	0
	Indirect Construction	1,948	5,295	9,335	11,069	11,143	6,216	436	0	0	0	0
	<b>Total Construction Impact</b>	9,239	23,218	39,545	47,833	48,913	31,202	8,198	0	0	0	0
	Direct Operations	228	815	823	816	4,493	4,664	4,664	4,664	4,664	4,664	4,664
	Indirect Operations	71	245	248	246	1,232	1,424	1,424	1,424	1,424	1,424	1,424
	<b>Total Operations Impact</b>	299	1060	1071	1061	5726	6,088	6,088	6,088	6,088	6,088	6,088
	<b>Combined Direct Impact</b>	7519	18,738	31,033	37,580	42,263	29,650	12,426	4,664	4,664	4,664	4,664
	<b>Combined Indirect Impact</b>	2019	5,541	9,582	11,315	12,376	7,640	1,859	1,424	1,424	1,424	1,424
	<b>Combined Total Impact</b>	9538	24,278	40,616	48,894	54,639	37,290	14,286	6,088	6,088	6,088	6,088

**Table 4.4-31. Impact on GDPHSS and GDMHSA Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	2,734	6,721	11,329	13,787	14,164	9,370	2911	0	0	0	0
	Indirect Construction	731	1,986	3,500	4,151	4,179	2,331	163	0	0	0	0
	<b>Total Construction Impact</b>	3,465	8,707	14,829	17,937	18,342	11,701	3,074	0	0	0	0
	Direct Operations	456	1,184	1,187	1,184	8,099	8,667	8,667	8,667	8,667	8,667	8,667
	Indirect Operations	142	356	357	356	2,221	2,468	2,468	2,468	2,468	2,468	2,468
	<b>Total Operations Impact</b>	598	1,540	1,544	1,540	10,319	11,135	11,135	11,135	11,135	11,135	11,135
	<b>Combined Direct Impact</b>	3,190	7,905	12,516	14,970	22,262	18,037	11,578	8,667	8,667	8,667	8,667
	<b>Combined Indirect Impact</b>	873	2,342	3,858	4,507	6,400	4,799	2,631	2,468	2,468	2,468	2,468
	<b>Combined Total Impact</b>	4,062	10,247	16,373	19,477	28,662	22,836	14,209	11,135	11,135	11,135	11,135

**Table 4.4-32. Impact on GDISID Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	7,291	17,923	30,211	36,764	37,770	24,986	7,763	0	0	0	0
	Indirect Construction	1,948	5,295	9,335	11,069	11,143	6,216	436	0	0	0	0
	<b>Total Construction Impact</b>	9,239	23,218	39,545	47,833	48,913	31,202	8,198	0	0	0	0
	Direct Operations	826	2,257	2,265	2,258	14,885	16,400	16,400	16,400	16,400	16,400	16,400
	Indirect Operations	258	679	681	679	4,082	4,741	4,741	4,741	4,741	4,741	4,741
	<b>Total Operations Impact</b>	1,084	2,936	2,946	2,937	18,967	21,141	21,141	21,141	21,141	21,141	21,141
	<b>Combined Direct Impact</b>	8,117	20,180	32,476	39,022	52,654	41,386	24,163	16,400	16,400	16,400	16,400
	<b>Combined Indirect Impact</b>	2,206	5,974	10,016	11,748	15,225	10,957	5,177	4,741	4,741	4,741	4,741
	<b>Combined Total Impact</b>	10,323	26,154	42,491	50,770	67,880	52,343	29,339	21,141	21,141	21,141	21,141

*Public Health and Human Services Staffing Impacts*

Table 4.4-33 provides an overview of the proposed action's impacts on various public health and human services agency staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-33. Public Health and Human Services Impact Summary (Unconstrained)**

<i>Agency and Staffing Type</i>	<i>Current Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GMHA Physicians	57	2014	19	33%	2	4%	Table 4.4-34
GMHA Nurses and Allied Health Professionals	355	2014	121	34%	13	4%	Table 4.4-35
GDPHSS - Primary Care Medical Providers and Nursing Staff	44	2014	19	43%	7	16%	Table 4.4-36
GDPHSS – BCDC Communicable Disease Prevention Professionals	33	2014	14	42%	6	18%	Table 4.4-37
GDPHSS - BFHNS Nurses	22	2014	10	45%	4	18%	Table 4.4-38
GDMHSA – Mental Health Professionals	130	2014	56	43%	22	16%	Table 4.4-39
GDISID Social Workers and Counselors	14	2014	6	43%	2	14%	Table 4.4-40

*Notes:* There are a wide variety of medical providers captured in the GDPHSS estimate, reflecting the diverse services provided by GDPHSS. They include Obstetrician/Gynecologist (OB/GYN), family practitioners, internists, pediatricians, nurse practitioners and certified nurse midwives.

**Table 4.4-34. Additional GMHA Physicians Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:2,821</b>										
Additional Capacity Required	Direct Construction	3	6	11	13	13	9	3	0	0	0	0
	Indirect Construction	1	2	3	4	4	2	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>14</b>	<b>14</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	2	2	2	2	2	2	2
	Indirect Operations	0	0	0	0	0	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>
	<b>Combined Direct Impact</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>
	<b>Combined Total Impact</b>	<b>3</b>	<b>9</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>13</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

**Table 4.4-35. Additional GMHA Nurses and Allied Health Professionals Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:453</b>										
Additional Capacity Required	Direct Construction	16	40	67	81	83	55	17	0	0	0	0
	Indirect Construction	4	12	21	24	25	14	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>16</b>	<b>42</b>	<b>68</b>	<b>84</b>	<b>90</b>	<b>61</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	10	10	10	10	10	10	10
	Indirect Operations	0.2	1	1	1	3	3	3	3	3	3	3
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
	<b>Combined Direct Impact</b>	<b>17</b>	<b>41</b>	<b>69</b>	<b>83</b>	<b>93</b>	<b>65</b>	<b>27</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
	<b>Combined Indirect Impact</b>	<b>4</b>	<b>12</b>	<b>21</b>	<b>25</b>	<b>27</b>	<b>17</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	<b>Combined Total Impact</b>	<b>21</b>	<b>54</b>	<b>90</b>	<b>108</b>	<b>121</b>	<b>82</b>	<b>32</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>

**Table 4.4-36. Additional GDPHSS – Bureau of Primary Care Medical Providers and Nursing Staff Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,499</b>										
Additional Capacity Required	Direct Construction	2	4	8	9	9	6	2	0	0	0	0
	Indirect Construction	0	1	2	3	3	2	0.1	0	0	0	0
	<b>Total Construction Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0.3	1	1	1	5	6	6	6	6	6	6
	Indirect Operations	0.1	0.2	0.2	0.2	1	2	2	2	2	2	2
	<b>Total Operations Impact</b>	<b>0.4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
	<b>Combined Direct Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>15</b>	<b>12</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4.3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
	<b>Combined Total Impact</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>19</b>	<b>15</b>	<b>9</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>

**Table 4.4-37. Additional GDPHSS BCDC Communicable Disease Prevention Specialists Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,999</b>										
Additional Capacity Required	Direct Construction	1	3	6	7	7	5	1	0	0	0	0
	Indirect Construction	0	1	2	2	2	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	1	1	1	4	4	4	4	4	4	4
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
	<b>Combined Direct Impact</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>11</b>	<b>9</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>

**Table 4.4-38. Additional GDPHSS BFHNS Nursing Personnel Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:2,915</b>										
Additional Capacity Required	Direct Construction	1	2	3	4	4	3	1	0	0	0	0
	Indirect Construction	0	1	2	2	2	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	3	3	3	3	3	3	3
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Direct Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	Combined Indirect Impact	0	1	2	2	3	2	1	1	1	1	1
	<b>Combined Total Impact</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

**Table 4.4-39. Additional GDMHSA Mental Health Professionals Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:507</b>										
Additional Capacity Required	Direct Construction	4	11	19	23	25	16	4	0	0	0	0
	Indirect Construction	2	5	9	10	11	7	2	0	0	0	0
	<b>Total Construction Impact</b>	<b>5</b>	<b>13</b>	<b>22</b>	<b>27</b>	<b>30</b>	<b>20</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	16	18	17	16	16	16	16
	Indirect Operations	0	1	1	1	5	5	5	5	5	5	5
	<b>Total Operations Impact</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>21</b>	<b>23</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>
	<b>Combined Direct Impact</b>	<b>5</b>	<b>13</b>	<b>21</b>	<b>26</b>	<b>41</b>	<b>33</b>	<b>21</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	Combined Indirect Impact	2	6	9	11	16	12	7	5	5	5	5
	<b>Combined Total Impact</b>	<b>8</b>	<b>19</b>	<b>31</b>	<b>37</b>	<b>56</b>	<b>46</b>	<b>28</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>

**Table 4.4-40. Additional GDISID Social Workers and Counselors Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:12,086</b>										
Additional Capacity Required	Direct Construction	1	1	2	3	3	2	1	0	0	0	0
	Indirect Construction	0	0	1	1	1	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	1	1	1	1	1	1	1
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
	<b>Combined Direct Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	Combined Indirect Impact	0	0	1	1	1	1	0	0	0	0	0
	<b>Combined Total Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>



## 4.4.3.3 Constrained Analysis

Assumptions

The assumptions used in the unconstrained analysis also apply to this analysis. Any differences between the unconstrained and constrained analyses are due to the difference in service population estimates under the two scenarios.

Estimation of Effects*Service Population Impacts*

Table 4.4-41 provides an overview of the proposed action's impacts on GMHA, GDPHSS, GDMHSA and GDISID service populations for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-41. Impact on Public Health and Human Services, Service Population Summary  
(Constrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GMHA	160,797	2014	31,993	20%	4,426	3%	Table 4.4-42
GDPHSS	65,954	2014	20,170	31%	10,512	16%	Table 4.4-43
GDMHSA	65,954	2014	20,170	31%	10,512	16%	Table 4.4-43
GDISID	169,209	2014	45,234	27%	19,479	12%	Table 4.4-44

**Table 4.4-42. Impact on Guam Memorial Hospital Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	4,545	11,432	19,618	24,416	25,887	19,024	5,416	0	0	0	0
	Indirect Construction	507	1,252	2,097	2,548	2,866	2,707	628	0	0	0	0
	<b>Total Construction Impact</b>	<b>5,053</b>	<b>12,683</b>	<b>21,714</b>	<b>26,965</b>	<b>28,754</b>	<b>21,731</b>	<b>6,044</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	94	523	519	519	2,712	3,641	3,641	3,641	3,641	3,641	3,641
	Indirect Operations	21	111	110	110	527	784	784	784	784	784	784
	<b>Total Operations Impact</b>	<b>114</b>	<b>634</b>	<b>629</b>	<b>629</b>	<b>3,240</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>
	<b>Combined Direct Impact</b>	<b>4,639</b>	<b>11,955</b>	<b>20,137</b>	<b>24,935</b>	<b>28,600</b>	<b>22,665</b>	<b>9,057</b>	<b>3,641</b>	<b>3,641</b>	<b>3,641</b>	<b>3,641</b>
	<b>Combined Indirect Impact</b>	<b>528</b>	<b>1,363</b>	<b>2,207</b>	<b>2,658</b>	<b>3,394</b>	<b>3,492</b>	<b>1,412</b>	<b>784</b>	<b>784</b>	<b>784</b>	<b>784</b>
	<b>Combined Total Impact</b>	<b>5,167</b>	<b>13,318</b>	<b>22,344</b>	<b>27,593</b>	<b>31,993</b>	<b>26,157</b>	<b>10,470</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>	<b>4,426</b>

**Table 4.4-43. Impact on GDPHSS and GDMHSA Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	1,704	4,287	7,357	9,157	9,703	7,134	2,031	0	0	0	0
	Indirect Construction	190	469	785	955	1,079	1,015	235	0	0	0	0
	<b>Total Construction Impact</b>	<b>1,895</b>	<b>4,756</b>	<b>8,143</b>	<b>10,112</b>	<b>10,783</b>	<b>8,149</b>	<b>2,266</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	433	1,139	1,137	1,137	7,859	8,776	8,776	8,776	8,776	8,776	8,776
	Indirect Operations	95	241	241	241	1,528	1,736	1,736	1,736	1,736	1,736	1,736
	<b>Total Operations Impact</b>	<b>528</b>	<b>1,380</b>	<b>1,378</b>	<b>1,378</b>	<b>9,387</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>
	<b>Combined Direct Impact</b>	<b>2,138</b>	<b>5,426</b>	<b>8,494</b>	<b>10,294</b>	<b>17,562</b>	<b>15,910</b>	<b>10,807</b>	<b>8,776</b>	<b>8,776</b>	<b>8,776</b>	<b>8,776</b>
	<b>Combined Indirect Impact</b>	<b>285</b>	<b>710</b>	<b>1,027</b>	<b>1,196</b>	<b>2,608</b>	<b>2,751</b>	<b>1,971</b>	<b>1,736</b>	<b>1,736</b>	<b>1,736</b>	<b>1,736</b>
	<b>Combined Total Impact</b>	<b>2,423</b>	<b>6,136</b>	<b>9,521</b>	<b>11,490</b>	<b>20,170</b>	<b>18,661</b>	<b>12,778</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>	<b>10,512</b>

**Table 4.4-44. Impact on GDISID Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	4,545	11,432	19,618	24,416	25,887	19,024	5,416	0	0	0	0
	Indirect Construction	507	1,252	2,097	2,548	2,866	2,707	628	0	0	0	0
	<b>Total Construction Impact</b>	<b>5,053</b>	<b>12,683</b>	<b>21,714</b>	<b>26,965</b>	<b>28,754</b>	<b>21,731</b>	<b>6,044</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	738	2,071	2,067	2,066	13,797	16,186	16,186	16,186	16,186	16,186	16,186
	Indirect Operations	162	439	438	438	2,683	3,293	3,293	3,293	3,293	3,293	3,293
	<b>Total Operations Impact</b>	<b>899</b>	<b>2,510</b>	<b>2,505</b>	<b>2,504</b>	<b>16,481</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>
	<b>Combined Direct Impact</b>	<b>5,283</b>	<b>13,503</b>	<b>21,685</b>	<b>26,483</b>	<b>39,685</b>	<b>35,210</b>	<b>21,602</b>	<b>16,186</b>	<b>16,186</b>	<b>16,186</b>	<b>16,186</b>
	<b>Combined Indirect Impact</b>	<b>669</b>	<b>1,691</b>	<b>2,535</b>	<b>2,986</b>	<b>5,550</b>	<b>6,000</b>	<b>3,921</b>	<b>3,293</b>	<b>3,293</b>	<b>3,293</b>	<b>3,293</b>
	<b>Combined Total Impact</b>	<b>5,952</b>	<b>15,193</b>	<b>24,219</b>	<b>29,469</b>	<b>45,234</b>	<b>41,210</b>	<b>25,523</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>	<b>19,479</b>

*Public Health and Human Services Staffing Impacts*

Table 4.4-45 provides an overview of the proposed action's impacts on various public health and human services agency staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-45. Public Health and Human Services Impact Summary (Constrained)**

<i>Agency and Staffing Type</i>	<i>Current Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GMHA Physicians	57	2014	11	20%	2	3%	Table 4.4-46
GMHA Nurses and Allied Health Professionals	355	2014	71	20%	10	3%	Table 4.4-47
GDPHSS - Primary Care Medical Providers and Nursing Staff	44	2014	13	31%	7	16%	Table 4.4-48
GDPHSS – BCDC Communicable Disease Prevention Professionals	33	2014	10	31%	5	16%	<b>Error! Reference source not found.</b>
GDPHSS - BFHNS Nurses	22	2014	7	31%	4	20%	Table 4.4-49
GDMHSA – Mental Health Professionals	130	2014	40	31%	21	16%	Table 4.4-50
GDISID Social Workers and Counselors	14	2014	4	27%	2	12%	Table 4.4-51

*Notes:* There are a wide variety of medical providers captured in the GDPHSS estimate, reflecting the diverse services provided by GDPHSS. They include OB/GYN, family practitioners, internists, pediatricians, nurse practitioners and certified nurse midwives.

**Table 4.4-46. Additional GMHA Physicians Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:2,821</b>										
<b>Additional Capacity Required</b>	Direct Construction	2	4	7	9	9	7	2	0	0	0	0
	Indirect Construction	0	0	1	1	1	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	1	1	1	1	1	1	1
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
	<b>Combined Direct Impact</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	Combined Indirect Impact	0	0	1	1	1	1	1	0	0	0	0
	<b>Combined Total Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

**Table 4.4-47. Additional GMHA Nurses and Allied Health Professionals Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:453</b>										
<b>Additional Capacity Required</b>	Direct Construction	10	25	43	54	57	42	12	0	0	0	0
	Indirect Construction	1	3	5	6	6	6	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>9</b>	<b>23</b>	<b>37</b>	<b>48</b>	<b>53</b>	<b>43</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	1	1	1	6	8	8	8	8	8	8
	Indirect Operations	0	0	0	0	1	2	2	2	2	2	2
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
	<b>Combined Direct Impact</b>	<b>10</b>	<b>26</b>	<b>44</b>	<b>55</b>	<b>63</b>	<b>50</b>	<b>20</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>
	Combined Indirect Impact	1	3	5	6	7	8	3	2	2	2	2
	<b>Combined Total Impact</b>	<b>11</b>	<b>29</b>	<b>49</b>	<b>61</b>	<b>71</b>	<b>58</b>	<b>23</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>

**Table 4.4-48. Additional GDPHSS – Bureau of Primary Care Medical Providers and Nursing Staff Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,499</b>										
Additional Capacity Required	Direct Construction	1	3	5	6	6	5	1	0	0	0	0
	Indirect Construction	0	0	1	1	1	1	0	0	0	0	0
	Total Construction Impact	1	3	4	5	6	5	1	0	0	0	0
	Direct Operations	0	1	1	1	5	6	6	6	6	6	6
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	Total Operations Impact	0	1	1	1	6	7	7	7	7	7	7
	Combined Direct Impact	1	4	6	7	12	11	7	6	6	6	6
	Combined Indirect Impact	0	0	1	1	2	2	1	1	1	1	1
	Combined Total Impact	2	4	6	8	13	12	9	7	7	7	7

**Table 4.4-50. Additional GDPHSS – BCDC Communicable Disease Prevention Specialists Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,999</b>										
Additional Capacity Required	Direct Construction	1	2	4	5	5	4	1	0	0	0	0
	Indirect Construction	0	0	0	0	1	1	0	0	0	0	0
	Total Construction Impact	1	2	3	4	4	4	1	0	0	0	0
	Direct Operations	0	1	1	1	4	4	4	4	4	4	4
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	Total Operations Impact	0	1	1	1	5	5	5	5	5	5	5
	Combined Direct Impact	1	3	4	5	9	8	5	4	4	4	4
	Combined Indirect Impact	0	0	1	1	1	1	1	1	1	1	1
	Combined Total Impact	1	3	5	6	10	9	6	5	5	5	5

**Table 4.4-49. Additional GDPHSS BFHNS Nursing Personnel Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:2,915</b>										
Additional Capacity Required	Direct Construction	1	1	3	3	3	2	1	0	0	0	0
	Indirect Construction	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	3	3	3	3	3	3	3
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Direct Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	Combined Indirect Impact	0	0	0	0	1	1	1	1	1	1	1
	<b>Combined Total Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

**Table 4.4-50. Additional GDMHSA Mental Health Professionals Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:507</b>										
Additional Capacity Required	Direct Construction	3	7	11	14	14	11	4	0	0	0	0
	Indirect Construction	0	1	1	1	2	2	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>3</b>	<b>7</b>	<b>12</b>	<b>15</b>	<b>15</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	15	16	16	16	16	16	16
	Indirect Operations	0	0	0	0	3	3	3	3	3	3	3
	<b>Total Operations Impact</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>18</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>
	<b>Combined Direct Impact</b>	<b>4</b>	<b>9</b>	<b>13</b>	<b>16</b>	<b>29</b>	<b>27</b>	<b>20</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	Combined Indirect Impact	0	1	2	2	5	5	4	3	3	3	3
	<b>Combined Total Impact</b>	<b>4</b>	<b>10</b>	<b>15</b>	<b>18</b>	<b>34</b>	<b>31</b>	<b>23</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>

**Table 4.4-51. Additional GDISID Social Workers and Counselors Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:12,086</b>										
Additional Capacity Required	Direct Construction	0	1	2	2	2	2	0	0	0	0	0
	Indirect Construction	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	1	1	1	1	1	1	1
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
	<b>Combined Direct Impact</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	Combined Indirect Impact	0	0	0	0	0	0	0	0	0	0	0
	<b>Combined Total Impact</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

#### 4.4.3.4 Additional Public Health and Human Services Discussion

In July of 2008, The U.S. Department of Health and Human Services provided a Guam Issues Inventory response to GovGuam prioritized health and human services issues related to the proposed action (U.S. Department of Health and Human Services 2008). These priorities included acquisition of critical staffing, and capital improvement and funding for infrastructure and services.

While the above quantitative analysis focuses on the proposed action's impact on required numbers of a variety of public health care providers on Guam, these factors are important when considering the impact of the proposed action on Guam's public health care system.

##### Existing Professional Staffing Deficits

For many of the GovGuam public health agencies listed above, the existing professional staffing to service population ratios that were used in this analysis are ratios that show existing deficits. Since the above staffing analyses are based upon existing ratios rather than standards, they preserve any professional shortages that currently exist on the Island of Guam. For instance, Guam has been designated as a Physician Shortage Area, a designation that is made for any region that does not meet a physician to population ratio of 2,000:1, and allows for the hiring of foreign doctors on J-1 visas. As another example, with baseline staffing ratios, GDPHSS BCDC communicable disease prevention staffers are currently struggling to keep up with the dramatic increase in communicable diseases on Guam (see the Affected Environment section for more information). BCDC staff are currently prioritizing the most urgent cases, and not following up on all reports or cases of contacts, because of capacity issues (Appendix D – GDPHSS BCDC Interview). Similarly, BFHNS nursing staff currently reports an inability to keep up with the public health nursing needs of the Island of Guam. The Bureau of Family Health and Nursing Services (BFHNS) nursing staff prioritizes cases according to urgency. Finally, both GDISID and GDMHSA are currently under permanent injunction, requiring them to hire additional staff (GDISID and GDMHSA Interviews - Appendix D).

Such deficits are endemic to the location, size, and working conditions on the Island of Guam. Guam's distance from the U.S. mainland makes it difficult to hire health professionals from the U.S. Overall the salaries of public health and human services professionals and support staff are not comparable to the U.S. or to private health clinics and military health institutions on Guam, making it difficult to recruit and retain qualified staff. Working conditions at GovGuam health and social service agencies are often high-stress, and in facilities that are in need of upgrade, making it difficult to recruit additional staff or provide adequate and comprehensive services. Staff retention is also an issue – many are retiring or leaving for off-island positions. Conditions such as this have made it necessary that BFHNS remove the one-year hospital restriction on the hiring of nursing personnel, leading to a lower level of service (Appendix D – GDHHS BFHNS Interview).

Other deficits in health care professionals are a nation-wide issue. The U.S. Bureau of Labor Statistics estimates that by 2016, more than one million new and replacement nurses would be required while other analysis estimate that the shortage of registered nurses in the U.S. could reach 500,000 by 2025 (American Association of Colleges of Nursing 2009). While Guam's remote location might put it at a disadvantage in recruiting health professionals, its close proximity to the Philippines lends to an alternate pool of staff that may be less attracted to working in the U.S. mainland.

##### Additional Staffing Requirements

While the analysis above provides an outline of impacts on health professional requirements related to the proposed action, an important caveat to this analysis is that for every one of the public health professional

positions required, additional administrative staff are required to support the work of that professional. The GDPHSS BPC for example, noted that for each health professional it employs, four additional support staff such as nurse aids and medical records clerks are required (Appendix C – GDPHSS BPC Survey). The implications of such a ratio can be far reaching. In the case of the BPC, the project's direct impact peak in 2014 would require the hiring of 48 support staff in addition to the professionals noted in the analysis above. Additional staffing requirements of recent or future public health facility developments (for example, the newly expanded NRCHC and the soon-to-be expanded SRCHC) can also affect staffing requirements.

There is also the possibility that the incoming populations associated with the proposed action might require additional staff time and agency resources. For example, GDMHSA staff have observed that workers from off-island, such as those that would arrive on Guam during the construction phase, often work in stressful and intense situations that increase the prevalence of substance abuse. Similarly, military individuals transferring to a new, remote island location sometimes experience difficulty adapting to a different culture. It has been observed that both these populations would sometimes be inclined to access the confidential and free services of GDMHSA, despite having health insurance, because of the fear that their condition might affect their terms of employment (Appendix D – GDMHSA Interview).

#### Underinsured Populations

GDPHSS and GDMHSA target the most indigent populations for health care (see Affected Environment section). Thus the majority of individuals accessing services are uninsured. However, GDPHSS and GDMHSA staff note that many individuals accessing services do have health insurance, but unaffordable co-payments for services or medications, or missing coverage of specific services and medications makes it necessary that these individuals access the free services of these two agencies. The population growth associated with the proposed action would contribute to these uninsured and underinsured populations, especially in the form of residents entering into Guam through the Compact of Free Association agreement, that does not require individuals have health coverage before arriving on Guam.

#### Military and Civilian Health Care System Overlap

Note that the GMHA service population analysis is not able to capture some nuances to utilization of GMHA and Navy Hospital Services on Guam:

- In emergency situations, an individual, civilian or military, would be taken to the closest hospital emergency room (GMHA or Naval Hospital) until they are stable enough to be transported to the appropriate facility (Guam Memorial Hospital Interview – Appendix D).
- Because the Naval Hospital's capacity is low, military dependents do occasionally use GMHA services. GMHA can bill TRICARE, the military health insurance system, for these services (Guam Memorial Hospital Interview – Appendix D).
- There are also plans to build a replacement Naval Hospital as well as a separate 6,000 square-foot outpatient clinic for veterans. (The current clinic is located within the current hospital.)

It should be noted that this service population analysis does not capture the fact that in emergency situations, an individual, civilian or military, would be taken to the closest hospital emergency room (GMHA or Naval Hospital) until they are stable enough to be transported to the appropriate facility (Appendix D – GMHA Interview). Furthermore, because the Naval Hospital's capacity is low, military dependents do occasionally use GMHA services. GMHA can bill TRICARE, the military health insurance system, for these services (Appendix D – GMHA Interview). As of writing, this billing data



was unavailable. There are also plans to build a new Naval Hospital as well as a new 6,000 square-foot outpatient clinic for veterans.

### Facility and Supply Requirements

GovGuam public health-related capital improvement and feasibility studies are in the process of occurring. As mentioned above, The NRCHC recently expanded its physical space by an additional 9,500 square feet (7,000 square feet in clinic space and 2,500 in pharmacy space), that allows for the recruitment of additional practitioner and support staff. The SRCHC is slated to double its space capacity, with a groundbreaking in May of 2009 (Appendix C – GDPHSS Survey). GMHA administrators noted they were in the beginning stages of feasibility studies for the building of a new hospital on Guam (Appendix D – GMHA Interview). The Guam Issues Inventory notes that the hospital estimates the need for: expansion/new construction of an emergency room, cardiac rehabilitation, renovation of the existing radiology unit, hospital rooms, pediatric ward, among other improvements.

Through the process of interviews, qualitative data was collected regarding capital improvement and medical supply needs of various GovGuam public health agencies. GDMHSA reported substandard air quality in the building, fire suppression risks, and mold problems (Appendix D – GDMHSA Interview). GDPHSS's TB treatment program was housed in the windowless main public health building. GDPHSS BFHNS indicated a lack of clinical supplies (such as syringes) and antibiotics.

### Funding Issues

The procurement of funding for additional staff, capital improvements, and medical supplies for GovGuam public health agencies is a complex one. In 2008, GovGuam received a total of \$43,283,170 from various federal health and human service funding programs.

In some instances, low staffing numbers or lack of technological capacity inhibits agencies from harnessing the funding that is available. For example, GDMHSA is not able to bill the military TRICARE system for the services they provide. Although TRICARE support is available, the agency does not have the capacity to track military individuals who access their services, and thus are unable to tap into this support (Appendix D – GDMHSA Interview). The agency currently utilizes a hard-copy paper system to monitor caseloads that is inefficient for processing or analyzing data. It has recently purchased a software system and is developing an information management system that would house financial, procurement, service population, and staffing data (Appendix D – GDMHSA Interview). Similar technological and staffing capacity issues limit agency tracking of service populations that might qualify for an increase in compact impact funding, and inhibits agencies from following up with self-pay patients that do not pay their bills for medical treatment.

In other instances, lack of funding precludes an agency's ability to operate efficiently and effectively. For example, although the building of a permanent one-stop GDISID facility would eliminate the costly leasing of office space, GDISID lacks the capital to implement the project, even though the agency already has the plan and the land for a facility. As another example, to meet the costs of hiring additional staffing as required by the permanent injunction, GDMHSA must take out loans.

#### **4.4.4 Public Safety Service Impacts**

##### 4.4.4.1 Introductory Statements

Analysis was performed on impact on the following GovGuam public safety agencies:

- Guam Police Department (GPD)

- Guam Fire Department (GFD)
- Guam Department of Corrections (GDoC)
- Guam Department of Youth Affairs (GDYA)

In particular, quantitative analysis was conducted on the proposed action's impact on:

- Service population numbers
- Key public safety services staffing requirements

Qualitative discussion on additional impacts is located in the Additional Public Safety Services Discussion section.

The capacity of military security services were not analyzed, although military security departments are discussed in view of their interaction with government agencies in maintaining public safety on the island.

The impacts discussed are independent of any needs that may result from non-project related general population growth.

This analysis does not take into account any staffing impacts that would be required because of GFD responsibilities in the enforcement of fire codes and building standards for any construction that occurs on Guam. These are noted in the section entitled Growth Permitting and Regulatory Agency Impacts, below.

#### 4.4.4.2 Unconstrained Analysis

##### Construction Component Assumptions

Table 4.4-52 presents the key *construction component* assumptions used in analysis of impacts, and the source or rationale for these assumptions. Key assumptions include:

- All incoming population is considered part of the GPD service population. GPD's service population is defined in this analysis as Guam's total population, including active-duty military. This is because even active duty military personnel charged with crimes off-base would go through the GPD and judiciary systems.
- During the construction phase, additional firefighting personnel will be needed due to high hazard conditions on island. This is incorporated into the analysis through the use of an adjusted growth in service population, in order to capture the impact of increased construction and worker housing on the Island of Guam. The National Fire Protection Association (NFPA) Standard #1710, titled the "Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments" (2001 Edition), recommends five to six on-duty personnel per engine company in jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions or other pertinent factors as identified by the authorities having jurisdiction. This is compared with the recommendation for four on-duty personnel per engine company in other jurisdictions. Worker housing and working areas fall under such high hazard jurisdictions and would impact GFD staffing requirements more heavily.
- Analysis used the current Safety Professional to Service Population ratios determined through agency surveys.

**Table 4.4-52. Construction Component Assumptions for Public Safety Agency Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
% island population under the protection of GPD	100%	Assumption from GPD and Navy Security Interviews (Appendix D)
% increase over current firefighter to population ratio due to high hazard situations, per year	2010 – 6% 2011 – 11% 2012 – 12% 2013 – 12% 2014 – 10% 2015 – 9% 2016 – 9 %	H-2B housing meets the NFPA definition of high hazard jurisdictions that requires an additional % increase in required GFD staffing during the construction phase.
% increase in inmates in jail, prison, and federal holds at GDoC per year	2010 – 3% 2011 – 8% 2012 – 13% 2013 – 16% 2014 – 15% 2015 – 10% 2016 – 3%	Percent of adult civilian population increase over baseline as a result of proposed action (construction phase). To produce increase in service population, these percentages were then multiplied by inmate population numbers provided in GDoC Survey (Appendix C).
GDYA service population	Ages 10-17	GDYA Interview (Appendix D)
GPD Sworn Police Officer : Service Population Ratio	1 : 561	2007 GPD staffing numbers to service population ratio. Data from GPD Survey (Appendix C).
GFD Firefighter : Service Population Ratio	1 : 846	2008 GFD staffing numbers to service population ratio. Data from GFD Survey (Appendix C).
GDoC Corrections Officer : Inmate Ratio	1 : 6	2008 GDoC staffing to inmate numbers. Data from GDoC Survey (Appendix C).
GDYA Youth Service Worker : Service Population Ratio	1 : 316	2008 GDYA youth service worker numbers to service population estimates. Data from GDYA Survey (Appendix C).

**Military Operational Component Assumptions**

Table 4.4-53 presents the key *operational component* assumptions used in analysis of impacts and the source or rationale for these assumptions. These assumptions are much the same as those used for the construction phase analysis.

**Table 4.4-53. Operational Component Assumptions for Public Safety Agency Impacts (Unconstrained)**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
All quantitative assumptions for construction component also apply for the operational component, unless negated by the assumptions listed below.		
% increase in inmates in jail, prison or federal holds at GDoC per year.	2010 – 1% 2011 – 1% 2012 – 1% 2013 – 1% 2014 – 4% 2015 – 4% 2016 – 4% 2017 – 4% 2018 – 4% 2019 – 4% 2020 – 4%	Percent of adult population (not including active duty) increase over baseline as a result of proposed action. To produce increase in service population, these percentages were then multiplied by inmate population numbers provided in the GDoC Survey (Appendix C).

Estimation of Effects*Service Population Impacts*

Table 4.4-54 provides an overview of the proposed action's impacts on GPD, GFD, GDoC, and GDYA service populations for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-54. Impact on Public Safety Service Population Summary (Unconstrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GPD	160,797	2014	79,187	49%	33,608	21%	Table 4.4-55
GFD	175,877	2014	65,469	37%	10,561	6%	Table 4.4-56
GDoC	1,035	2014	300	29%	87	8%	Table 4.4-57
GDYA	24,987	2014	10,547	42%	6,328	25%	Table 4.4-58

**Table 4.4-55. Impact on GPD Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
<b>Baseline Service Ratio</b>		<b>1:561</b>											
Increase in Service Population	Direct Construction	7,291	17,923	30,211	36,764	37,770	24,986	7,763	0	0	0	0	
	Indirect Construction	2,117	5,714	9,897	11,642	12,690	8,087	1,301	0	0	0	0	
	<b>Total Construction Impact</b>	<b>9,407</b>	<b>23,636</b>	<b>40,107</b>	<b>48,406</b>	<b>50,459</b>	<b>33,073</b>	<b>9,063</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	Direct Operations	1,464	3,790	3,790	3,790	25,694	27,826	27,826	27,826	27,826	27,826	27,826	27,826
	Indirect Operations	167	408	403	379	3,025	4,018	5,029	5,605	5,605	5,782	5,782	
	<b>Total Operations Impact</b>	<b>1,631</b>	<b>4,199</b>	<b>4,194</b>	<b>4,169</b>	<b>28,719</b>	<b>31,845</b>	<b>32,856</b>	<b>33,431</b>	<b>33,431</b>	<b>33,608</b>	<b>33,608</b>	
	<b>Combined Direct Impact</b>	<b>8,754</b>	<b>21,713</b>	<b>34,001</b>	<b>40,554</b>	<b>63,464</b>	<b>52,813</b>	<b>35,589</b>	<b>27,826</b>	<b>27,826</b>	<b>27,826</b>	<b>27,826</b>	
	<b>Combined Indirect Impact</b>	<b>2,284</b>	<b>6,122</b>	<b>10,300</b>	<b>12,021</b>	<b>15,714</b>	<b>12,105</b>	<b>6,330</b>	<b>5,605</b>	<b>5,605</b>	<b>5,782</b>	<b>5,782</b>	
	<b>Combined Total Impact</b>	<b>11,038</b>	<b>27,835</b>	<b>44,301</b>	<b>52,575</b>	<b>79,178</b>	<b>64,918</b>	<b>41,919</b>	<b>33,431</b>	<b>33,431</b>	<b>33,608</b>	<b>33,608</b>	

**Table 4.4-56. Impact on GFD Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
<b>Baseline Service Ratio</b>		<b>1:846</b>											
Increase in Service Population	Direct Construction	8,197	20,176	34,152	41,747	42,895	28,452	9,036	0	0	0	0	
	Indirect Construction	2,191	5,961	10,554	12,571	12,657	7,079	507	0	0	0	0	
	<b>Total Construction Impact</b>	<b>10,388</b>	<b>26,137</b>	<b>44,705</b>	<b>54,318</b>	<b>55,552</b>	<b>35,530</b>	<b>9,542</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	Direct Operations	503	1,527	1,533	1,528	9,259	9,818	9,818	9,818	9,818	9,818	9,818	9,818
	Indirect Operations	45	128	132	128	658	743	743	743	743	743	743	
	<b>Total Operations Impact</b>	<b>548</b>	<b>1,655</b>	<b>1,665</b>	<b>1,656</b>	<b>9,917</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	
	<b>Combined Direct Impact</b>	<b>8,700</b>	<b>21,703</b>	<b>35,685</b>	<b>43,275</b>	<b>52,154</b>	<b>38,270</b>	<b>18,854</b>	<b>9,818</b>	<b>9,818</b>	<b>9,818</b>	<b>9,818</b>	
	<b>Combined Indirect Impact</b>	<b>2,236</b>	<b>6,089</b>	<b>10,686</b>	<b>12,699</b>	<b>13,315</b>	<b>7,822</b>	<b>1,250</b>	<b>743</b>	<b>743</b>	<b>743</b>	<b>743</b>	
	<b>Combined Total Impact</b>	<b>10,935</b>	<b>27,792</b>	<b>46,370</b>	<b>55,974</b>	<b>65,469</b>	<b>46,091</b>	<b>20,103</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	<b>10,561</b>	

**Table 4.4-57. Impact on GDoC Inmate Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:6</b>										
Increase in Service Population	Direct Construction	33	81	135	163	165	108	34	0	0	0	0
	Indirect Construction	9	24	42	49	49	27	2	0	0	0	0
	<b>Total Construction Impact</b>	<b>42</b>	<b>105</b>	<b>176</b>	<b>212</b>	<b>214</b>	<b>135</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	5	13	12	12	80	85	84	83	82	81	81
	Indirect Operations	0	1	1	1	6	6	6	6	6	6	6
	<b>Total Operations Impact</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>86</b>	<b>91</b>	<b>90</b>	<b>89</b>	<b>88</b>	<b>87</b>	<b>87</b>
	<b>Combined Direct Impact</b>	<b>38</b>	<b>93</b>	<b>147</b>	<b>175</b>	<b>246</b>	<b>193</b>	<b>118</b>	<b>83</b>	<b>82</b>	<b>81</b>	<b>81</b>
	<b>Combined Indirect Impact</b>	<b>9</b>	<b>25</b>	<b>43</b>	<b>50</b>	<b>54</b>	<b>33</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
	<b>Combined Total Impact</b>	<b>47</b>	<b>118</b>	<b>190</b>	<b>225</b>	<b>300</b>	<b>226</b>	<b>125</b>	<b>89</b>	<b>88</b>	<b>87</b>	<b>87</b>

**Table 4.4-58. Impact on GDYA Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:316</b>										
Increase in Service Population	Direct Construction	734	1,797	2,991	3,590	3,686	2,419	699	0	0	0	0
	Indirect Construction	196	531	924	1,080	1,087	602	39	0	0	0	0
	<b>Total Construction Impact</b>	<b>930</b>	<b>2,328</b>	<b>3,915</b>	<b>4,670</b>	<b>4,774</b>	<b>3,020</b>	<b>738</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	258	638	639	638	4,530	4,930	4,930	4,930	4,930	4,930	4,930
	Indirect Operations	81	192	192	192	1,242	1,398	1,398	1,398	1,398	1,398	1,398
	<b>Total Operations Impact</b>	<b>338</b>	<b>830</b>	<b>831</b>	<b>830</b>	<b>5,773</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>
	<b>Combined Direct Impact</b>	<b>992</b>	<b>2,435</b>	<b>3,630</b>	<b>4,228</b>	<b>8,217</b>	<b>7,349</b>	<b>5,629</b>	<b>4,930</b>	<b>4,930</b>	<b>4,930</b>	<b>4,930</b>
	<b>Combined Indirect Impact</b>	<b>277</b>	<b>723</b>	<b>1,116</b>	<b>1,273</b>	<b>2,330</b>	<b>2,000</b>	<b>1,437</b>	<b>1,398</b>	<b>1,398</b>	<b>1,398</b>	<b>1,398</b>
	<b>Combined Total Impact</b>	<b>1,268</b>	<b>3,158</b>	<b>4,746</b>	<b>5,500</b>	<b>10,547</b>	<b>9,349</b>	<b>7,066</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>	<b>6,328</b>

*Public Safety Services Staffing Impacts*

Table 4.4-59 provides an overview of the proposed action's impacts on various public safety services agency staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-59. Public Safety Services Staffing Impacts Summary (Unconstrained)**

<i>Agency and Staffing Type</i>	<i>Current Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GPD – Police Officers	309	2014	141	46%	60	19%	Table 4.4-60
GFD - Firefighters	190	2014	77	41%	12	6%	Table 4.4-61
GDoC – Custody and Security Personnel	188	2014	54	29%	16	9%	Table 4.4-62
GDYA – Youth Service Professionals	79	2014	33	42%	20	25%	Table 4.4-63

**Table 4.4-60. Additional GPD Sworn Police Officers Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Capacity Required	Direct Construction	13	32	54	65	67	45	14	0	0	0	0
	Indirect Construction	4	10	18	21	23	14	2	0	0	0	0
	<b>Total Construction Impact</b>	14	35	56	69	75	53	15	0	0	0	0
	Direct Operations	3	7	7	7	46	50	50	50	50	50	50
	Indirect Operations	0	1	1	1	5	7	9	10	10	10	10
	<b>Total Operations Impact</b>	3	7	7	7	51	57	59	60	60	60	60
	<b>Combined Direct Impact</b>	16	39	61	72	113	94	63	50	50	50	50
	<b>Combined Indirect Impact</b>	4	11	18	21	28	22	11	10	10	10	10
	<b>Combined Total Impact</b>	20	50	79	94	141	116	75	60	60	60	60

**Table 4.4-61. Additional GFD Uniformed Fire Personnel Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:846</b>										
New Capacity Required	Direct Construction	10	24	40	49	51	34	11	0	0	0	0
	Indirect Construction	3	7	12	15	15	8	1	0	0	0	0
	<b>Total Construction Impact</b>	10	26	41	51	54	37	10	0	0	0	0
	Direct Operations	1	2	2	2	11	12	12	12	12	12	12
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	1	2	2	2	12	12	12	12	12	12	12
	<b>Combined Direct Impact</b>	10	26	42	51	62	45	22	12	12	12	12
	<b>Combined Indirect Impact</b>	3	7	13	15	16	9	1	1	1	1	1
	<b>Combined Total Impact</b>	13	33	55	66	77	54	24	12	12	12	12



**Table 4.4-62. Additional Custody and Security Personnel Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Capacity Required	Direct Construction	6	15	24	30	30	20	6	0	0	0	0
	Indirect Construction	2	4	8	9	9	5	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>6</b>	<b>16</b>	<b>25</b>	<b>31</b>	<b>32</b>	<b>22</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	15	15	15	15	15	15	15
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>16</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	<b>Combined Direct Impact</b>	<b>7</b>	<b>17</b>	<b>27</b>	<b>32</b>	<b>45</b>	<b>35</b>	<b>21</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>
	<b>Combined Indirect Impact</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>9</b>	<b>21</b>	<b>35</b>	<b>41</b>	<b>54</b>	<b>41</b>	<b>23</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>

**Table 4.4-63. Additional Youth Service Professionals Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Capacity Required	Direct Construction	2	6	9	11	12	8	2	0	0	0	0
	Indirect Construction	1	2	3	3	3	2	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>2</b>	<b>6</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	14	16	16	16	16	16	16
	Indirect Operations	0	1	1	1	4	4	4	4	4	4	4
	<b>Total Operations Impact</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>18</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
	<b>Combined Direct Impact</b>	<b>3</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>26</b>	<b>23</b>	<b>18</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Total Impact</b>	<b>4</b>	<b>10</b>	<b>15</b>	<b>17</b>	<b>33</b>	<b>30</b>	<b>22</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>

## 4.4.4.3 Constrained Analysis

Assumptions

The assumptions in Table 4.4-52 and Table 4.4-53 apply to this analysis. The differences between the unconstrained and constrained analyses are due to the difference in service population estimates under the two scenarios.

Estimation of Effects*Service Population Impacts*

Table 4.4-64 provides an overview of the proposed action's impacts on GPD, GFD, GDoC, and GDYA service populations for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-64. Impact on Public Safety Service Population Summary (Constrained)**

<i>Agency</i>	<i>Current Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GPD	160,797	2014	53,786	33%	28,031	17%	Table 4.4-65
GFD	175,877	2014	40,087	23%	8,899	5%	Table 4.4-66
GDoC	1,035	2014	210	20%	81	8%	Table 4.4-67
GDYA	24,987	2015	7,513	30%	6,106	24%	Table 4.4-68

The combined total impact on GPD's service population would reach 50,000 at the 2014 peak, dropping to a steady 26,600 by 2017. GFD's service population would reach 40,000 at the 2014 peak, dropping to steady 8,900 after 2017. An additional 210 individuals would enter the GDoC system's prison, jail or as federal holds at the 2014 peak, dropping to a sustained number of 81 additional individuals by 2017. The GDYA service population increases until 2015 since the decline in construction related youth is exceeded by the increase in operations related youth. The combined total impact would add an additional 7,857 youth to the GDYA's service population in 2015, dropping to a sustained addition of 6,100 youth by 2017.

**Table 4.4-65. Impact on GPD Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:561</b>										
Increase in Service Population	Direct Construction	4,545	11,432	19,618	24,416	25,887	19,024	5,416	0	0	0	0
	Indirect Construction	507	1,252	2,097	2,548	2,866	2,707	628	0	0	0	0
	<b>Total Construction Impact</b>	<b>5,053</b>	<b>12,683</b>	<b>21,714</b>	<b>26,965</b>	<b>28,754</b>	<b>21,731</b>	<b>6,044</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1,337	3,521	3,517	3,517	24,067	26,638	26,638	26,638	26,638	26,638	26,638
	Indirect Operations	72	159	158	158	966	1,393	1,393	1,393	1,393	1,393	1,393
	<b>Total Operations Impact</b>	<b>1,409</b>	<b>3,680</b>	<b>3,675</b>	<b>3,674</b>	<b>25,033</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>
	<b>Combined Direct Impact</b>	<b>5,883</b>	<b>14,952</b>	<b>23,135</b>	<b>27,933</b>	<b>49,954</b>	<b>45,662</b>	<b>32,055</b>	<b>26,638</b>	<b>26,638</b>	<b>26,638</b>	<b>26,638</b>
	<b>Combined Indirect Impact</b>	<b>579</b>	<b>1,411</b>	<b>2,255</b>	<b>2,706</b>	<b>3,832</b>	<b>4,100</b>	<b>2,020</b>	<b>1,393</b>	<b>1,393</b>	<b>1,393</b>	<b>1,393</b>
	<b>Combined Total Impact</b>	<b>6,462</b>	<b>16,363</b>	<b>25,389</b>	<b>30,639</b>	<b>53,786</b>	<b>49,762</b>	<b>34,075</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>

**Table 4.4-66. Impact on GFD Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:846</b>										
Increase in Service Population	Direct Construction	5,110	12,868	22,175	27,724	29,400	21,661	6,304	0	0	0	0
	Indirect Construction	571	1,409	2,371	2,895	3,256	3,083	731	0	0	0	0
	<b>Total Construction Impact</b>	<b>5,680</b>	<b>14,277</b>	<b>24,546</b>	<b>30,619</b>	<b>32,656</b>	<b>24,744</b>	<b>7,034</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	344	1,175	1,171	1,170	7,144	8,398	8,398	8,398	8,398	8,398	8,398
	Indirect Operations	18	53	53	53	287	501	501	501	501	501	501
	<b>Total Operations Impact</b>	<b>363</b>	<b>1,229</b>	<b>1,224</b>	<b>1,223</b>	<b>7,431</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>
	<b>Combined Direct Impact</b>	<b>5,454</b>	<b>14,043</b>	<b>23,346</b>	<b>28,894</b>	<b>36,544</b>	<b>30,059</b>	<b>14,702</b>	<b>8,398</b>	<b>8,398</b>	<b>8,398</b>	<b>8,398</b>
	<b>Combined Indirect Impact</b>	<b>589</b>	<b>1,463</b>	<b>2,424</b>	<b>2,948</b>	<b>3,543</b>	<b>3,584</b>	<b>1,232</b>	<b>501</b>	<b>501</b>	<b>501</b>	<b>501</b>
	<b>Combined Total Impact</b>	<b>6,043</b>	<b>15,506</b>	<b>25,770</b>	<b>31,842</b>	<b>40,087</b>	<b>33,643</b>	<b>15,934</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>	<b>8,899</b>

**Table 4.4-67. Impact on GDoC Inmate Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:6</b>										
Increase in Service Population	Direct Construction	22	55	94	116	120	86	24	0	0	0	0
	Indirect Construction	2	6	10	12	13	12	3	0	0	0	0
	<b>Total Construction Impact</b>	<b>25</b>	<b>61</b>	<b>104</b>	<b>128</b>	<b>134</b>	<b>98</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	4	11	11	11	73	80	79	78	77	77	77
	Indirect Operations	0	1	1	1	3	4	4	4	4	4	4
	<b>Total Operations Impact</b>	<b>4</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>76</b>	<b>84</b>	<b>83</b>	<b>82</b>	<b>82</b>	<b>81</b>	<b>81</b>
	<b>Combined Direct Impact</b>	<b>26</b>	<b>67</b>	<b>105</b>	<b>127</b>	<b>194</b>	<b>166</b>	<b>104</b>	<b>78</b>	<b>77</b>	<b>77</b>	<b>77</b>
	<b>Combined Indirect Impact</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>16</b>	<b>16</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Total Impact</b>	<b>29</b>	<b>73</b>	<b>116</b>	<b>139</b>	<b>210</b>	<b>182</b>	<b>111</b>	<b>82</b>	<b>82</b>	<b>81</b>	<b>81</b>

**Table 4.4-68. Impact on GDYA Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:316</b>										
Increase in Service Population	Direct Construction	332	827	1,379	1,698	1,867	1,533	403	0	0	0	0
	Indirect Construction	37	90	147	177	206	218	47	0	0	0	0
	<b>Total Construction Impact</b>	<b>369</b>	<b>917</b>	<b>1,526</b>	<b>1,875</b>	<b>2,073</b>	<b>1,752</b>	<b>450</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	257	637	637	637	4,554	5,087	5,087	5,087	5,087	5,087	5,087
	Indirect Operations	56	135	135	135	886	1,018	1,018	1,018	1,018	1,018	1,018
	<b>Total Operations Impact</b>	<b>314</b>	<b>773</b>	<b>772</b>	<b>772</b>	<b>5,440</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>
	<b>Combined Direct Impact</b>	<b>589</b>	<b>1,464</b>	<b>2,016</b>	<b>2,335</b>	<b>6,421</b>	<b>6,621</b>	<b>5,490</b>	<b>5,087</b>	<b>5,087</b>	<b>5,087</b>	<b>5,087</b>
	<b>Combined Indirect Impact</b>	<b>93</b>	<b>226</b>	<b>282</b>	<b>312</b>	<b>1,092</b>	<b>1,236</b>	<b>1,065</b>	<b>1,018</b>	<b>1,018</b>	<b>1,018</b>	<b>1,018</b>
	<b>Combined Total Impact</b>	<b>683</b>	<b>1,690</b>	<b>2,298</b>	<b>2,647</b>	<b>7,513</b>	<b>7,857</b>	<b>6,555</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>	<b>6,106</b>

*Public Safety Services Staffing Impacts*

Table 4.4-69 provides an overview of the proposed action's impacts on various public safety services agency staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-69. Public Safety Services Staffing Impacts Summary (Constrained)**

<i>Agency and Staffing Type</i>	<i>Current Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>	<i>Table with Year by Year Break-down</i>
GPD – Police Officers	309	2014	96	31%	50	16%	Table 4.4-70
GFD - Firefighters	190	2014	47	25%	11	6%	Table 4.4-71
GDoC – Custody and Security Personnel	188	2014	38	20%	15	8%	Table 4.4-72
GDYA – Youth Service Professionals	79	2015	25	32%	19	24%	Table 4.4-73

**Table 4.4-70. Additional GPD Sworn Police Officers Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Additional Capacity Required	Direct Construction	8	20	35	43	46	34	10	0	0	0	0	
	Indirect Construction	1	2	4	5	5	5	1	0	0	0	0	
	<b>Total Construction Impact</b>	<b>7</b>	<b>19</b>	<b>30</b>	<b>39</b>	<b>43</b>	<b>34</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	Direct Operations	2	6	6	6	43	47	47	47	47	47	47	47
	Indirect Operations	0	0	0	0	2	2	2	2	2	2	2	
	<b>Total Operations Impact</b>	<b>3</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>45</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
	<b>Combined Direct Impact</b>	<b>10</b>	<b>27</b>	<b>41</b>	<b>50</b>	<b>89</b>	<b>81</b>	<b>57</b>	<b>47</b>	<b>47</b>	<b>47</b>	<b>47</b>	
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	
	<b>Combined Total Impact</b>	<b>12</b>	<b>29</b>	<b>45</b>	<b>55</b>	<b>96</b>	<b>89</b>	<b>61</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>	

Note: Some numbers may not appear to add due to rounding.

**Table 4.4-71. Additional GFD Uniformed Fire Personnel Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
<b>Baseline Service Ratio</b>		<b>1:846</b>											
New Capacity Required	Direct Construction	6	15	26	33	35	26	7	0	0	0	0	
	Indirect Construction	1	2	3	3	4	4	1	0	0	0	0	
	<b>Total Construction Impact</b>	<b>5</b>	<b>14</b>	<b>22</b>	<b>29</b>	<b>32</b>	<b>26</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	Direct Operations	0	1	1	1	8	10	10	10	10	10	10	10
	Indirect Operations	0	0	0	0	0	1	1	1	1	1	1	
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	
	<b>Combined Direct Impact</b>	<b>6</b>	<b>17</b>	<b>28</b>	<b>34</b>	<b>43</b>	<b>36</b>	<b>17</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	
	<b>Combined Indirect Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
	<b>Combined Total Impact</b>	<b>7</b>	<b>18</b>	<b>30</b>	<b>38</b>	<b>47</b>	<b>40</b>	<b>19</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	

Note: Some numbers may not appear to add due to rounding.

**Table 4.4-72. Additional GDoC Custody and Security Personnel Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Capacity Required	Direct Construction	4	10	17	21	22	16	4	0	0	0	0
	Indirect Construction	0	1	2	2	2	2	1	0	0	0	0
	<b>Total Construction Impact</b>	<b>4</b>	<b>9</b>	<b>15</b>	<b>18</b>	<b>20</b>	<b>16</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	13	15	14	14	14	14	14
	Indirect Operations	0	0	0	0	1	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>
	<b>Combined Direct Impact</b>	<b>5</b>	<b>12</b>	<b>19</b>	<b>23</b>	<b>35</b>	<b>30</b>	<b>19</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>5</b>	<b>13</b>	<b>21</b>	<b>25</b>	<b>38</b>	<b>33</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>

Note: Some numbers may not appear to add due to rounding.

**Table 4.4-73. Additional GDYA Youth Service Professionals Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Capacity Required	Direct Construction	1	3	4	5	6	5	1	0	0	0	0
	Indirect Construction	0	0	0	1	1	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	14	16	16	16	16	16	16
	Indirect Operations	0	0	0	0	3	3	3	3	3	3	3
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>17</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>
	<b>Combined Direct Impact</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>20</b>	<b>21</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
	<b>Combined Total Impact</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>24</b>	<b>25</b>	<b>21</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>

Note: Some numbers may not appear to add due to rounding.

#### 4.4.4.4 Additional Public Safety Services Discussion

While the above quantitative analysis focuses on the proposed action's impact on public safety professional requirements, there are important factors regarding the impact of the proposed action on Guam's public safety system.

This section first details other factors that play into staffing requirements. It then discusses possible impacts as they are shaped by regional differences, issues of jurisdiction, the quality of local and federal cooperation, and requirements for appropriate facilities and equipment.

##### Other Staffing Factors

Support staff numbers are not included in the analysis above, but are large components of agency staffing. For example, 2006 data show that for every five police officers, approximately one civilian staff member was employed by GPD (Appendix C – GPD Survey). Similarly, for every 6 custody and security staff at GDoC, 1 administrative or fiscal employee was employed in the parole division (Appendix C – GDoC Survey). These staffing ratios would add at the peak impact year of 2014, the requirement of 19 additional civilian staff at the GPD and an additional 6 administrative or fiscal employees at GDoC.

It should be also be noted that the GFD analysis is based upon a baseline staffing ratio that does not allow the meeting of certain NFPA fire protection standards on a consistent basis. While GFD is able to meet the response time requirements, the agency is currently unable to meet the recommended staffing ratio per engine company on a consistent basis, due to sick leave, vacations, and deployment of staff through the National Guard (Appendix C – GFD Survey).

##### Regional Issues

Regional aspects of the island affect both GFD and GPD's public safety responsibilities and would affect the number of additional staff that would be required at various locations. High hazard areas GFD must take into consideration and staff more heavily include industrial regions where hazardous materials are stored, areas such as the Port Authority, regions with high rise buildings, and the remote and hilly southern regions of the island. Road and traffic congestion as well as lack of water pressure, due to the impacts of construction and a general increase in population would also impact safety and rescue operations.

Precinct-specific police officer to population ratios are dependent on demographic traits and characteristics, and would be impacted by incoming population groups. Areas requiring more law enforcement presence include: those with an urban center (businesses), with legal gambling (game rooms), or highly mobile/seasonal populations (Guam Police Department 2007). In 2006, the ratio of sworn police officers to 1,000 inhabitants was as follows:

- Tamuning/Tumon Precinct: 2.0
- Agat Precinct: 1.0
- Dededo (including Yigo) Precinct: 0.5
- Hagatna Precinct: 0.5

##### Jurisdiction

Because of the large military presence on the Island of Guam, issues of jurisdiction require close collaboration between local and federal public safety agencies, and such collaboration would require strengthening. The Supremacy Clause applies when federal and local laws conflict, and federal policy or law would prevail. GovGuam can regulate conduct and activity on federal property to the extent that this



inconsistency does not occur. In the event of an infraction by Active Duty personnel, on- or off-base, the military maintains jurisdiction, although concurrent jurisdiction means that GovGuam would also have jurisdiction in most cases. In cases involving civilians, jurisdiction is usually federal if the infraction occurred on-base, and local if not (Guam-JGPO Public Safety Forum 2008).

Both in the past and currently, cases involving jurisdictional issues require that federal and local officials talk through the case and decide how the case is best prosecuted. This discussion includes issues such as what is best for all parties, what is best use of taxpayer resources, government assets and the best way to adjudicate and work through issues (Guam-JGPO Public Safety Forum 2008). Recently, GPD has been processing most infractions off-base, including those involving Active Duty personnel (GPD and Navy Security Department Interviews – Appendix D).

Overall, collaboration between civilian and military safety agencies has been good, and these positive relationships and formal guidelines would require further development. GPD reports having a good working relationship with military security services, and has been collaborating with them on specific issues. For example, GPD, the Air Force and Navy security officers share patrol duties in the tourist districts of Tumon and Tamuning, and the Chief of Police meets with the admiral and general regarding specific concerns such as illegal immigration. The Naval Criminal Investigative Service and Air Force Office of Special Investigations are part of a task force performing the mapping of massage parlors on the Island of Guam to ensure that all massage establishments are operating legally (GPD 2009). The GFD also have a Memorandum of Understanding with military fire protection services. However, there have been statements that collaboration between fire protection agencies requires strengthening (Guam-JGPO Public Safety Forum 2008).

#### Facilities and Equipment

Public safety agencies indicated that they deal with current issues of overcrowding and inadequate facilities.

Increased staffing population numbers at these agencies would necessarily require upgrades of facilities so that new personnel can work productively.

Increased service population numbers would also require additional space.

A number of GFD fire stations were originally built for other purposes and do not house the equipment properly, exposing fire trucks and rescue boats to weather damage (Appendix D – GFD Interview). In particular, the fire stations at Sinajana, Agat, and Piti are over capacity, while the stations at Tamuning, Yigo, Astumbo, Inarajan, Umatac, Yona and Talofofu are at maximum capacity (Appendix C – GFD Survey).

The GDoC is unable to house all its inmates, overnighters and parolees that are being held on an infraction, and must shift individuals between its Adult Correctional Facility and Hagatna Detention Facility (GDoC 2008). There has been discussion of building a new 1,000 bed prison, but as of time of writing this has not been confirmed (GDoC 2008). GPD is also looking to expand its capabilities with the formation of the new Yigo precinct, and a reconstruction of the Agat precinct (Guam-JGPO Public Safety Forum 2008).

GDYA also has crowding issues. While the agency's Dededo facility and one of its Agat facilities would be able to accommodate additional service population, GDYA's remaining four facilities are either at or above capacity currently (Appendix C – GDYA Survey).

Finally, an increase in agency staff combined with project-related safety incidents would require that GovGuam agencies acquire additional equipment and vehicles. For example, all firefighters and Emergency Medical Technicians are issued standard Medical Personal Protective Equipment, depending on the type of incident they are involved in (Guam Civilian Military Task Force 2007):

- Structural incident gear includes helmets with face guards, fire retardant hoods, turnout coats, bunker pants with suspenders, fire boots, gloves, personal alarm security systems, and self contained breathing apparatus.
- Forestry incident gear includes helmets, fire retardant long sleeves, pants, boots and gloves, canteens, head lamps and goggles.
- Medical incident gear includes latex rubber gloves, N-95 face masks, contamination suits, and facial shields.

It is difficult to assess the proposed action's impact on type public safety incidents that are likely to occur, and the connected equipment and vehicles that might be required. For instance, while hazardous conditions on road due to construction might cause increased traffic accidents, increased traffic due to a growing population may lead to slower traffic and a lower number of fatalities (Appendix D – GPD Interview). It is expected that water emergency incidents such as boating accidents and drowning would increase with population numbers and equipment such as rescue boats and jet skis are used in such incidents.

#### **4.4.5 Other Selected General Service Agency Impacts**

##### 4.4.5.1 Introductory Statements

Analysis was performed on impact on the following GovGuam agencies that would be impacted by population growth:

- Guam Department of Parks and Recreation (GDPR)
- Guam Public Library System (GPLS)
- Guam Judiciary

In particular, quantitative analysis was conducted on the proposed action's impact on:

- Service population numbers
- Key staffing requirements for the three agencies

Qualitative discussion on additional impacts is located in section 1.1.1.1.

The impacts discussed are independent of any needs that may result from non-project related general population growth.

Also, it should be noted that many parks and community centers on Guam are not under the purview of GDPR, but rather are maintained and managed by the 19 mayors on Guam. Information on these facilities was not available at time of writing.

##### 4.4.5.2 Unconstrained Analysis

###### Construction Component Assumptions

Table 4.4-74 presents the key *construction component* assumptions used in analysis of impacts. These include:

- Analysis used the current professional to service population ratios determined through agency surveys.
- This analysis considers the service populations of GDPR, GPLS and the Guam Judiciary as the entire island population. Each of these agencies service both civilian and military population needs.

**Table 4.4-74. Construction Component Assumptions for Other Selected Agency Impacts**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
% of island population assumed to be in GDPR service population	100%	The entire island population is allowed access to the parks and recreation areas run by GDPR.
% of island population assumed to be in GPLS service population	100%	All island residents and visitors are allowed access to the GPLS libraries, and all individuals with a valid form of identification are allowed to obtain a library card. Information from GPLS Survey (Appendix C).
% of island population assumed to be on Guam Judiciary's service population	100%	All civil and criminal activity processed and litigated on the Island of Guam would go through the Judiciary system. Information from Guam Judiciary Interview (Appendix D).
GDPR Staff : Service Population Ratio	1 : 1,954	Midpoint of agency staff (2000-2008) to service population estimates. Data from GDPR Survey (Appendix C).
GPLS Staff : Service Population Ratio	1 : 6,281	2008 GPLS staff to service population ratio. Data from GDPR Survey (Appendix C).
Guam Judiciary Judge : Service Pop Ratio	1 : 29,313	2007 Judiciary judges to service population ratio (Guam Judiciary 2008)

#### Military Operational Component Assumptions

Assumptions for the *operational component* are the same as for the construction component.

Estimation of Effects

*Service Population Impacts*

Table 4.4-75 shows the combined total impact for each of these agencies’ service populations would reach 79,178 at the 2014 peak, and drop to a steady 33,608 by 2017. This results in a 49% peak increase in service population numbers and a sustained increase of 21%.

**Table 4.4-75. Impact on GDPR, GPLS, and Guam Judiciary’s Service Population (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	7,291	17,923	30,211	36,764	37,770	24,986	7,763	0	0	0	0
	Indirect Construction	2,117	5,714	9,897	11,642	12,690	8,087	1,301	0	0	0	0
	<b>Total Construction Impact</b>	<b>9,407</b>	<b>23,636</b>	<b>40,107</b>	<b>48,406</b>	<b>50,459</b>	<b>33,073</b>	<b>9,063</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1,464	3,790	3,790	3,790	25,694	27,826	27,826	27,826	27,826	27,826	27,826
	Indirect Operations	167	408	403	379	3,025	4,018	5,029	5,605	5,605	5,782	5,782
	<b>Total Operations Impact</b>	<b>1,631</b>	<b>4,199</b>	<b>4,194</b>	<b>4,169</b>	<b>28,719</b>	<b>31,845</b>	<b>32,856</b>	<b>33,431</b>	<b>33,431</b>	<b>33,608</b>	<b>33,608</b>
	<b>Combined Direct Impact</b>	<b>8,754</b>	<b>21,713</b>	<b>34,001</b>	<b>40,554</b>	<b>63,464</b>	<b>52,813</b>	<b>35,589</b>	<b>27,826</b>	<b>27,826</b>	<b>27,826</b>	<b>27,826</b>
	<b>Combined Indirect Impact</b>	<b>2,284</b>	<b>6,122</b>	<b>10,300</b>	<b>12,021</b>	<b>15,714</b>	<b>12,105</b>	<b>6,330</b>	<b>5,605</b>	<b>5,605</b>	<b>5,782</b>	<b>5,782</b>
	<b>Combined Total Impact</b>	<b>11,038</b>	<b>27,835</b>	<b>44,301</b>	<b>52,575</b>	<b>79,178</b>	<b>64,918</b>	<b>41,919</b>	<b>33,431</b>	<b>33,431</b>	<b>33,608</b>	<b>33,608</b>

*Other General Service Agency Staffing Impacts*

Table 4.4-76 provides an overview of the proposed action's impacts on GDPR, GPLS and Guam Judiciary key staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-76. Other Selected General Service Agency Impacts Summary (Unconstrained)**

<i>Agency and Staffing Type</i>	<i>Current Key Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Key Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Key Staffing Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GDPR – General Staff	90	2014	41	46%	17	19%	Table 4.4-77
GPLS – General Staff	28	2014	13	46%	5	18%	Table 4.4-78
Judiciary - Judges	6	2014	3	50%	1	17%	Table 4.4-79

**Table 4.4-77. Additional GDPR Staffing Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,954</b>										
Additional Capacity Required	Direct Construction	4	9	15	19	19	13	4	0	0	0	0
	Indirect Construction	1	3	5	6	6.5	4.1	1	0	0	0	0
	<b>Total Construction Impact</b>	4	10	16	20	22	15	4	0	0	0	0
	Direct Operations	1	2	2	2	13	14	14	14	14	14	14
	Indirect Operations	0	0	0	0	2	2	3	3	3	3	3
	<b>Total Operations Impact</b>	1	2	2	2	15	16	17	17	17	17	17
	<b>Combined Direct Impact</b>	4	11	17	21	32	27	18	14	14	14	14
	<b>Combined Indirect Impact</b>	1	3	5	6	8	6	3	3	3	3	3
	<b>Combined Total Impact</b>	6	14	23	27	41	33	21	17	17	17	17

**Table 4.4-78. Additional GPLS Staffing Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:6,281</b>										
Additional Capacity Required	Direct Construction	1	3	5	6	6	4	1	0	0	0	0
	Indirect Construction	0	1	2	2	2.0	1	0	0	0	0	0
	<b>Total Construction Impact</b>	1	3	5	6	7	5	1	0	0	0	0
	Direct Operations	0	1	1	1	4	4	4	4	4	4	4
	Indirect Operations	0	0.1	0.1	0.1	0.5	0.6	0.8	0.9	0.9	0.9	0.9
	<b>Total Operations Impact</b>	0	1	1	1	5	5	5	5	5	5	5
	<b>Combined Direct Impact</b>	1	3	5	6	10	8	6	4	4	4	4
	<b>Combined Indirect Impact</b>	0	1	2	2	3	2	1	0.9	0.9	0.9	0.9
	<b>Combined Total Impact</b>	2	4	7	8	13	10	7	5	5	5	5

**Table 4.4-79. Additional Judiciary Judges Required (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:29,313</b>										
Additional Capacity Required	Direct Construction	0	1	1	1	1	1	0	0	0	0	0
	Indirect Construction	0	0	0	0	0.4	0.3	0	0	0	0	0
	<b>Total Construction Impact</b>	0	1	1	1	1	1	0	0	0	0	0
	Direct Operations	0	0	0	0	1	1	1	1	1	1	1
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	0	0	0	0	1	1	1	1	1	1	1
	<b>Combined Direct Impact</b>	0.3	1	1	1	2	2	1	1	1	1	1
	<b>Combined Indirect Impact</b>	0.1	0.2	0.4	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.2
	<b>Combined Total Impact</b>	0.4	1	2	2	3	2	1	1	1	1	1

4.4.5.3 Constrained Analysis

Assumptions

The assumptions used in the unconstrained analysis apply equally to the constrained scenario analysis. The difference between the two sets of numbers is due entirely to the difference in service population estimates under the two scenarios.

Estimation of Effects

*Service Population Impacts*

The combined total impact on each of these agencies' service populations would reach 53,786 at the 2014 peak, and drop to a steady 28,031 by 2017 (Table 4.4-80). This results in a 31% peak increase in service population numbers and a sustained increase of 16%.

**Table 4.4-80. Impact on GDPR, GPLS, and Guam Judiciary's Service Population (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in Service Population	Direct Construction	4,545	11,432	19,618	24,416	25,887	19,024	5,416	0	0	0	0
	Indirect Construction	507	1,252	2,097	2,548	2,866	2,707	628	0	0	0	0
	<b>Total Construction Impact</b>	<b>5,053</b>	<b>12,683</b>	<b>21,714</b>	<b>26,965</b>	<b>28,754</b>	<b>21,731</b>	<b>6,044</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1,337	3,521	3,517	3,517	24,067	26,638	26,638	26,638	26,638	26,638	26,638
	Indirect Operations	72	159	158	158	966	1,393	1,393	1,393	1,393	1,393	1,393
	<b>Total Operations Impact</b>	<b>1,409</b>	<b>3,680</b>	<b>3,675</b>	<b>3,674</b>	<b>25,033</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>
	<b>Combined Direct Impact</b>	<b>5,883</b>	<b>14,952</b>	<b>23,135</b>	<b>27,933</b>	<b>49,954</b>	<b>45,662</b>	<b>32,055</b>	<b>26,638</b>	<b>26,638</b>	<b>26,638</b>	<b>26,638</b>
	<b>Combined Indirect Impact</b>	<b>579</b>	<b>1,411</b>	<b>2,255</b>	<b>2,706</b>	<b>3,832</b>	<b>4,100</b>	<b>2,020</b>	<b>1,393</b>	<b>1,393</b>	<b>1,393</b>	<b>1,393</b>
	<b>Combined Total Impact</b>	<b>6,462</b>	<b>16,363</b>	<b>25,389</b>	<b>30,639</b>	<b>53,786</b>	<b>49,762</b>	<b>34,075</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>	<b>28,031</b>

*Other General Service Agency Staffing Impacts*

Table 4.4-81 provides an overview of the proposed action's impacts on GDPR, GPLS and Guam Judiciary key staffing requirements for the action's peak year and steady-state. Year by year breakdowns of impacts are available in the tables noted.

**Table 4.4-81. Other Selected General Service Agency Impacts Summary (Constrained)**

<i>Agency and Type of Staff</i>	<i>Current Key Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Key Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Key Staffing Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>	<i>Table with year by Year Break-down</i>
GDPR – General Staff	90	2014	28	31%	14	16%	Table 4.4-82
GPLS – General Staff	28	2014	9	31%	4	16%	Table 4.4-83
Judiciary - Judges	6	2014	2	31%	1	19%	Table 4.4-84



**Table 4.4-82. Additional GDPR Staffing Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:1,954</b>										
Additional Capacity Required	Direct Construction	2	6	10	12	13	10	3	0	0	0	0
	Indirect Construction	0	1	1	1	1	1	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>2</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	1	2	2	2	12	14	14	14	14	14	14
	Indirect Operations	0	0	0	0	0	1	1	1	1	1	1
	<b>Total Operations Impact</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Combined Direct Impact</b>	<b>3</b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>26</b>	<b>23</b>	<b>16</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Total Impact</b>	<b>3</b>	<b>8</b>	<b>13</b>	<b>16</b>	<b>28</b>	<b>25</b>	<b>17</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>

Note: Some numbers may not appear to add due to rounding.

**Table 4.4-83. Additional GPLS Staffing Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:6,281</b>										
Additional Capacity Required	Direct Construction	1	2	3	4	4	3	1	0	0	0	0
	Indirect Construction	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	1	1	1	4	4	4	4	4	4	4
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Direct Impact</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Combined Total Impact</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

**Table 4.4-84. Additional Judiciary Judges Required (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Baseline Service Ratio</b>		<b>1:29,313</b>										
Additional Capacity Required	Direct Construction	0	0	1	1	1	1	0	0	0	0	0
	Indirect Construction	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Construction Impact</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Direct Operations	0	0	0	0	1	1	1	1	1	1	1
	Indirect Operations	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Operations Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Direct Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Combined Indirect Impact</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Combined Total Impact</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

#### 4.4.5.4 Additional Selected General Services Discussion

While the above quantitative analysis focuses on the proposed action's impact on required staff for various agencies, there are other important factors regarding the impact of the proposed action on these and similar agencies, that are detailed in this section.

##### *Current Agency Capacity Deficits*

It should be noted that the analysis ratios used in the calculations above do not take into account current agency capacity issues. For instance, due to government budget cuts, GDPR has experienced a 50% decrease in staffing in the space of 12 years and despite population increases and staffing numbers have not changed significantly since 2003 (Appendix C – GDPR Survey). According to criteria for determining adequacy of Public Library Services set down by the GPLS Board, the Island of Guam presently lacks at least ten professional librarians (Appendix C – GPLS Survey). Finally, the Guam Judiciary currently requires three additional judges to manage the workload that is independent of the proposed action (Guam-JGPO Public Safety Forum 2008).

##### *Additional Support Staff Requirements*

Impacts on support staff (in addition to the “key professional” numbers above) are important aspects of the proposed action's effects on agency capacity. However, they are much more difficult to quantify because agency support staff numbers were not always available at time of writing or support functions were contracted out.

While staffing numbers in this SIAS relate to overall GDPR staffing, the GDPR practices extensive outsourcing of various duties including: maintenance, teacher, lifeguard and park attendant.

GPLS staffing analysis in this SIAS included all staffing. However, it should be noted that because of the lack of professional librarians on Guam, GPLS Library Technicians are often put in charge of library operations.

The Guam Judiciary has engaged the support of the National Center State Courts to develop a comprehensive master plan addressing the entire agency's staffing needs, including parole, counselors, youth workers and marshals. Although current staffing numbers were not provided, the following ratios regarding support staff per judge was provided in a recent Judiciary needs assessment document (per judge) (Guam Judiciary Interview – Appendix D):

- 1 Chamber Clerk
- 1 Bailiff
- 1 Law Clerk
- 1 Deputy Clerk Supervisor
- 1 Deputy Clerk Assistant
- 2 Deputy Clerk I
- 2 Deputy Clerk II

##### *Facilities and Equipment*

In addition to staffing, the equipment, materials and technology that these agencies currently utilize are often inadequate.

The GPLS Five-Year Plan (2008-2012) indicates inadequate library equipment and furniture, and ineffective electronic archiving and catalog systems (GPLS 2007).

The Guam Judiciary's Strategic Plan notes the trends of security technology, use of the Internet, and increased networking of information requiring improved information and telecommunications technology (Guam Judiciary 2006).

The GDPR notes that all facilities including beach parks, historical parks and recreational facilities are in poor condition due to budget cuts (Appendix C – GDPR Survey)

#### *Budgetary Constraints*

Budgetary constraints are common among these agencies, and affect their ability to meet the requirements of the proposed action's impact. The Judiciary's 2009 budget was cut by 10% and the agency has begun to implement a range of cost-cutting measures including a delay in the opening of its satellite center, a hiring freeze, and monitoring and reducing operating expenses. The GDPR has current capacity issues due to government budget cuts – the department has experienced a 50% decrease in staffing in the space of 12 years and despite population increases, staffing has not changed significantly since 2003 (Appendix C – GDPR Survey).

### **4.4.6 Growth Permitting and Regulatory Agency Impacts**

#### 4.4.6.1 Introductory Statements

Analysis was performed on impact on the following GovGuam agencies responsible for issuing, monitoring and enforcing development permits on Guam:

- Guam Department of Public Works (GDPW) Building Permits and Inspection
- Guam Department of Land Management (GDLM)
- Guam Environmental Protection Agency (GEPA)
- Guam Coastal Management Program (CMP), within Guam Bureau of Statistics and Plans (GBSP)
- Guam Power Authority (GPA)
- Guam Water Authority (GWA)
- Guam Fire Department (GFD)
- Historic Preservation Office (HPO), within the GDPR
- Guam Division of Environmental Health (DEH), within the GDPHSS)
- Guam Alien Labor Processing & Certification Division (ALPCD) within the Guam Department of Labor

Unlike the previously described services, the permitting work of these agencies would be driven by increases in permit applications before and during the process of growth on Guam (rather than population increases). Note that impacts to GFD, GDPR and GDPHSS were also addressed in prior impact sections. This section analyzes only the impact on their permitting functions (only a small percentage of their overall functions).

#### 4.4.6.2 Unconstrained Analysis

##### Assumptions

There are no distinctions between *construction component* and *operational component* assumptions for the agencies analyzed in this section. This is because impacts are driven by the number of development permits estimated to be required, regardless of the project phase. Therefore, the assumptions listed in Table 4.4-85 apply to both components.

**Table 4.4-85. Assumptions for Growth Permitting Agency Impacts**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>Quantitative Assumptions</b>		
Permits other than building permits	Proportional to population growth	Environmental permits generally grow with population.
Monitoring/enforcement	Proportional to population growth except as noted below	Environmental monitoring and enforcement generally grow with population.
<b>Department of Land Management Assumptions</b>		
% permits received by GDPW that would be referred to GDLM	100%	Records show that GDLM processed several times the number of permits as did GDPW (GDLM and GBSP Interview – Appendix D).
% FTEs in permitting	33%	2005 base year. (GDLM Survey Response 2009)
% FTEs in monitoring/enforcement	11%	2005 base year. (GDLM Survey Response 2009)
% FTEs in administrative/support	11%	2005 base year. (GDLM Survey Response 2009)
Number permits processed per permitting FTE	1,569	2005 base year. (GDLM Survey Response 2009)
Number of rezones	Increase from base year according to population impact with two-year lead time from population increase	Rezoning assumed to be tied to population growth, with two years often needed from submittal to rezone to completion of construction.
Enforcement/monitoring	Increase according to permit increase	Enforcement assumed to be tied to population growth.
<b>GEPA Assumptions</b>		
% permits received by GDPW that would be referred to GEPA	74%	2005 base year. (GEPA Survey Response 2009)
% FTEs in permitting	65%	2005 base year. (GEPA Survey Response 2009)
% FTEs in monitoring/enforcement	15%	2005 base year. (GEPA Survey Response 2009)
Number permits processed per permitting FTE.	52.3	2005 base year. (GEPA Survey Response 2009)
On-site activities (direct project)	Equivalent of 200 permits on-site in 2010, increasing along with population impacts	Some set-up would be required early in project.
Monitoring/enforcement	Proportional to population growth except 200 permit-equivalents needed in 2010	Environmental monitoring and enforcement generally grow with population but typically require effort closer to beginning of projects.
<b>GFD Assumptions</b>		
% permits received by GDPW that would be referred to GFD	% permits received by GDPW that would be referred to GFD	% permits received by GDPW that would be referred to GFD.
% FTEs in permitting	% FTEs in permitting.	% FTEs in permitting.
% FTEs in monitoring/enforcement	% FTEs in monitoring/enforcement.	% FTEs in monitoring/enforcement.
Number permits processed per permitting FTE	Number permits processed per permitting FTE	Number permits processed per permitting FTE

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
<b>DEH Assumptions</b>		
% permits received by GDPW that would be referred to DEH	% permits received by GDPW that would be referred to DEH	% permits received by GDPW that would be referred to DEH.
% FTEs in permitting.	% FTEs in permitting.	% FTEs in permitting.
% FTEs in monitoring/enforcement	% FTEs in monitoring/enforcement.	% FTEs in monitoring/enforcement.
Number permits processed per permitting FTE	Number permits processed per permitting FTE	Number permits processed per permitting FTE
<b>Department of Parks and Recreation (HPO) Assumptions</b>		
% permits received by GDPW that would be referred to DPR	% permits received by GDPW that would be referred to DPR	% permits received by GDPW that would be referred to DPR.
% FTEs in permitting	% FTEs in permitting.	% FTEs in permitting.
% FTEs in monitoring/enforcement	% FTEs in monitoring/enforcement.	% FTEs in monitoring/enforcement.
Number permits processed per permitting FTE	Number permits processed per permitting FTE	Number permits processed per permitting FTE.
Permits required for direct project activities	Permits required for direct project activities	Permits required for direct project activities.
<b>GDoL ALPCD Assumptions</b>		
No H-2B Workers would be associated with operation of the proposed project. H-2B workers would only be employed for direct construction, and not for any indirect or induced activities.	No H-2B Workers would be associated with operation of the proposed project. H-2B workers would only be employed for direct construction, and not for any indirect or induced activities.	No H-2B Workers would be associated with operation of the proposed project. H-2B workers would only be employed for direct construction, and not for any indirect or induced activities.
Ratio of H-2B workers to ALPCD staff	Ratio of H-2B workers to ALPCD staff	Ratio of H-2B workers to ALPCD staff.

Estimation of Effects

*GDPW*

The proposed action’s impact would peak at 1,323 additional GDPW permit applications in 2011 requiring an additional 11 FTEs. By 2020, the impact drops to an additional 154 permit application requiring an additional 1 FTE (Table 4.4-86).

**Table 4.4-86. Estimated GDPW Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	185	220	320	350	230	150	110	0	0	0	0
	From Off-Site Project and Indirect	936	1,103	878	692	335	259	259	154	154	154	154
	<b>Total New Permits from Proposed Action</b>	1,121	1,323	1,198	1,042	565	409	369	154	154	154	154
New Staff Required	From Direct On-Site Project	1	2	2	2	2	1	1	0	0	0	0
	From Off-Site Project and Indirect	3.8	4.4	3.5	2.8	1.3	1.0	1.0	0.6	0.6	0.6	0.6
	Monitoring/Enforcement	3.2	3.5	3.4	2.7	1.8	1.0	0.9	0.7	0.5	0.5	0.5
	Administration/Support	0.9	1.0	0.9	0.8	0.5	0.4	0.3	0.1	0.1	0.1	0.1
	<b>Combined Total New Staff Needs</b>	9	11	10	9	6	4	3	1	1	1	1

Note: Columns may not add exactly to totals due to rounding.

GDLM

Impact on permits would peak at 1,001 in 2011 and decline to 136 by 2020 (Table 4.4-87). New staff required for GLUC hearings makes up most of the combined total employment impact, peaking in 2012 at 14 FTEs and drop to 8 FTEs at 2020.

**Table 4.4-87. Estimated GDLM Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	874	1,001	702	629	306	234	234	136	136	136	136
	<b>Total New Permits from Proposed Action</b>	874	1,001	702	629	306	234	234	136	136	136	136
New Staff Required	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	1	1	0	0	0	0	0	0	0	0	0
	Monitoring/ Enforcement	8	8	10	9	8	6	6	6	6	6	6
	From GLUC Hearings	3	3	3	3	3	1	1	1	1	1	1
	Administration/ Support	1	1	1	1	1	1	1	1	1	1	1
	<b>Combined Total New Staff Needs</b>	12	13	14	13	12	8	8	8	8	8	8

Note: Columns may not add exactly to totals due to rounding.

GEPA

The proposed action’s impact would peak with 1,129 additional GEPA permit applications in 2012, requiring an additional 29 FTEs. At 2020, the impact drops to an additional 102 permits requiring an additional 4 FTEs (Table 4.4-88).

**Table 4.4-88. Estimated GEPA Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	200	311	514	546	532	278	237	0	0	0	0
	From Off-Site Project and Indirect	657	652	615	486	235	182	182	102	102	102	102
	<b>Total New Permits from Proposed Action</b>	<b>857</b>	<b>962</b>	<b>1,129</b>	<b>1,032</b>	<b>767</b>	<b>459</b>	<b>419</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>
New Staff Required	From Direct On-Site Project	4	6	10	10	10	5	5	0	0	0	0
	From Off-Site Project and Indirect	13	13	15	12	8	4	3	2	2	2	2
	Monitoring/ Enforcement	1	1	2	2	3	3	2	1	1	1	1
	Administration/ Support	2	2	3	3	2	1	1	0	0	0	0
	<b>Combined Total New Staff Needs</b>	<b>19</b>	<b>22</b>	<b>29</b>	<b>28</b>	<b>23</b>	<b>13</b>	<b>11</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

Note: Columns may not add exactly to totals due to rounding.



CMP

Table 4.4-89 shows that impacts on CMP permits would peak at 458 in 2013 and decline to 97 at 2020. New staff required for monitoring and enforcement makes up a large portion of the combined total employment impact, peaking in 2013 at 10 FTEs and drop to 4 FTEs by 2020.

**Table 4.4-89. Estimated CMP Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	130	116	211	273	146	35	17	0	0	0	0
	From Off-Site Project and Indirect	105	150	187	185	153	117	103	97	97	97	97
	<b>Total New Permits from Proposed Action</b>	<b>235</b>	<b>266</b>	<b>397</b>	<b>458</b>	<b>299</b>	<b>152</b>	<b>121</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>
New Staff Required	From Direct On-Site Project	1.6	1.4	2.6	3.4	1.8	0.4	0.2	0	0	0	0
	From Off-Site Project and Indirect	1.3	1.9	2.3	2.3	1.9	1.5	1.3	1.2	1.2	1.2	1.2
	Monitoring/ Enforcement	0.8	0.8	1.8	3.2	4.2	3.8	2.4	2.4	2.4	2.4	2.4
	Administration/ Support	0.6	0.6	1.0	1.3	1.2	0.9	0.6	0.5	0.5	0.5	0.5
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

Note: Columns may not add exactly to totals due to rounding.

GPA

The proposed action’s impact would peak at 1,088 additional GPA permit applications in 2011, requiring an additional 4 FTEs. At 2020, the impact drops to an additional 160 permits, requiring less than 1 additional FTE (Table 4.4-90).

**Table 4.4-90. Estimated GPA Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	200	339	359	361	216	68	25	0	0	0	0
	From Off-Site Project and Indirect	614	749	630	502	381	296	296	160	160	160	160
	<b>Total New Permits from Proposed Action</b>	<b>814</b>	<b>1,088</b>	<b>990</b>	<b>863</b>	<b>597</b>	<b>365</b>	<b>321</b>	<b>160</b>	<b>160</b>	<b>160</b>	<b>160</b>
New Staff Required	From Direct On-Site Project	0.6	0.8	0.8	0.8	0.5	0.2	0.1	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	1.4	1.7	1.5	1.2	0.9	0.7	0.7	0.4	0.4	0.4	0.4
	Monitoring/ Enforcement	1.2	1.4	1.2	1.0	0.7	0.6	0.6	0.3	0.3	0.3	0.3
	Administration/ Support	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Note: Columns may not add exactly to totals due to rounding.

GWA

The proposed action’s impact would peak at 778 additional GWA permit applications in 2011, requiring an additional 7 FTEs. At 2020, the impact drops to an additional 87 permits, requiring less than one new FTE (Table 4.4-91).

**Table 4.4-91. Estimated GWA Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	145	396	327	273	127	23	12	0	0	0	0
	From Off-Site Project and Indirect	324	382	304	240	189	163	163	87	87	87	87
	<b>Total New Permits from Proposed Action</b>	<b>469</b>	<b>778</b>	<b>631</b>	<b>513</b>	<b>316</b>	<b>186</b>	<b>175</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>
New Staff Required	From Direct On-Site Project	1.2	3.4	2.8	2.3	1.1	0.2	0.1	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	2.8	3.3	2.6	2.0	1.6	1.4	1.4	0.7	0.7	0.7	0.7
	Monitoring/ Enforcement	0.0	0.2	0.7	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.0
	Administration/ Support	0.4	0.7	0.6	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Note: Columns may not add exactly to totals due to rounding.

GFD

The proposed action’s impact would peak at an additional 584 GFC permit applications in 2011, requiring an additional 14 FTEs (Table 4.4-92). At 2020, the impact drops to 76 additional permits, requiring 2 FTE.

**Table 4.4-92. Estimated GFD Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	510	584	408	343	143	133	133	76	76	76	76
	<b>Total New Permits from Proposed Action</b>	<b>510</b>	<b>584</b>	<b>408</b>	<b>343</b>	<b>143</b>	<b>133</b>	<b>133</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>
New Staff Required	From Direct On-Site Project	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	11.2	12.8	8.9	7.5	3.1	2.9	2.9	1.7	1.7	1.7	1.7
	Monitoring/Enforcement	0.2	0.6	0.9	1.1	1.6	1.3	0.8	0.6	0.6	0.6	0.6
	Administration/Support	0.9	1.0	0.8	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.2
	<b>Combined Total New Staff Needs</b>	<b>12</b>	<b>14</b>	<b>11</b>	<b>9</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Note: Columns may not add exactly to totals due to rounding.

GDPHSS – DEH

Table 4.4-93 shows that impacts on DEH permits would peak at 36 in 2011 and decline to 4 by 2020. New staff required for monitoring and enforcement, makes up most of the combined total employment impact, peaking in 2014 at 5 FTEs and drop to 2 FTEs by 2020 (Table 4.4-93).

**Table 4.4-93. Estimated DEH Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	2	2	2	2	2	0	0	0	0	0	0
	From Off-Site Project and Indirect	29	34	27	21	10	8	8	4	4	4	4
	<b>Total New Permits from Proposed Action</b>	<b>31</b>	<b>36</b>	<b>29</b>	<b>23</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
New Staff Required	From Direct On-Site Project	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Monitoring/ Enforcement	0.6	1.5	2.3	2.8	4.0	3.2	1.9	1.5	1.5	1.5	1.5
	Administration/ Support	0.2	0.5	0.7	0.8	1.2	1.0	0.6	0.5	0.5	0.4	0.4
	<b>Combined Total New Staff Needs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Note: Columns may not add exactly to totals due to rounding.

GDPR-HPO

The proposed action’s impact would peak at 739 additional HPO permit applications in 2010, requiring an additional 4 FTEs (Table 4.4-94). At 2020, the impact drops to an additional 39 permits, requiring less than one additional FTE.

**Table 4.4-94. Estimated DPR-HPO Permits and Required Permitting Staff (Unconstrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	475	404	308	212	181	131	70	0	0	0	0
	From Off-Site Project and Indirect	264	321	238	188	91	70	70	39	39	39	39
	<b>Total New Permits from Proposed Action</b>	<b>739</b>	<b>725</b>	<b>546</b>	<b>400</b>	<b>272</b>	<b>201</b>	<b>140</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>39</b>
New Staff Required	From Direct On-Site Project	2.4	2.1	1.6	1.1	0.9	0.7	0.4	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	1.4	1.7	1.2	1.0	0.5	0.4	0.4	0.2	0.2	0.2	0.2
	Monitoring/ Enforcement	0.1	0.3	0.4	0.5	0.7	0.6	0.3	0.3	0.3	0.3	0.3
	Administration/ Support	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Note: Columns may not add exactly to totals due to rounding.

Guam Department of Labor-Alien Labor Processing and Citizenship Division

The proposed action’s impact would peak at 13,278 additional ALPCD applications in 2014, requiring an additional 46 FTEs. This impact drops to dropping to zero when demand for new H-2B workers begins to decline after the 2014 construction peak (Table 4.4-95).

**Table 4.4-95. Projected Number of H-2B Workers On Guam and Basis for ALPCD Workload (Unconstrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New H2B Workers from Proposed Action (increase from previous year)	2,298	3,540	4,483	2,928	1,191	0	0	0	0	0	0
<b>New Staff Required</b>	<b>8</b>	<b>12</b>	<b>16</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

4.4.6.3 Constrained Analysis

Assumptions

The assumptions in Table 4.4-85 apply to both the *construction phase* and *operational phase* of this analysis. The differences between the unconstrained and constrained analyses are due to the difference in economic activity driving permit requests under the two scenarios.

Estimation of Effects

*GDPW*

The proposed action’s impact would peak at 842 additional GDPW permit applications in 2011 requiring an additional 6 FTEs. By 2020, the impact drops to an additional 132 permit application requiring about one additional FTE (Table 4.4-96).

**Table 4.4-96. Estimated GDPW Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	85	100	160	190	80	20	10	0	0	0	0
	From Off-Site Project and Indirect	689	742	546	557	286	237	237	132	132	132	132
	<b>Total New Permits from Proposed Action</b>	<b>774</b>	<b>842</b>	<b>706</b>	<b>747</b>	<b>366</b>	<b>257</b>	<b>247</b>	<b>132</b>	<b>132</b>	<b>132</b>	<b>132</b>
New Staff Required	From Direct On-Site Project	0	0	1	1	0	0	0	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	3	3	2	2	1	1	1	0.5	0.5	0.5	0.5
	Monitoring/ Enforcement	3	3	2	2	2	1	1	0.7	0.5	0.5	0.5
	Administration/ Support	1	1	0	0	0	0	0	0.1	0.1	0.1	0.1
	<b>Combined Total New Staff Needs</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Note: Columns may not add exactly to totals due to rounding.

GDLM

Impact on permits would peak at 775 in 2011 and decline to 116 by 2020 (Table 4.4-97). New staff required for GLUC hearings makes up most of the combined total employment impact, peaking in 2011-2014 at 12 FTEs and drop to 6 FTEs at 2020.

**Table 4.4-97. Estimated GDLM Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	677	775	452	494	280	214	214	116	116	116	116
	<b>Total New Permits from Proposed Action</b>	<b>677</b>	<b>775</b>	<b>452</b>	<b>494</b>	<b>280</b>	<b>214</b>	<b>214</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
New Staff Required	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	0	0	0	0	0	0	0	0	0	0	0
	Monitoring/ Enforcement	7	8	9	9	8	6	6	6	6	6	6
	From GLUC Hearings	3	2	2	2	3	1	1	1	1	1	1
	Administration/ Support	1	1	1	1	1	1	1	1	1	1	1
	<b>Combined Total New Staff Needs</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>

Note: Columns may not add exactly to totals due to rounding.



GEPA

The proposed action’s impact would peak with 938 additional GEPA permit applications in 2012, requiring an additional 24 FTEs. At 2020, the impact drops to an additional 87 permits requiring an additional 3 FTEs (Table 4.4-98).

**Table 4.4-98. Estimated GEPA Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	200	306	511	550	559	287	235	0	0	0	0
	From Off-Site Project and Indirect	508	595	428	326	192	143	143	87	87	87	87
	<b>Total New Permits from Proposed Action</b>	<b>708</b>	<b>902</b>	<b>938</b>	<b>876</b>	<b>751</b>	<b>430</b>	<b>378</b>	<b>87</b>	<b>87</b>	<b>87</b>	<b>87</b>
New Staff Required	From Direct On-Site Project	4	6	10	11	11	5	4	0	0	0	0
	From Off-Site Project and Indirect	10	12	11	10	7	3	3	2	2	2	2
	Monitoring/Enforcement	0	1	1	1	2	2	2	1	1	1	1
	Administration/Support	1	2	2	2	2	1	1	0	0	0	0
	<b>Combined Total New Staff Needs</b>	<b>15</b>	<b>20</b>	<b>24</b>	<b>24</b>	<b>22</b>	<b>12</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

Note: Columns may not add exactly to totals due to rounding.

CMP

The proposed action’s impact would with 368 additional CMP permit applications in 2013, requiring an additional 8 FTEs. By 2020, the impact drops to an additional 17 permits requiring an additional 2 FTEs (Table 4.4-99).

**Table 4.4-99. Estimated CMP Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	130	116	174	248	146	35	17	0	0	0	0
	From Off-Site Project and Indirect	105	105	104	120	97	51	37	17	17	17	17
	<b>Total New Permits from Proposed Action</b>	<b>235</b>	<b>221</b>	<b>278</b>	<b>368</b>	<b>242</b>	<b>85</b>	<b>54</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>
New Staff Required	From Direct On-Site Project	1.6	1.4	2.2	3.1	1.8	0.4	0.2	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	1.3	1.3	1.3	1.5	1.2	0.6	0.5	0.2	0.2	0.2	0.2
	Monitoring/ Enforcement	0.8	0.8	1.6	2.6	3.3	3.0	1.9	1.9	1.9	1.9	1.9
	Administration/ Support	0.6	0.5	0.8	1.1	0.9	0.6	0.4	0.3	0.3	0.3	0.3
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Note: Columns may not add exactly to totals due to rounding.

GPA

The proposed action’s impact would peak at 884 additional GPA permit applications in 2011, requiring an additional 3 FTEs. At 2020, the impact drops to an additional 148 permits, requiring less than one additional FTE (Table 4.4-100).

**Table 4.4-100. Estimated GPA Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	200	339	359	361	216	68	25	0	0	0	0
	From Off-Site Project and Indirect	477	545	409	397	342	284	284	148	148	148	148
	<b>Total New Permits from Proposed Action</b>	677	884	768	758	558	352	309	148	148	148	148
New Staff Required	From Direct On-Site Project	1	1	1	1	0	0	0	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	1	1	1	1	1	1	1	0.3	0.3	0.3	0.3
	Monitoring/Enforcement	1	1	1	1	1	1	1	0.3	0.3	0.3	0.3
	Administration/Support	0	0	0	0	0	0	0	0	0	0	0
	<b>Combined Total New Staff Needs</b>	3	3	3	3	2	2	1	1	1	1	1

Note: Columns may not add exactly to totals due to rounding.

GWA

The proposed action’s impact on permits peaks at 667 additional GWA 2013, requiring an additional 6 FT. At 2020, the impact drops to an additional 80 permits, requiring 1 additional FTE (Table 4.4-101).

**Table 4.4-101. Estimated GWA Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	145	396	327	273	127	23	12	0	0	0	0
	From Off-Site Project and Indirect	251	271	199	188	177	153	153	79	79	79	79
	<b>Total New Permits from Proposed Action</b>	<b>396</b>	<b>667</b>	<b>526</b>	<b>461</b>	<b>304</b>	<b>177</b>	<b>165</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
New Staff Required	From Direct On-Site Project	1	3	3	2	1	0	0	0	0	0	0
	From Off-Site Project and Indirect	2	2	2	2	2	1	1	1	1	1	1
	Monitoring/ Enforcement	0	0	0	0	0	0	0	0	0	0	0
	Administration/ Support	0	1	0	0	0	0	0	0	0	0	0
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Note: Columns may not add exactly to totals due to rounding.

GFD

The proposed action’s impact would peak at an additional 452 GFC permit applications in 2011, requiring an additional 11 FTEs. At 2020, the impact drops to 67 additional permits, requiring 2 FTE (Table 4.4-102).

**Table 4.4-102. Estimated GFD Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	395	452	262	300	133	124	124	67	67	67	67
	<b>Total New Permits from Proposed Action</b>	<b>395</b>	<b>452</b>	<b>262</b>	<b>300</b>	<b>133</b>	<b>124</b>	<b>124</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>
New Staff Required	From Direct On-Site Project	0	0	0	0	0	0	0	0	0	0	0
	From Off-Site Project and Indirect	9	10	6	7	3	3	3	1	1	1	1
	Monitoring/ Enforcement	0	0	1	1	1	1	1	1	1	1	1
	Administration/ Support	1	1	0	1	0	0	0	0	0	0	0
	<b>Combined Total New Staff Needs</b>	<b>9</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Note: Columns may not add exactly to totals due to rounding.

## GDPHSS – DEH

Table 4.4-103 shows that impacts on DEH permits would peak at 26 in 2011 and decline to 4 at 2020. New staff required for monitoring and enforcement, not permit processing, makes up most of the combined total employment impact, peaking in 2014 and 2015 at 3 FTEs and drop to 2 FTEs at 2020.

**Table 4.4-103. Estimated DEH Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	2	2	2	2	2	0	0	0	0	0	0
	From Off-Site Project and Indirect	22	24	18	17	9	7	7	4	4	4	4
	<b>Total New Permits from Proposed Action</b>	<b>24</b>	<b>26</b>	<b>20</b>	<b>19</b>	<b>11</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
New Staff Required	From Direct On-Site Project	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
	Monitoring/ Enforcement	0.3	1	1	2	3	3	2	1.3	1.3	1.3	1.3
	Administration/ Support	0.1	0	0	0	1	1	1	0.4	0.4	0.4	0.4
	<b>Combined Total New Staff Needs</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Note: Columns may not add exactly to totals due to rounding.

GDPR-HPO

The proposed action’s impact would peak at 681 additional HPO permit applications in 2010, requiring 4 additional FTE. At 2020, the impact drops to an additional 34 permits, requiring less than one additional FTE (Table 4.4-104).

**Table 4.4-104. Estimated DPR-HPO Permits and Required Permitting Staff (Constrained)**

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Increase in No. of Permits	From Direct On-Site Project	475	404	308	212	181	131	70	0	0	0	0
	From Off-Site Project and Indirect	206	255	156	147	82	63	63	34	34	34	34
	<b>Total New Permits from Proposed Action</b>	<b>681</b>	<b>659</b>	<b>464</b>	<b>359</b>	<b>263</b>	<b>194</b>	<b>133</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>
New Staff Required	From Direct On-Site Project	2.4	2.1	1.6	1.1	0.9	0.7	0.4	0.0	0.0	0.0	0.0
	From Off-Site Project and Indirect	1.1	1.3	0.8	0.8	0.4	0.3	0.3	0.2	0.2	0.2	0.2
	Monitoring/ Enforcement	0.1	0.2	0.2	0.3	0.5	0.5	0.3	0.2	0.2	0.2	0.2
	Administration/ Support	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0
	<b>Combined Total New Staff Needs</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: Columns may not add exactly to totals due to rounding.

Guam Department of Labor-Alien Labor Processing and Certification Division

The proposed action’s impact would peak at 13,278 additional ALPCD applications in 2014, requiring an additional 46 FTEs. This impact drops to dropping to zero when demand for new H-2B workers begins to decline after the 2014 construction peak (Table 4.4-105).

**Table 4.4-105. Projected Number of H-2B Workers On Guam and Basis for ALPCD Workload (Constrained)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New H2B Workers from Proposed Action (increase from previous year)	2,298	3,540	4,483	2,928	1,191	0	0	0	0	0	0
<b>New Staff Required</b>	<b>8</b>	<b>12</b>	<b>16</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

#### 4.4.6.4 Additional Growth Permitting and Regulatory Agencies Discussion

Understaffing has persistently been a problem with various permitting agencies, with a frequent persistence of unfilled positions. In 2005, a relatively normal year, GDLM had 9 FTE positions filled, but 15 unfilled. That same year, GEPA had 58 FTEs filled, but 23 were unfilled. HPO had 7 FTE positions filled and 4 unfilled. Thus, with more appropriate levels of staffing to provide up to standards levels of service, the impact of the proposed project would be higher than shown in the tables above.

In general, the ALPCD workload (and FTEs) is judged to rise and fall with the number of H-2B workers projected to be working on Guam. Although some efficiencies (reductions in staff time per H-2B worker) could be involved in processing higher numbers, these efficiencies are not judged to be substantial.

### 4.5 SOCIOCULTURAL IMPACTS

When reviewing sociocultural impacts in this section, it is important to remember the few social issues that are not technically “impacts” of the proposed action because they are not caused by the action, but are nevertheless given fresh energy by discussion of the proposed action. Brief overviews of these topics are included in Section 3.5. These include:

- Claims for WWII reparations
- Various land issues involving the military’s return of lands formerly acquired from Guam and more recent restrictions on access due to post-9/11 increased security
- Military-Civilian social issues on Okinawa

#### 4.5.1 Impacts on Crime and Serious Social Disorder

##### 4.5.1.1 Introductory Statements

Most sociocultural impacts are due to the overall volume of the proposed action, not the unique attributes of any particular service (i.e., Marines, Navy, or Army).

However, during the operations phase, the Navy component of the proposed action is of a more concentrated nature than the Marine component, as it consists of shore leave components. This results in slightly different crime and social order impacts, detailed at the end of the impact analysis.

The Army AMDTF action in and of itself would be sufficiently small that it would be unlikely to have any impacts on crime and social order, either in construction or operational components. However, because the Army action is occurring in conjunction with other aspects of the overall military buildup, it would somewhat magnify many of the previously discussed impacts.

##### 4.5.1.2 Unconstrained Analysis

Table 4.5-1 identifies possible impacts to crime and serious social disorder on Guam during the construction and operations components. These are based on scoping input and interviews.

**Table 4.5-1. Topics for Crime and Social Order Impact Analysis**

<i>Construction</i>	<i>Operations</i>
Increase in overall crime	Increase for overall crime
Increase in prostitution	Increase in sexual assaults
Increase in drug use/substance abuse	Increase in prostitution
	Increase in drug use/substance abuse
	Increase in crimes against women and children
	Increase in military- civilian fights



## Construction Component

### *Increase in Overall Crime*

It is expected that a spike in the number of offenses and arrests would occur at the onset and for the duration of the construction component, especially considering that the overall social change at this time would be augmented by the relocation of all Marine Corps personnel.

Construction booms in general cause a variety of social disruptions. As areas are affected by rapid population growth and social change, law enforcement becomes more bureaucratic, impersonal, reliant on recordkeeping, stringent, and professional. Residents who are preoccupied with social change and its consequences may note a large increase in crime as a result of the population growth, regard newcomers as largely responsible for the crime, and are more likely to report crime (Covey and Menard 1984; also, see “Boomtown” discussion in Section 1.2.2).

Inquiries to the GPD, the GBSP, and other organizations/agencies along with extensive research failed to uncover quantitative crime data about Guam’s previous construction boom phases. However, interviews with industry professionals that experienced Guam’s hotel construction boom of the late 1980s and early 1990s indicate that Guam did not experience significant increases in crime or social disorder (GCA and GVB Interviews – Appendix D). More recent arrest data on Guam does not indicate an offenders’ type of employment, so it is not possible to say whether construction workers in particular are more crime-prone than other types of workers.

The expected construction worker composition may also affect increase in crime, with H-2B workers having historically less of an impact than workers migrating from the FAS.

H-2B workers are subject to numerous employer regulations. In general they appear to follow these rules, save money, and send it home. Any violations under legal jurisdiction could lead to their deportation (Guam Judiciary, Guam Chamber of Commerce, and GVB Interviews – Appendix D). Prior experience suggests that H-2B workers would be responsible for little if any increase in crime.

In contrast, in-migration of workers from the FAS (whether for direct construction work or to take new indirect jobs), has been associated with increased crime. In-migrants from the FAS (including Palau, FSM, and the RMI) are disproportionately represented in arrests for Part I and Part II offenses in the most recent published data (Table 4.5-2):

**Table 4.5-2. Percentage of FAS/FSM Arrestees for Part I and Part II Offenses, 2005-2006**

<i>Year</i>	<i>Total Offenses</i>	<i>Part I Offenses</i>	<i>Part II Offenses</i>
2005	33%	21%	35%
2006	33%	26%	34%

*Source:* GBSP 2005; GPD 2008.

While the exact percentage of Guam’s population comprised of FAS residents for these years is not known, the numbers counted by the U.S. Census Bureau (2009) for 2008 suggests a percentage in the range of 11% to 15%. This compares with 33% of all arrestees on Guam for 2005 and 2006. Notably, 2006 statistics show that FAS/FSM arrests were disproportionately high for serious Part I crimes such as Aggravated Assault (44%), Motor Vehicle Theft (43%) and Murder (33%); however, actual numbers of the latter two crimes are low and therefore statistically less reliable (GPD 2008). For Part II crimes, the FAS/FSM arrests were disproportionately high for offenses such as Other Assaults, Vandalism, Drunkenness, Liquor Laws, Driving Under the Influence, and Disorderly Conduct. Chuukese comprise 80% of indigent defendants currently in the court system (Appendix D – Guam Judiciary Interview).

The possibility of ethnic bias in arrest patterns must be acknowledged in reference to the above data.

Furthermore, cultural differences affect arrest rates as well. Although GPD data combines FAS and FSM populations, immigrants from the FSM account for the majority of the FAS residents on Guam (U.S. Census Bureau 2009). These immigrants not only come from depressed economies, but also often live by different value systems that may manifest in behavior that is acceptable in their culture but not on Guam. For example, while educational requirements are nominal in FSM, not attending school is defined as truancy on Guam (Appendix D – GPD Interview). It should also be emphasized that FAS residents' current apparent propensity for more crime reflects cultural transition to a more modern society and would not necessarily continue indefinitely.

Micronesian gangs are also emerging as a problem, and especially involve Chuukese and Chamorro youth engaging in fights and retaliation actions (Appendix D – GPD Interview).

#### *Increase in Prostitution*

While the *volume* of prostitution may be assumed to grow consistent with the significant increase in transient population during the construction period, it cannot be conclusively determined whether the *rate* of prostitution would increase.

In general, prostitution prospers in boomtown settings – from the California gold rush in the mid-19th century to small communities now experiencing oil and natural gas exploration. Thousands of men are added to the local population, and transient workers often have little stake in the community. As a result, drugs, alcohol abuse, and prostitution can become significant problems, and annual arrests can double or triple in a single year (Ortiz et al. 2009).

Presently on Guam, clubs, strip clubs and massage parlors are co-located, and prostitution is integral to this mix of commercialized vice (GPD Interview – Appendix D). On the surface, prostitution is not obvious on Guam; however, the number of therapeutic massage parlors is rising (GPD Interview – Appendix D). Although there is no direct linkage between therapeutic massage parlors and prostitution, a relationship can be inferred from co-location of adult entertainment, massage parlors, and sex workers in cities throughout the world.

In 2006, seven arrests for prostitution and commercialized vice were made. Trend data are inconclusive and show four arrests in 2002, two in 2003, five in 2004, and two in 2005 (GPD 2008). Prostitution is classified as a Part II offense because reported arrests and offenses can vary greatly depending on local law enforcement policies.

Inquiries to the GPD revealed an absence of quantitative data about those who patronize prostitutes. Arrest data refer only to prostitutes, not their clients. Thus, there is no clear evidence whether likely immigrating groups are any more or less likely to patronize prostitutes. It is therefore not possible to say whether these groups of workers in particular would differ from other construction-related workers in contributing to prostitution.

#### *Increase in Drug Use/Substance Abuse*

The proposed action would likely increase the number of arrests for drug and alcohol-related offenses simply because of the population growth. Furthermore, rapid social and economic change can significantly impact drug and alcohol abuse.

It is not possible however, to determine whether construction workers in particular would incur more drug and alcohol-related arrests than other types of workers. The GPD reports on drug abuse arrests by age and

types of drugs involved and Driving Under the Influence arrests are reported by outcomes (involving crash, injuries or fatalities) and ethnicity, not by type of employment.

Data is available on FAS/FSM alcohol offenses however, and in 2006 FAS/FSM arrests were disproportionately high for alcohol-related offenses though not for drug violations (Table 4.5-3).

**Table 4.5-3. Total Drug and Alcohol-Related Arrests and FAS/FSM Arrests, 2006**

<i>Offense</i>	<i>Total</i>	<i>% FAS/FSM</i>
Driving Under the Influence	836	39%
Liquor Laws	94	68%
Drunkenness	117	62%
Drug Abuse Violations	182	10%

*Source:* GPD 2008.

Finally, the flow of goods and legal and illegal immigrants into Guam presents opportunities for drug smuggling. The drug methamphetamine was involved in 54% of the drug arrests in 2006 (GPD 2008). The 2003 Drug Threat Assessment reported that methamphetamine is the most available, most abused illegal drug on Guam (U.S. Department of Justice, National Drug Intelligence Center 2003). It is readily available on Guam due to a steady supply from the Philippines, Hong Kong, China, Taiwan, and South Korea.

#### Military Operational Component

##### *Increase in Overall Crime*

It appears that the military operational component would have little impact on overall crime rates.

This is determined with access to limited data, evidence that crime rates for U.S. military in Okinawa are low, and no detailed statistics on individual branches of the armed forces. Quantitative military data on criminal arrests of Marine Corps personnel or for any branch of the armed services are limited to information on overseas SOFA personnel. The GPD does not gather specific data on military charged with crimes, and neither the DoD nor Marine Corps websites offer data. Thus the best reliable predictor for an increase in overall crime on Guam once the Marine Corps personnel are relocated is provided by the information on arrests of SOFA personnel while on Okinawa.

Increase in crime by the military dependents on Guam may also be a possible impact. Guam has experienced rising juvenile drug abuse arrests (from seven to 117 between 2002 and 2006) and other assaults from 39 to 160 between 2002 and 2006) (GPD 2008; Guam Judiciary 2008; ROK Drop 2008). Dependents of SOFA personnel on Okinawa do contribute to the overall crime statistic. Of the 46 arrests in 2007, 30 were active-duty service members; one was a civilian employee; and 15 were dependents. In 2006, arrests involved 38 service members, three civilians, and 22 dependents arrested, including 23 minors.

##### *Increase in Sexual Assaults*

In 2006, GPD recorded 141 arrests for forcible rape and seven arrests for sex offenses (GPD 2008). As noted previously, the GPD does not gather specific data on military charged with crimes.

Thus, quantitative data on sexual assault arrests of Marine Corps personnel or for any branch of the armed services are limited to information on overseas SOFA personnel. This data conveys the impression that the impact of sexual assaults by any branch of the military would not be significant. That conclusion, however, should be viewed with some caution, as detailed information on Marines – as well as Army, Navy, and Air Force – is lacking.

### *Increase in Prostitution*

The overall *volume* of prostitution may be assumed to grow consistent with the significant increase in both military and civilian population stemming from the buildup, but it cannot be conclusively determined whether the *rate* of prostitution would increase.

Historically, prostitution has long been associated with the presence of military bases. Prostitution is frequently cited as a problem around military bases in Korea, the Philippines, and more recently in Bosnia. However, local law enforcement policies are a major factor in determining whether prostitution is, first, considered an important issue, and, second, tolerated or not.

Regardless of the approach or enforcement policies of local authorities, the U.S. military has declared a “zero tolerance” policy regarding prostitution. Realistically, some military personnel, like some civilians, frequent houses of prostitution and engage in other types of commercialized vices. Given that there is already a fairly large military population on Guam, the few 2006 arrests on Guam for prostitution indicate that the problem is not a large one, is not considered so by the police, and/or is not a priority for enforcement by Guam authorities.

Research for this study found that general articles referring to prostitution and the military tend to focus on single events or areas of deployment. No statistical studies were found that give any quantitative data on discrepancies between Marines and other branches of the military in regards to whether one branch is more inclined to utilize the services of a prostitute.

### *Increase in Drug Use/Substance Abuse*

“Substance abuse” can include alcohol. The drinking age on the Island of Guam is currently 18. There have been discussions about enforcing an on-base drinking age of 21, and perhaps off-base as well. However, any off-base limits would be difficult to enforce, and would require the attention of the military (Appendix D – GPD Interview).

Information on drug use/substance abuse (including alcohol) in the military is fragmented, but indications are that this may be a growing problem. In 2005, the DoD conducted a survey of 16,037 active-duty military personnel. In the survey, 43% of active-duty military personnel admitted to frequent binge drinking. In addition, 67.1% of binge-drinking episodes were reported by personnel aged 17-25 (representing nearly half of all active-duty military personnel), and a quarter of those episodes were reported by underage personnel (age 17-20) (Central Broadcasting Service News 2009). It should be noted, however, that published results did not compare rates among different military services or with civilians of comparable age and socioeconomic status.

In 2005 10.5% of enlisted personnel left the military, an increase from 8.7% in 2002. This increase is blamed in part on drug use. The losses include soldiers, Sailors and airmen who are discharged before their term of enlistment is up and have risen among enlisted and officers alike in recent years. Discharges for drug use have risen 40% in the Army since 2002, although discharges for alcohol use declined (Join Together 2006).

Moreover, there is growing concern that military personnel returning from Iraq and Afghanistan are experiencing a range of difficulties, including traumatic brain injury, post traumatic stress disorder, depression, anxiety, and tobacco, alcohol and drug abuse. This has become a major issue to such an extent that a January 2009 conference was convened by the National Institute on Drug Abuse to address substance abuse and co-morbidities among military personnel, veterans, and their families.

No statistical studies were found on any specific branch of the military in regards to drug use and substance abuse. Thus, the conclusion of probable increase in alcohol or other substance abuse issues is based strictly on the addition of significantly more military troops to Guam's population, but not the Marine Corps in particular.

#### *Increase in Offenses Against Women and Children*

Domestic violence and child abuse were concerns frequently expressed in scoping comments. (Some of these overlap with concerns covered previously).

Despite data limitations, available information suggests the upcoming military re-deployment would cause an increase in offenses against women and children on Guam's military community, certainly in the overall volume and possibly in the rate as well. However, this is a function of increased presence of the military population in general, not the Marines in particular.

Guam data do not provide clear indications of relationship between current military presence and family violence. In 2006, only 53 arrests for "Offenses Against the Family" were reported (GPD 2008). There is no indication whether the offenders were civilian or military. For a number of reasons including shame, secrecy, and isolation, both domestic violence and child abuse are typically under-reported (National Committee to Prevent Child Abuse 1996).

Nationally, there have been clearer indications that family violence is a serious military-wide concern, although there even these are subject to data limitations.

Following a number of reported high-profile domestic violence cases involving soldiers who killed their spouses, Congress passed the National Defense Authorization Act for FY 2000, that required DoD to take several actions to address concerns about domestic violence in the military. Among these requirements was establishment of a Defense Task Force on Domestic Violence. Over the next three years, the task force issued three reports that collectively contained almost 200 recommendations. The task force reported finding a system where military personnel rarely faced punishment or prosecution for battering their wives and where they often found shelter from civilian orders of protection. The overarching recommendation was for the military to implement a "culture shift" to zero tolerance for domestic violence by holding offenders accountable and by punishing criminal behavior. DoD accepted most of the recommendations and gradually made many changes, ranging from an increase in family counselors to domestic violence training for commanding officers (General Accounting Office 2006; Alvarez and Sontage 2008).

However, specific data on either the Marine Corps or any other branch of the military were not published. In fact, DoD's ability to record domestic violence incidents and disciplinary actions taken by commanders is hampered because the systems the department uses are based on incomplete data (General Accounting Office 2006). DoD's domestic violence database does not capture data from all law enforcement systems. As yet, no plans have been developed to address the data limitations. Given the incomplete information, DoD cannot know the size and nature of the problems nor have the ability to assess the effectiveness of its actions.

Since the beginning of the current wars in Afghanistan and Iraq, there has been a cluster of family murder-suicides suggesting a possible link between combat tours and domestic violence (Alvarez and Sontage 2008). Again, many questions have been raised about the actual strength of this link, although researchers have established a relationship between combat-induced post-traumatic stress disorder and domestic violence.

### *Increase in Military/Civilian Fights*

Fights have occurred between military and civilian populations since the U.S. armed forces first came to Guam, and occasional personal conflicts occur around all military bases throughout the world and regardless of country or nationality. Despite Guam's existing military population, such conflicts are not considered a major issue at present, but interviews with various Guam civic leaders found significant concern based in part on the Marine's reputed "warrior culture" and in part on widespread memories of violent encounters when there was a larger military presence on Guam during the Vietnam War period (Guam Civilian Military Task Force Committee on the Environment 2008; Guam Civilian Military Task Force Committee on Health and Social Services 2008; Guam Civilian Military Task Force Committee on Public Safety 2008).

Ultimate fighting and mixed martial arts training are currently popular among Guam's young civilian population, and there have been reports that the youth undergoing such training might test themselves against Marines who could react accordingly (GPD Interview – Appendix D). If such conflicts occur, they would likely represent a significant transitional "period of adjustment," but the length of this period is not predictable.

### *Navy Component Crime and Social Disorder Impacts*

The increase in the numbers of port-days of Sailors on shore leave associated with the operational phase of the transient berthing of the CVN has the potential to have adverse sociocultural impacts. Overall, the occupational setting is one that is characterized by alternating periods of being at sea for lengthy periods of time experiencing "... intense activity, gruelingly long work hours ...", followed by "... "periods of recreation in U.S. or foreign ports" (Ames et. al. 2009). It is this period of recreation where Sailors tend to "blow off steam" (Russ and Ames 2006).

One important aspect of Navy shore leave is the consumption of alcoholic beverages. Young Sailors are often under the legal drinking age, and have a relative lack of drinking experience (Ames et. al. 2009). During deployment, Navy policy does not allow any drinking of alcohol onboard ship while at sea, except under certain tightly regulated situations. The docking of ships at ports for periods of "liberty" or "shore leave" often leads to heavy and/or binge drinking activities (Federman et al. 2000), and anecdotal evidence indicates that this is the case currently when carriers dock at Guam's port (GDYA Interview – Appendix D).

Finally, although quantitative measures of the current impact of Navy shore leave on Guam's crime and social order environment were not available, GovGuam agency interviews suggested that any increase in port-days or number of Sailors on shore leave on Guam would require additional enforcement from both civilian and military public safety agencies (GDoC, GPD, and U.S. Naval Security Interviews – Appendix D). The Public Safety Services impact section of this study provides additional discussion on this topic.

#### 4.5.1.3 Constrained Analysis

Impact differences under the constrained scenario are more prominent for impacts associated with construction than with operations.

### Increase in Overall Crime

The constrained scenario would still involve significant disruptions to community norms, but the absolute numbers and percentages of in-migrants (particularly those other than H-2B workers) would be less. While it is impossible to quantify the difference precisely, it is reasonable to assume that there would still be some uptick in crime rates during the construction phase under the constrained scenario, but that it

would not be as great as under the unconstrained scenario. And the absolute volume of crime would of course be less due to the relatively smaller population increase.

#### Increase in Prostitution

Unlike the unconstrained analysis, there would likely be an increase in prostitution *rates*, but no clear certainty about the absolute *volume* of prostitution.

Because the constrained scenario involves fewer dependents per in-migrant – and therefore probably proportionately more single males among the non-H-2B worker population – there is more reason to anticipate higher rates of prostitution under the constrained rather than the unconstrained scenario. In terms of absolute volume of prostitution, the smaller population would suggest a reduction, but it is impossible to say to what extent that reduction would be countermanded by the greater rates.

#### Increase in Drug Use/Substance Abuse

Under the constrained scenario, there would be lesser increases (from that of the unconstrained scenario) in both rates and absolute volumes of abuse, but still increases over the current pre-construction levels.

### **4.5.2 Chamorro Issues**

#### 4.5.2.1 Introductory Statements

The biggest impact drivers on Chamorro cultural issues for both the construction and operational phases may be the introduction of military and DoD civilian workers into the population and the feeling of respect by the military for the Chamorro population on Guam. Acquisition or leasing of lands for development would also drive impacts to a lesser extent. In all cases, the more significant impacts on Chamorro issues would be felt during the operations phase as opposed to the construction phase.

The Marine action will have the largest sociocultural impact in regard to Chamorro issues. The Navy Aircraft Carrier Berthing and the Army AMDTF actions in and of themselves would be sufficiently small that they would be unlikely to have any impacts on Chamorro issues by themselves. However, as they are occurring in conjunction with the Marine Corps action, they would somewhat magnify the impacts.

#### 4.5.2.2 Unconstrained Analysis

Based on scoping input and interviews, Table 4.5-4 identifies potential impact topics for the construction and operations components.

**Table 4.5-4. Topics for Chamorro Issues Impact Analysis**

<i>Construction</i>	<i>Operations</i>
Further minoritization of Chamorros by temporary workers and related in-migration	Political minoritization of Chamorros by permanent military population and related in-migration
License of public lands from the Chamorro Land Trust	Related impact: perceptions of mutual respect from the U.S. military
Unearthing of Chamorro artifacts	

#### Construction Component

##### *Minoritization*

At 42% of the population, Chamorros are already a minority on Guam (although they are still a plurality – i.e., the largest single group). Therefore, the incoming wave of temporary H-2B construction workers and other workers associated with a construction boom could increase Chamorro feelings of marginalization. However, the portion of these workers from the FAS or on H-2B visas would lack political rights, and

most of these workers would leave Guam after 2016. Therefore, the construction component should not have significant ongoing impacts on Chamorro political control.

#### *Land Acquisition and Leasing*

Under Alternative 1 of the proposed action, the military would acquire new lands for development.

Assuming this is done through lease rather than condemnation, for parts of these parcels that are public, the military would require a license from the Chamorro Land Trust Commission (CLTC). By its charter, the CLTC leases land to Chamorro farmers and business owners, or licenses land to non-Chamorros, using the revenues to promote health and development projects for Chamorros. The military's plans to license public lands from the CLTC would determine, in part, the CLTC's funds for development projects; and a large increase in development funds for the CLTC would have a beneficial impact on the Chamorro population.

#### *Artifacts*

There is a concern that military development could unearth Chamorro artifacts. Chamorro groups such as the DCA, the Guam Council on the Arts & Humanities Agency, and the Guam Museum are requesting the military give the anticipated artifacts and provide funding to the Guam Museum.

#### Military Operational Component

##### *Minoritization*

Overall, the unconstrained scenario indicates a sustained increase of approximately 33,500 people on Guam. Most of these people would have political rights as U.S. citizens. Therefore, their sustained presence could affect Chamorro culture in a number of ways, politically and culturally.

Firstly, a reduction in Chamorro voting power would impact certain political issues important to the Chamorro population.

The incoming population would presumably be disinclined to vote for further moves away from the U.S., and this may affect the success or failure of future plebiscites involving Guam's political status. Guam's status and its relationship to the U.S. are largely legal affairs, such as the 1978 Constitutional Convention. However, the constitution produced by that Convention was rejected by the voters the following year (Office of the Governor of Guam 2008). Subsequent attempts to change Guam from an organized but unincorporated territory into a commonwealth have so far collapsed.

A reduction in Chamorro voting power may also be felt on the policy level. For example, it is commonly agreed among Chamorro politicians that public funds should be spent to support funeral and wake activities. However, non-Chamorro elected officials may not appreciate this cultural tradition and support such things (Guam DCA panel 2008).

Another political goal of some Chamorros has been total sovereignty. While it is by no means certain that Guam residents would ever vote for full independence even if the military buildup does not take place, the addition of more non-Chamorro voters may make efforts at sovereignty less viable.

On a more purely cultural level, while the loss of the Chamorro language has been occurring for years on Guam, it may be accelerated with the military build-up.

Guam's integration into the larger English-speaking American society has been correlated with a loss of the use of Chamorro language in everyday life. A survey of Chamorro residents (Santos and Salas 2005) found that 90% said the language was a source of pride, and students are learning to read and write the



language with more comprehension than most of their elders. However, younger people are much less able to speak and comprehend the spoken language than their elders. Younger people speak the language primarily just with older relatives, not among their peers.

U.S. Census (2000a) data contain slightly different figures that tell a similar story. While 35% of all Guam residents 65 years old and over (regardless of ethnicity) speak Chamorro, only 26% of those 18 to 64 years old speak Chamorro, and just 11% aged 5 to 17 years old speak Chamorro. Among just those who speak Chamorro, of those 65 and over, 51% speak Chamorro more frequently than they speak English. In the Chamorro-speaking 18-to-64 age range, people speak English as much as they speak Chamorro. And among Chamorro speakers 17 or under, two-thirds speak English more often than they speak Chamorro. This loss of language skills is a common occurrence where a more dominant culture influences a minority culture.

### *Respect*

Like many small island societies, Chamorros developed an interdependent culture, to achieve consensus whenever possible. Under this sort of consensus-based cultural system, exclusion from decision making may be equated with “disrespect.” This could conflict with the military culture of chain-of-command and their mission of national defense, as opposed to local concerns.

The Chamorro concept of inafa’maolek holds that society is based on good relationships and mutual respect. Inafa’maolek is based on varying familial relationships, and reciprocal obligations between two people in any of these relationships. The relationships tend to be based on age, with the older person owing the younger person responsibility, and the younger owing the older deference. Chamorros expect people to approach their relationships with the wider society conforming to the philosophy of respetu. This philosophy involves respecting the environment and society where the individual lives. Chamorros are held to inafa’maolek and respetu by a strong sense of mamahlao, or shame. A proper Chamorro has a sense of mamahlao in social situations, and does not openly contradict a superior or act outside of social mores. (Guam DCA 2003)

Nuanced aspects of the way the military deals with the Chamorro population on Guam would determine the perception of whether they respect the local population and culture. A survey by the Public Affairs and Legal Studies club at the UoG found over 80% of respondents wanted to tell the military that communication would be the surest sign of respect and path to smooth interaction on Guam (KUAM.com 2008).

#### 4.5.2.3 Constrained Analysis

Analysis suggests little actual difference in sociocultural impacts under the unconstrained scenario.

### Minoritization

While there would be a strictly demographic impact resulting in increased numbers of non-Chamorros (less so under the constrained scenario), the actual issue has more to do with political control. Political control is more of a concern under the operational phase than the construction phase, because of the lack of political rights extended to the H-2B and FAS workers, and the temporary nature of their stay on Guam.

### Land Acquisition and Leasing

The potential military acquiring of land from the CLTC would have the same impact under the unconstrained and constrained scenarios.

Artifacts

Issues related to the disposition of Chamorro artifacts uncovered during construction would also be the same under the unconstrained and constrained scenarios.

**4.5.3 Community Cohesion**

## 4.5.3.1 Introductory Statements

The negative interactions related to incoming new population discussed here do not rise to the level of major issues previously discussed under “Crime and Disorder,” but are more likely to be irritants that may undermine a sense of mutual respect between groups.

Also, the arrival of new populations can bring positive benefits that infuse communities with opportunities for more meaningful interactions.

Most sociocultural impacts are due to the overall volume of the proposed action, not the unique attributes of any particular service (i.e., Marines, Navy, or Army).

However, during the operations phase, the Navy component of the proposed action is of a more concentrated nature than the Marine component, as it consists of shore leave components. This results in slightly different community cohesion concerns that are detailed at the end of the impact analysis.

The Army AMDTF action in and of itself would be sufficiently small that it would be unlikely to have any impacts on community cohesion, either in construction or operational components. However, because the Army action is occurring in conjunction with other aspects of the overall military buildup, it would somewhat magnify many of the previously discussed impacts.

## 4.5.3.2 Unconstrained Analysis

Table 4.5-5 summarizes the potential impacts for construction and operations components.

**Table 4.5-5. Topics for Community Cohesion Impact Analysis**

<i>Construction</i>	<i>Operations</i>
Increase in Cultural Conflicts	Increase in Cultural Conflicts
	Increase in Military Outreach/Community Programs

Construction Component*Increase in Cultural Conflicts*

Large-scale in-migration of culturally different populations can easily lead to tension with the host community’s longtime residents (United Kingdom Department of Communities and Local Government 2007). The main populations relevant to this proposed action are H-2B construction workers or groups from the Asia Pacific region that may in-migrate for available indirect jobs.

The following discussion outlines examples of cultural discontinuities that could emerge during the construction component, producing conflict. Such discontinuity and conflict could reach significant levels as greater numbers of immigrants arrive.

As previously discussed in Section 4.3.7, Guam’s temporary foreign workers (H-2Bs) are generally regarded as law-abiding, causing few disruptions to the community. However, there has been some historical experience with foreign construction workers who, due to unfamiliarity with local conditions and prohibition, have disturbed local customs or environments. For example, temporary foreign workers have upset residents by harvesting marine animals normally not consumed on Guam, and by taking shells and corals to the point where reefs have been damaged (GBSP Interview – Appendix D).

Problems related to immigrants from the FAS who come to Guam for direct construction work or new indirect jobs frequently arise in the areas of public health and education. A 2001 General Accounting Office report on Micronesian migration cited data showing that Compact of Free Association migrants were working low-paying jobs that required few skills, and that most (more than 50%) were living at poverty levels on Guam, HI, and the CNMI in conditions that places a strain on public services.

Conflicts between local and in-migrant customs related to housing and living conditions is also an issue on Guam. For example, up to 15 or 20 individuals from these groups have been reported to reside in a single housing unit, and there are stories of subdivided lots without sewer connections or other infrastructure being sold by unscrupulous developers to Micronesians, who find it natural to live in the “traditional” rural style found on their home islands (GCA 2008; Guam Housing and Renewal Authority 2008). However, it is also argued that these in-migrants accept such crowding and harmful living conditions because of economic reasons, not because it is a cultural norm – i.e., these same in-migrant groups do not live with the same household densities in their home islands (CME 2009).

Cultural conflicts can also be observed in the education sector. Often FAS in-migrants are not highly educated, few have college degrees and just over 50% have graduated from high school (General Accounting Office 2001). However, as mentioned in the Crime and Social Disorder section, the comparatively minimal educational requirements in Micronesia are values that are sometimes brought to Guam by in-migrants, resulting in lax parental enforcement of school attendance, and ultimately resulting in high levels of truancy for Micronesian students (Appendix D – GPSS Interview).

### Military Operational Component

#### *Increase in Cultural Conflicts*

As noted in the Chamorro Issues section, concerns about increased military-civilian conflict often reflect beliefs that incoming populations would not have sufficient knowledge of and respect for local culture. Also noted previously, the way the military works with the local population and efforts made to understand local issues, would determine whether increased cultural conflicts would occur in the military operational phase. Already in place is a newcomers’ orientation program offered by the Navy and the Air Force that informs newly assigned service members and their families about the culture and uniqueness of Guam (Office of the Governor of Guam 2009).

#### *Increase in Military Outreach/Community Programs*

For decades, a variety of community service programs have encouraged positive interaction and cultural exchange between the military and civilian populations on Guam. Many of these programs were instituted by the Naval and Air Force commands on the island (Office of the Governor of Guam 2009).

These programs have the potential to bring a beneficial impact to Guam to the point that positive interactions could strengthen military ties to local communities. For example, the larger military contingent would add greater numbers of volunteers to community service programs that would bring together both military and civilian groups working toward shared goals.

Some examples of these programs are:

1. Sister Village Program - Military units are paired with villages to foster mutual sharing and understanding between the people of Guam and the military personnel and their family members stationed on Guam. School partnerships with military units were established in 1987.

2. In 1997, volunteer efforts were formally expanded in five project categories to help strengthen education and the quality of life on Guam through joint military and community effort. Those project categories include:
  - Partnership in Education
  - Guest Teacher Program
  - Health, Safety, and Fitness
  - Environmental Stewardship
  - Campaign Drug
  - Project Good Neighbor (Pacific Daily News 2008)
3. Naval Hospital Guam Community Services
  - Staff contribute thousands of community service hours on projects such as school clean-up, work with Guam Animals in Need and countless other organizations
  - Naval Hospital received top honors in the 2008 Navy Environmental Stewardship Flagship Award for large, shore-based commands
  - Most notable is the nursing mentorship that is provided for seniors of the UoG nursing program (Naval Hospital Guam 2009)
4. Andersen Air Force Base Programs
  - Big Brother Big Sister
  - Donations to schools through the DoD Computers for Learning Program (Lessard 2008)
  - Air shows open to the community

#### *Navy Component Community Cohesion Impacts*

There remains a measure of community apprehension about the increased pulses of Sailors arriving on Guam for shore leave and how their presence might cause discomfort in the community. The ultimate impact on community cohesion that might occur would be dependent on how successful enforcement and education programs are in mitigating such occurrences.

Most of the community apprehension comes from uncertainties regarding possible increases in some of the issues detailed in the Crime and Social Disorder section, and how those increases might affect community cohesion. For example, prostitution and sexual assault occurrences affect community cohesion through the related public health concerns of STD transmission and unwanted pregnancies. Studies aimed at the prevention of STDs and unplanned pregnancies in the armed forces have shown that “Sailors who deploy at regular intervals in particular, have unique circumstances underlying their vulnerability to pregnancy and sexually transmitted infection” (Russ and Ames 2006). Although no statistical evidence is available, interviews with public health agencies on Guam confirm that the most common services sought out by individuals from the military include testing for the HIV and various STDs (Appendix C – DPHSS BPC Survey; DPHSS BCDC and DPHSS DPW Interviews – Appendix D). In particular, testing of military individuals has increased since 2001 for gonorrhea and syphilis (DPHSS BCDC Interview – Appendix D).

#### 4.5.3.3 Constrained Analysis

The unconstrained analysis indicated anecdotal evidence of relatively minor cultural conflicts between the H-2B population and Guam residents, and these would not be affected under the constrained analysis.

Though the strains between longtime Guam residents and newcomer FAS populations, and on public services, detailed under the unconstrained analysis will continue to exist, they will be to a smaller degree, because the constrained scenario assumes a smaller population growth.

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## **CHAPTER 5. AFFECTED ENVIRONMENT - CNMI**

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The magnitude of the proposed action on CNMI is far less than for Guam so there will be limited discussion and fewer topics discussed in CNMI-related Chapters. The proposed action would occur on Tinian, one island in the CNMI. The analysis in this SIAS will present information on the CNMI as a whole, Tinian in particular, and Saipan and Rota in very brief detail.

### **5.1 HISTORICAL AND ECONOMIC OVERVIEW**

#### **5.1.1 CNMI**

The CNMI became part of the U.S. Trust Territories of the Pacific following WWII.

The Northern Marianas negotiated a Commonwealth Agreement with the U.S., approved in 1975. In 1986 assumed control of its domestic affairs while the U.S. government retained responsibility over foreign affairs and defense. One of the most controversial economic aspects of the Commonwealth Agreement was the ability it gave to CNMI to control the minimum wages and immigration visas/work permits of foreign workers. Foreign workers included Chinese workers employed in the garment manufacturing industry (largely on Saipan) and Filipino or other Asian workers in the hotel and resort industry.

The CNMI's dependence on guest workers and tourism caused economic difficulties in the 1990s. Wage rates were maintained at substantially lower levels than in neighboring Guam or in Puerto Rico and the evolution of the General Agreement of Trade and Tariffs into the World Trade Organization, and the accompanying liberalization of trade between the U.S. mainland and other Asian garment manufacturing countries, caused the CNMI garment industry to go into rapid decline. This decline coincided with an abrupt drop in Japanese tourist arrivals following the September 11, 2001 bombing of the World Trade Center. In 2005, Japan Airlines, the main airline between CNMI and Japan, discontinued its Saipan service.

Currently, the economy of the CNMI is severely depressed with limited prospects for near-term recovery. Private-sector employment fell from 32,790 jobs in 2002 to 22,622 jobs in 2007, with the biggest drop in manufacturing (U.S. Census Bureau 2002 and 2007).

An evolving area of significant concern for CNMI businesses involves Title VII, Section 702 of the 2008 Consolidated Natural Resources Act, now U.S. Public Law 110-229. The law re-federalizes CNMI immigration policy and control. It becomes effective November 2009, followed by a transition period. Areas of concern are uncertainties guest worker labor availability and about the continued ability of Chinese and Russians to invest in second homes or other real estate.

Resorts are particularly at risk because of their dependence on foreign workers who may be repatriated, and also because tourists from the People's Republic of China and Russia, comprising about 20% of tourism revenues in FY2008 (Hotel Association of the Northern Mariana Islands 2009b) will no longer qualify for visa waivers under the new rules. Additionally, the previous economic advantage in hiring workers from Asian sources who accept lower wages may become moot as the CNMI minimum wage rises incrementally to meet the U.S. federal minimum wage because of language in Public Law 110-28 (enacted in 2007).

A recent study commissioned by the governor of the CNMI and funded by the U.S. DoI estimates a 44% decrease in Gross Domestic Product (GDP) in the CNMI due to the combined federalization of wages and immigration (CNMI Office of the Governor 2008).

The political reaction to refederalization has resulted in strong suspicion of other federal actions in the CNMI. For example, in 2008, President George W. Bush designated the Marianas Trench and surrounding waters as the Marianas Trench Marine Monument. While the designation could become an economic boon to the CNMI in tourist revenues and Non-Governmental Organization (NGO) activity (Pew Environmental 2008), it has also been characterized as a federal encroachment on the CNMI's local sovereignty (Sebastian 2008).

Other challenges to the CNMI economy have been its outdated and inefficient power equipment. These have resulted in extremely high utility rates draining consumer expenditures from other normal activity (CNMI Department of Commerce 2008a).

Finally, some economic observers (e.g., Bartolucci and Shreni 2006) believe that CNMI's current real estate system presents a serious deterrent to outside investors and tends to depress land values. Namely, there exists a Constitutional restriction of real property ownership to persons of at least 25% Northern Mariana Islands descent. The purpose of this restriction is to prevent the widespread alienation of land from native peoples that has occurred in places such as the Hawaiian Islands. This is covered at somewhat more length in the subsequent discussion of "Social Values and Issues."

### **5.1.2 Tinian**

From a historical perspective, the island of Tinian is best known as the forward base from where nuclear attacks on Japan were launched in 1945. Most residents moved from Tinian following the close of the war. In recent years the airstrip has become an attraction for Tinian's small tourism industry. However, Tinian has remained a quiet and lightly populated island.

The leasing of land between the CNMI and federal governments has been an economic factor since January 6, 1983, when the federal government finalized a Lease Agreement for the use of 17,799 acres (ac) (7,203 hectares [ha]) of CNMI land and waters for military training. Other items included in the lease agreement were 177 acres in Tanapag Harbor on Saipan, and the entire Farallon de Mendinilla (an approximate area of 206 acres). The Tinian portion of the agreement encompasses roughly the northern two-thirds of the island of Tinian. In total, the government paid \$19,520,600 for the lease agreement. Of that amount, \$17,500,000 was for the Tinian acreage. The lease agreement is effective for 50 years (till year 2028), with a 50 year renewal option.

In 1994, CNMI and DoD signed a leaseback agreement for a portion of the public lands leased to the military. This area was made available for scattered small agricultural and grazing operations. The leaseback agreement was amended, and has now expired. The agreement is now available on a month-to-month basis, at the discretion of the military. The military has also ceded some lands in and around the West Field back to the local government of Tinian to build and operate the civilian airport. The current remaining military lease area is 14,651 ac (5,929 ha) (DPL 2009a).

The leased lands utilized by the military are called Exclusive Military Use Area and is open to the public only during times when military training is not occurring. The leaseback area on the other hand, is a joint use area at all times and military and civilian activities on this land must be compatible.

When the original lease was made, residents anticipated the economic benefits of a permanent base. As the Covenant was being discussed in the early 1970s, military planners told Tinian residents that North field would be refurbished into a fully-functioning B-52 Air Force base, generating approximately 300 jobs for the local population at mainland U.S. wage scales (Tinian Chamber of Commerce 2009). The construction of such a base would have allowed residents to access (now-defunct) clauses in the original lease agreement guaranteeing them access to on-base amenities. In reality however, the various military

services have in fact conducted only sporadic training exercises there. While there is no permanent residential population on the military's land, it is usually available for resident food-gathering and recreation, and for tour business access to beaches and historical sites.

Tinian's economy is dominated by one existing casino, a small tourism trade centered on the island's role in WWII, and marine activities such as diving. In the early 1990s the island hosted a tuna transshipment and freezer facility, but this facility closed late in the decade when its owner entered bankruptcy. Agriculture on the island is primarily of a subsistence nature, though there is some small cash cropping of vegetables. Cattle-ranching has been promoted as a growth industry on Tinian but remains in its early stages. Both cattle ranching and tourism are dependent on access to the military lease area.

Household income on Tinian is derived mainly from CNMI government employment and a small retail trade sector. Casino gaming revenues enter the economy through revenues to the taxation by the local government. The existing casino has been staffed almost entirely with foreign guest workers, as longtime Tinian residents are more likely to seek work in the higher-paying government sector.

A look at the Tinian casino and resort economy shows its reliance on the Asian market. In the late 1970s, the people of Tinian decided to permit gambling on the island through construction of up to five casinos. Thus far only the Tinian Dynasty Hotel and Casino resort has actually been constructed. It enjoyed success after its 1998 opening but has suffered in the CNMI economic recession. In 2008, a second casino (Bridge Investment Group) began construction, with two more in the planning and permitting phases. However, reflecting both international and CNMI economic conditions, Bridge Investment Group subsequently halted its current casino construction. Various industry representatives interviewed for this report believe the Tinian Dynasty may have to close if and when visa waiver federalization takes effect (Hotel Association of the Northern Mariana Islands 2009a; Marianas Visitors Authority 2009a; Tinian Dynasty Hotel and Casino 2009a).

The Tinian Dynasty Hotel and Casino, the only casino operating on Tinian, is at risk of closure for two reasons. The first is because a large percentage of its customer base is Chinese. The second is because the availability of a foreign labor workforce is now threatened by refederalization. Table 5.1-1 shows the Tinian Dynasty's reliance on the Chinese market as well as its recent lower occupancy numbers. The low level of "Guam and Other U.S." percentages indicates that few of the current military personnel on Guam have spent rest and relaxation (R&R) time on Tinian.

**Table 5.1-1. 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>

*Notes:* Data on visitors by nationality provided by Tinian Dynasty Hotel & Casino; 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.

*Source:* Tinian Dynasty Hotel & Casino 2009b.

In addition to the Tinian Dynasty, there are two other local hotels on Tinian. Table 5.1-2 shows a trend estimate for Tinian's total average daily visitor count, using tourist counts from these locations. Given a



2005 Tinian resident population of 2,829, this estimate suggests that tourists comprised about 15% of the total number of people on island at any one time for that year. The visitor population declined by about 30% from 2005 to 2008. There are no data on the rate of resident population decline during those years.

**Table 5.1-2. 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>	430	379	491	519	526	450	360

*Notes:* Tinian Dynasty Hotel & Casino data on annual visitors, plus additional assumptions provided by or vetted with the casino – additional visitors equal 10% of Dynasty numbers; average length of stay 3.5 days.

*Source:* Tinian Dynasty Hotel & Casino 2009b.

Insufficient transportation infrastructure is also noted as a barrier to further tourism development throughout Tinian, and as a factor in the Tinian Dynasty's poor occupancy rate and financial performance. The recent reduction in air travel and corresponding slump in tourist numbers on all CNMI islands has led to less revenue going to any island. That, coupled with the fact of rising fuel and food prices, has made living on Tinian economically difficult for residents.

### 5.1.3 Saipan

In conjunction with and since the decline of the previously strong garment industry, tourism has comprised a major part of the Saipan economy for decades. Saipan's principal markets have been Japan and Korea, with strong recent growth from China and Russia. Tourism was again surging in early 2008 before the global economic crisis occurred and new federal controls over wage levels and visa entry permits were announced. As a result, as of June 2009, visitor arrivals (for all purposes, including business) were down 29% from the previous June, with declines from China (72%) and Russia (43%) leading the downturn. The Marianas Visitors Authority said the Russian decline was due to the misimpression that the new visa permit rules had already been implemented (Marianas Visitors Authority 2009a; Marianas Visitors Authority 2009b).

### 5.1.4 Rota

The 2007 Economic Census indicates Rota's private-sector economy that year was dominated by retail trade and the accommodations and food service industries. Rota has a number of small hotels and hostels, and a very small visitor count (680 in June 2009, down from 953 in June 2008) is dominated by U.S./Guam leisure and business visitors, followed by Japanese (Marianas Visitors Authority; 2009a).

Although no casinos have yet been built on Rota, in 2007 it created a Casino Gaming Commission, and island leaders have been looking into this activity for Rota's economic future (Marchesseault 2009).

Rota has also long been known as an agricultural island, though the 2007 U.S. Agricultural Census indicates the number of farm operators dipped slightly from 2002 to 2007 (99 to 97) and the acreage in farms during the same period dropped from 897 to 770, the smallest amount of any CNMI municipality (U.S. Department of Agriculture 2009). However, the reported 2007 market value of Rota agricultural products reached nearly \$1 million. Most of this value was from root crops (principally sweet potatoes and taro), followed by vegetables and melons (with cucumbers and watermelons the principal crop in terms of pound raised).

## 5.2 POPULATION CHARACTERISTICS

### 5.2.1 CNMI

Population trends for the CNMI and Tinian are shown in Table 5.2-1.

**Table 5.2-1. Historical and Projected CNMI and Tinian Populations, 1970 - 2015**

	1970	1980	1990	2000	2005	2008	2010	2015
CNMI	12,359	16,890	44,037	69,706	65,927	62,969	63,031	64,068
Tinian	710	866	2,118	3,540	2,829	N/A	N/A	N/A

*Source:* U.S. Census Bureau 2000; CNMI Department of Commerce Central Statistics Division (CSD) 2008; Secretariat of the South Pacific 2008.

The CNMI population increased during the 1980s and 1990s due to high birthrates and guest-worker immigration. However, that trend reversed itself in the 2000s, due to a shrinking economy.

In 2000, the CNMI had a population of 69,921:

- 5% lived on Tinian (3,540 people)
- 90% on the capital island of Saipan
- 5% on Rota
- only a handful of residents on the Northern Islands

By 2005, due to a faltering economy, the CNMI-wide population had dropped to 65,927 and Tinian's population had declined even more rapidly to 2,829, just 4% of the total population (CNMI Department of Commerce, CSD 2008). The 2000 CNMI-wide census indicated that Asians were the largest population group.

Currently, the Commonwealth is characterized by a relatively young population (median age 30.1 years); high annual rate of population growth (approximately 2.3% per year); and a relatively long life expectancy at birth (76.7 years). It is estimated that 27% of the population is under 18 and 3% is over age 65. These population characteristics heavily impact the health care and educational systems (Central Intelligence Agency 2009).

Official projections by the U.S. Census Bureau (2008) estimate continued rapid expansion of the population, but CNMI government statisticians give more weight to the projections of the Secretariat of the South Pacific (included in Table 5.2-1), though they believe even these may be overstated (CNMI Department of Commerce 2008b).

### 5.2.2 Tinian

The 2005 CNMI Department of Commerce Household Income and Expenditure Survey counted 2,829 residents on Tinian. All of Tinian's population is located in the south with 76% of the island's 2005 population was located in and around the main village of San José.

The ethnic makeup of Tinian is heavily influenced by the resort/tourism industries that employ large numbers of guest workers from the Philippines and other Asian countries. The 2005 CNMI Household Income and Expenditures Survey found that 32% of the population of Tinian is of Filipino descent and 0.8% was of Micronesian descent. Overall, the Chinese population on Tinian is lower than for the CNMI as a whole as Filipino workers, and a smaller group of Bangladeshi, fill many hotel jobs on Tinian.

Birthplace information for Tinian residence is shown in Table 5.2-2. Despite the population decline from 2000 to 2005, birthplace profiles remained similar. A little less than half the Tinian citizenry was CNMI-born, and a little under half were foreign-born. Additional data from both years showed the great majority

of the foreign-born had not become U.S. citizens. Furthermore, the foreign born population has a higher outward migration rate than their native born counterparts.

**Table 5.2-2. Tinian Residents by Birthplace, 2000 and 2005**

	2000	2005
<b>Total Population</b>	<b>3,540</b>	<b>2,829</b>
<i>Native born</i>	53.6%	54.3%
Born CNMI	44.7%	46.2%
Born Elsewhere in the U.S.	8.8%	8.1%
<i>Foreign born</i>	46.4%	45.7%
Philippines	26.6%	27.0%
China	6.9%	8.8%
Bangladesh	2.6%	2.9%
All Other Foreign	10.3%	7.1%

Source: U.S. Census Bureau 2000.

Tinian's future population growth independent of the military build-up is not certain, as it will likely depend on the construction and success of further casinos.

### 5.2.3 Saipan

The island of Saipan is home to more than 90% of the population of the CNMI. The 2005 population was 60,608. Only 49% of the residents of Saipan were U.S. citizens at the time, though it should be noted that elements of the garment industry were still active then so that number may have gone up as foreign workers migrated home. Saipan consists of 31% Filipinos, 20% Chamorros, and the remaining consisting of various other Asian and Pacific Islander groups (CNMI Department of Commerce, CSD 2008).

### 5.2.4 Rota

U.S. Census records assembled by the U.S. DoI (U.S. DoI 2009) indicated Rota's population peaked at 3,509 in 1995 and then declined to 3,283 in 2000, less than Tinian's population at the time. CNMI Census data for 2005 indicated a further drop to 2,490 in 2005, still under Tinian's population (CNMI Department of Commerce, CSD 2008). Rota's 2005 population had the highest proportion of Chamorros of the three major CNMI municipalities (65%, vs. 44% for Tinian and 20% for Saipan). It also had the highest proportion of U.S. citizens (77%, vs. 55% for Tinian and 49% for Saipan) and of children under 18 (35%, vs. 26% for Tinian and 29% for Saipan).

## 5.3 ECONOMIC CHARACTERISTICS

### 5.3.1 Labor Force and Income

#### 5.3.1.1 CNMI

Minimum wage rates in the CNMI (\$4.55/hr) are substantially below comparable wage rates on Guam (\$6.55). There have been few organized labor contracts in the guest-worker-dependent sectors of the economy. Thus there is little internal pressure for wage increases.

Average income varies considerably from one ethnic group to another. Chamorros earned a median 2005 annual income of \$31,619; Filipinos earned \$14,190; peoples of the FAS, \$13,916 (CNMI Department of Commerce, CSD 2008).

The CNMI raising of wages to meet the new minimum wage standards will have various consequences on labor force and income. One consequence of CNMI's guest worker policies has been that a relatively high

proportion of wages were at the legal minimum wage level. Under Public Law 110-28, the CNMI minimum wage will rise to meet the U.S. federal minimum wage by 2014. It will accomplish this by annual \$0.50 increases. The CNMI minimum wage stands at \$4.55 per hour as of September 2009, with another \$0.50 increase on May 26, 2010. The rising minimum wage will have an impact on CNMI income, but is likely to result in both a reduction in overall CNMI employment and a loss of the Commonwealth's competitive wage advantage (Congressional Budget Office 2004; Vallejera 2007). It may also encourage more native born persons to replace foreign workers as wages increase to more desirable levels.

Table 5.3-1 shows employment by industry for the CNMI in 2005. Employment in the manufacturing industry made up about one-third of total employment; the accommodations industry (e.g. Tourism) was the second leading employer.

**Table 5.3-1. Employment by Industry, CNMI, 2005**

	<i>Total CNMI</i>	<i>Tinian</i>	<i>Saipan</i>	<i>Rota</i>
Total Employed	33,622	1,602	31,109	908
Agriculture/forestry/fisheries/mining	422	15	392	14
Construction	1,640	77	1,505	58
Manufacturing	10,988	31	10,950	7
Wholesale	305	8	297	0
Retail	2,431	23	2,386	22
Transportation/communication/utilities	913	23	875	14
Information	366	0	366	0
Finance	821	62	752	7
Professional Services	1,803	46	1,727	29
Educational	2,070	131	1,794	145
Arts	1,430	69	1,255	105
Accommodation	4,866	677	4,066	123
Other	2,414	170	2,201	43
Public	3,153	270	2,543	341

Source: CNMI Department of Commerce, CSD, 2008

#### 5.3.1.2 Tinian

The leading employer on Tinian was the accommodations industry, that industry provided more than 40% of the jobs. The second leading employer is the Public Sector (17% of total employment).

Tinian's unemployment rate is estimated to be around 17%.

Hourly wages on Tinian have historically been somewhat higher than in the CNMI as a whole. CNMI hourly wages were brought down due to the large amount of low-wage Chinese workers employed on Saipan. Another factor in the higher wages on Tinian may be the fairly high level of educational attainment on the Island (Table 5.3-2).

**Table 5.3-2. Educational Attainment on Tinian (Population 25 and Older)**

	2000	2005
Less than 9 <sup>th</sup> grade	9%	10%
9 <sup>th</sup> to 12 grade, no diploma	15%	11%
High school graduate	31%	41%
Some college, no degree	18%	12%
Associate degree	6%	16%
Bachelor's degree	18%	7%
Graduate or professional degree	3%	2%
<i>% High School Grad or Higher</i>	76%	79%
<i>% Bachelor Degree or Higher</i>	21%	9%

Source: U.S. Census Bureau 2000; CNMI Department of Commerce, CSD 2008.

### 5.3.1.3 Saipan

The Saipan-wide 2005 number of employed persons was 31,109, with the unemployment rate estimated at 7.7%. As previously suggested the population and labor force are both believed to be declining as the depressed economy produces both out-migration and discouraged workers dropping out of the official labor force. Chamorros made up only 12% of the active labor force in 2005, but 30% of the unemployed population. The household median income was \$16,835, and per capita income was \$6,017.

### 5.3.1.4 Rota

Unemployment was 10.1%, the intermediate between Tinian's 17.0%. Rota's median household income slightly exceeded that of Tinian in 2005 (\$22,270 on Rota, \$21,538 on Tinian, and \$16,835 on Saipan). However, this likely reflects the effects of strong reliance on government jobs rather than the health of the private sector – of Rota's 908 employed persons in 2005, 51% held government jobs. Using data from the 2007 U.S. Economic Census (that includes private-sector employment only) to calculate average salary by dividing total payroll by number of employees, Rota emerges as having the lowest private-sector average (\$8,100, vs. \$10,400 on Tinian and about \$11,000 on Saipan) (U.S. Census Bureau 2009).

### 5.3.2 Agriculture

#### 5.3.2.1 CNMI

The CNMI Agriculture industry accounts for only a small percentage of employment, however; the industry may see disproportionately high beneficial economic impacts from the proposed action. Table 5.3-3 shows the number of farms and the monetary value of agricultural production, by island, for 2002 and 2007.

**Table 5.3-3. Number of Farms and \$ Values of Agricultural Production, CNMI, 2002 and 2007**

Item	CNMI Total		Tinian		Saipan		Rota	
	2002	2007	2002	2007	2002	2007	2002	2007
Total # of Farms	214	256	23	31	92	128	99	97
Total \$ Value	\$2,287,407	\$2,409,513	\$147,387	\$263,622	\$1,469,548	\$1,241,411	\$670,472	\$904,480
Root Farms	85	106	2	5	37	54	46	47
Root \$ Value	\$404,734	\$638,498	(D)	\$3,010	(D)	\$184,228	\$297,284	\$451,260
Vegetable and Melon Farms	102	110	6	7	64	69	32	34
Vegetable and Melon \$ Value	\$821,293	\$631,470	\$54,500	\$77,188	\$684,178	\$340,182	\$82,615	\$214,100
Fruits and Nuts Farms	103	115	9	8	37	74	57	33
Fruits and Nuts \$ value	\$343,021	\$401,664	\$16,000	\$72,339	\$122,083	\$217,480	\$204,938	\$111,845
Nursery Crop Farms	10	17	1	2	6	10	3	5
Nursery Crop \$ Value	\$93,247	\$178,311	(D)	(D)	\$72,600	(D)	(D)	\$26,500
Livestock Farms	71	98	11	26	16	36	44	36
Livestock \$ Value	\$475,167	\$279,485	\$52,800	\$77,945	\$365,027	\$107,415	\$57,340	\$94,125
Poultry and Eggs Farms	32	18	1	3	3	9	28	6
Poultry & Eggs \$ Value	\$143,795	\$214,360	(D)	(D)	(D)	\$187,745	\$24,345	(D)
Fish & Aquaculture Farms	5	5	1	1	1	2	3	2
Fish & Aquaculture \$ Value	\$6,150	\$65,725	(D)	(D)	(D)	(D)	(D)	(D)

*Legend:* (D) represents that data was withheld so that the sales of individual farms would not be disclosed.

*Note:* Some farms produce more than one type of crop and are included under multiple categories.

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

#### 5.3.2.2 Tinian

Tinian has the lowest level of agricultural production of the three islands. Livestock farms are more numerous than other types of farms and account for 30% of the value of agricultural production. Vegetables/Melons farms and Fruits/Nuts farms also each account for about 30% of the value of production on Tinian.

#### 5.3.2.3 Saipan

Saipan has the highest level of agricultural production of the three islands. Vegetable and melon produce accounts for the highest percentage of sales, however; vegetable and melon sales declined dramatically from 2002 to 2007, and the total value of Saipan agricultural production declined by 15.5% from 2002 to 2007.

#### 5.3.2.4 Rota

Agricultural production on Rota grew by 35% from 2002 to 2007. This indicates improved efficiency, as the growth occurred despite the loss of two farms. Root produce generally creates the most value of all of

the different types of produce (50% of the total in 2007). Vegetable and melon production value increased substantially from 2002 to 2007 while fruit and nut production value declined.

### 5.3.3 Housing Supply and Projections

#### 5.3.3.1 CNMI

In 2000, CNMI had the highest median house value of any of the U.S. Insular Areas, exceeding median house values on the U.S. Mainland. More than three-quarters (76%) of CNMI houses were valued at \$100,000 or above in 1999. Approximately 32% of these homes were appraised at \$500,000 or above.

Table 5.3-4 presents year 2000 data on the value of housing for CNMI as a whole, as well as Tinian, Saipan, and Rota. About two-thirds of the houses were constructed since 1980.

**Table 5.3-4. Value of Owner-Occupied Housing in CNMI, 2000**

	<i>Total CNMI</i>	<i>Tinian</i>	<i>Saipan</i>	<i>Rota</i>
<b>TOTAL UNITS</b>	<b>4,408</b>	<b>248</b>	<b>3,560</b>	<b>352</b>
Less than \$50,000	10.1%	6.8%	10.7%	11.1%
\$50,000 to \$99,999	17.2%	17.2%	16.3%	22.7%
\$100,000 to \$149,999	16.8%	16.5%	16.5%	19.6%
\$150,000 to \$199,999	13.9%	21.0%	13.0%	13.1%
\$200,000 to \$299,999	15.2%	19.0%	14.6%	15.9%
\$300,000 to \$499,999	10.2%	3.6%	11.6%	5.2%
\$500,000 or more	16.6%	15.7%	17.1%	12.5%
Median	\$159,829	\$162,234	\$161,205	\$125,000

Source: U.S. Census Bureau 2000.

#### 5.3.3.2 Tinian

Table 5.3-5 summarizes the most recent available information on housing occupancy on Tinian.

A substantial number of houses were vacant at the time of the 2000 census. While the Tinian homeownership rate was low, there also remained a high rental vacancy rate. This was caused by limited employment and the existence of group housing for hotel workers. By 2005, the number of occupied units had begun to dwindle along with the population, but the homeownership rate remained roughly constant.

**Table 5.3-5. Housing Occupancy and Ownership on Tinian, 2000 and 2005**

	<i>2000</i>	<i>2005</i>
Occupied Housing Units	790	656
Occupied by the Owner	248	216
Vacant all Year	266	N/A
Vacant part of the Year	14	N/A
<b>Total Units</b>	<b>1,055</b>	<b>N/A</b>

Source: U.S. Census Bureau 2000; Guam Department of Commerce, CSD 2008.

As of 2000, the average household size for owner-occupied dwellings on Tinian (5.04 individuals) was substantially higher than that for rented units (2.85 individuals). The higher household size reflects the existence of multi-generational households common in CNMI society (CNMI Department of Commerce, CSD 2002).

Table 5.3-4 shows the 2000 median value of housing on Tinian to be the highest in CNMI. The Tinian housing prices presented were partially due to optimism on the part of homeowners during 2000, a time of economic success. Subsequent economic downturns have most likely reduced housing values, at least

relative to other islands in the CNMI. Additionally, there has been some modest increase in housing supply for permanent residents, as well as the construction of temporary barracks by the Bridge Investment Group for the possible development of a new casino (CNMI Department of Commerce 2008b).

#### 5.3.3.3 Saipan

Saipan had by far the most housing units in the CNMI and the median value of those units was above the CNMI average. Nearly 30% of the housing units on Saipan had a value of at least \$300,000. Based on the 2000 U.S. Census data, the total value of housing units on Saipan was \$574 million.

#### 5.3.3.4 Rota

Rota had the fewest number of housing units in the CNMI and the value per unit was well below the CNMI average. About 67% of Rota housing units were valued below \$200,000. Based on the 2000 U.S. Census data, the total value of housing units on Saipan was \$44 million.

### 5.3.4 CNMI Government Finances

Table 5.3-6 shows the recent financial conditions of the CNMI government. In 2001 the government was running a budget surplus however in later years, mostly due to increasing expenditures, the government has spent more than it earns. In 2004 the CNMI government budget deficit equaled 18% of its total revenues.

**Table 5.3-6. CNMI Government Finances, 2001-2004**

	2001	2002	2003	2004
Own source revenue	\$227,709,651	\$215,650,986	\$225,412,808	\$235,754,891
Federal contributions	\$49,348,134	\$71,964,627	\$57,560,034	\$63,006,595
Total revenues	\$277,057,785	\$287,615,613	\$282,972,842	\$298,761,486
Total expenditures	\$258,177,431	\$314,985,333	\$303,986,379	\$352,488,419
<b>Revenues less expenditures [surplus/(deficit)]</b>	<b>\$18,880,354</b>	<b>(\$27,369,720)</b>	<b>(\$21,013,537)</b>	<b>(\$53,726,933)</b>

Source: General Accounting Office 2006.

#### 5.3.4.1 Tinian Government Structure and Revenue

The Municipality of Tinian and Aguiguan is made up of the islands of Tinian and Aguiguan (sometimes referred to as Goat Island), an uninhabited island about 10 miles southeast of Tinian. The municipal government is made up of the Mayor's Office and Municipal Council. The Municipal Council is an elected three-person Council. The Municipality of Tinian and Aguiguan is represented in the CNMI Legislature by an elected four-member Legislative Delegation (three senators and one House representative).

The relationship between the Municipality and the CNMI central government is not as independent as are relationships between most American cities or counties and state governments. All CNMI Resident Department Heads on Tinian are appointed by Tinian's Mayor. Thus CNMI agencies on Tinian are effectively responsible to both the Mayor and CNMI department heads on Saipan.

Casino revenues on Tinian, derived from private casino operators, represent the only revenue generated on the island. Gambling is prohibited in the Northern Mariana Islands except as allowed through



Commonwealth law or as established through initiative in the Commonwealth or in any senatorial district, per Article XXI of the CNMI Constitution. In the November 1978 general elections, 78% of the people of Tinian voted overwhelmingly in a senatorial initiative to allow casino gaming in the Municipality of Tinian and Aguiguan. Through this casino gaming initiative, the revenues generated were considered local revenues and the funds remain in the municipality instead of being transferred to the central government.

Casino revenues thus contribute to a local budget that funds the operations of the Tinian Casino Gaming Control Commission, the Tinian Municipal Treasury, and the Tinian Mayor's Office. The Commission was created through the Casino Gaming Act to be the regulatory and enforcement agency for the casino gaming industry. The Treasury was created by the Act to handle all related gaming revenues. Casino revenues flowing to the Tinian Mayor's Office are used to fund personnel, operations, and public programs that are not provided for under the CNMI primary funding.

A collapse of the Tinian casino gaming industry would thus displace casino employees *and* workers in those regulatory agencies currently funded through the casino revenues. Table 5.3-7 and Table 5.3-8 show current Tinian government employment funded by casino revenues as well as CNMI Legislative Appropriations.

**Table 5.3-7. Tinian Governmental Agencies by Primary Funding Source**

<i>Agencies Funded by Tinian Gaming Revenues</i>	<i>Agencies Funded by CNMI Legislative Appropriations</i>
Mayor's Office (25 employees as of early 2009)	Mayor's Office (125 employees as of early 2009)
Municipal Treasury (Treasurer and 4 staff as of early 2009)	Tinian Municipal Council (3 Council members and 4 staff as of early 2009)
Tinian Youth Center (Director and 11 staff as of early 2009)	CNMI agencies located on Tinian (6 Resident Department Heads and 297 employees as of early 2009)
Tinian Casino Gaming Control Commission (5 Commissioners and 39 staff as of early 2009)	

Source: Tinian Municipal Treasury 2009.

**Table 5.3-8. Trends in Tinian Municipal Budgets and Employment Funded by Gaming Revenues**

<i>FYs</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
<b>Revenues</b>									
- from Gaming	\$4,509,875	\$2,983,242	\$4,082,930	\$4,144,802	\$4,641,222	\$3,709,667	\$4,933,137	\$3,643,869	\$3,304,018
- Other Sources	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$649,217
Expenditures (all purposes)	\$2,340,874	\$4,308,361	\$3,853,264	\$4,475,527	\$4,547,366	\$3,695,949	\$4,505,376	\$4,351,260	\$4,297,424
Year-End Surplus/Deficit	\$2,169,001	-1,325,119	\$229,666	-\$330,275	\$93,856	\$13,718	\$427,761	-\$707,391	-\$344,189
Combined Jobcount <sup>1</sup> (filled positions)	40	80	84	93	92	94	80	80	80
-Mayor's Office/ Youth Center/ Treasurer	2	46	50	57	56	48	42	42	42
-Gaming Commission	38	34	34	36	36	36	38	38	38

Note: <sup>1</sup>FTE

Source: Tinian Municipal Treasury 2009.

## 5.4 TINIAN PUBLIC SERVICES

### 5.4.1 Education Services

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

According to 2007-2008 school year data provided by the CNMI Public School System, Tinian Elementary enrollment was 295 students, and Tinian Junior/Senior High School enrollment was 320 students.

Class sizes are relatively small with a student-teacher ratio of 20 at Tinian Elementary and 13.4 at Tinian Junior/Senior High School. About 64% of the teachers at the high school are certified by the CNMI Public School System (CNMI Public School System 2008).

The student body of CNMI as a whole is mostly drawn from the indigenous population. Guest worker populations (with the exception of the Filipino population) have been less likely to have children.

On Tinian, the primary school student population is concentrated in the Chamorro and Filipino ethnicities, with relatively few from neighboring Micronesian areas (Table 5.4-1).

**Table 5.4-1. Ethnic Pupil Accounting, Tinian versus Rest of CNMI Schools, 2007-2008**

	<i>Tinian (Combined Schools)</i>	<i>All Other CNMI Schools</i>
Chamorro or Chamorro Mix	62%	41%
Carolinian or Carolinian Mix	1%	11%
Other Micronesian <sup>1</sup>	2%	13%
Filipino	32%	28%
Other Asian <sup>2</sup>	2%	4%
Caucasian	0%	1%
All Others	1%	2%
<b>Total (Base):</b>	<b>615</b>	<b>10,127</b>

Notes: <sup>1</sup>Chuukese, Palauan, Pohnpeian, Marshallese, Yapese

<sup>2</sup> Korean, Chinese, Japanese

Source: CNMI Public School System 2008.

For the period 2000-2005, student tracking studies suggest that approximately 37% of the graduates from Tinian High school have some college education. Historically, the Northern Marianas College operated an extension campus in San José, but it recently closed.

In 2006 the CNMI school system received 46% of its revenues from CNMI sources. Another 40% came from grants, mostly from the U.S. Department of Education (CNMI Public School System 2008).

### 5.4.2 Health and Human Services

Infectious diseases in the CNMI as a whole are a major health concern. Of particular concern are HIV, TB, Hepatitis A and B, food-borne illnesses, vaccine-preventable diseases, and STDs. The rapid influx of contract workers has contributed to these problems. The incidence of TB is over 10 times higher than the Mainland U.S., with over half of all cases among non-resident alien workers (U.S. DoI 1999).

The Tinian Health Center is the island's primary health care facility. It was built and occupied in 1987. The building is entirely air-conditioned. The Center provides emergency services, treatment, two holding beds, delivery, laboratory, X-Ray, pharmacy, dental and public health services. The morgue and

Sanitation Office are located in a separate building. The morgue currently has space for two bodies and there are no funded plans for a larger morgue facility.

The Tinian Health Center employs one full-time doctor, one nurse-practitioner, one physician's assistant, five registered nurses, five licensed practical nurses, and one nursing aide. It also employs one dentist and two dental technicians. While this staffing level meets Tinian's current needs, this capacity is tenuous, as health professionals often leave the island after only short periods of employment (Tinian Municipal Directors 2009).

### **5.4.3 Public Safety Services**

The CNMI Department of Public Safety is responsible for Police, Fire and Emergency Management activities on Tinian. Facilities are located in San José and as of late 2008 were staffed by 20 police officers, 12 firefighters, and six administrative support personnel. Staffing was anticipated to expand if and when a new casino opened.

The Commonwealth Ports Authority maintains firefighting capability at the Tinian International Airport. This capability could be made available to Department of Public Safety in the event of a major emergency. The Airport has two fire-fighting vehicles and a staff of nine (out of 12 authorized positions) officers who man the facility on a three-shift, 24-hour basis.

In general, the CNMI Department of Public Safety's capacity is adequate to meet the current needs of the Tinian community.

While recent Tinian crime rates are not available, Tinian police officials suggested recent spikes in petty theft due in to "the discovered value of copper, brass, aluminum, etc.," and status offenses. Although organized crime (mainly prostitution) linked to the tourist industry is known to exist in Saipan, no prostitution has yet been reported in Tinian. Much of the Department of Public Safety's law enforcement effort is directed at traffic control, drunk driving, and domestic disputes. While Tinian police report significant reductions in the number of highway accidents, they remain concerned about the lack of any drivers' education due to Tinian being legally exempted from any written driver examination (this exemption applies on Rota as well) (Tinian Department of Public Safety 2008).

Public safety services on Tinian as they currently exist would not be adequate to meet the needs of a major population influx or a serious public emergency. In particular, fire-fighting equipment may not be capable of fighting a major structural or brush fires. Acquisition in 2006 of a refurbished fire engine provided by the Department of Homeland Security under its Weapons of Mass Destruction program was the first major piece of firefighting equipment to arrive on the island for several years (de la Torre 2006).

## **5.5 SOCIAL VALUES AND ISSUES**

Land tenure is an important social issue in the CNMI, as it is elsewhere in the Pacific islands.

Although long-term land leases are possible on Tinian and elsewhere in CNMI, Article XII of the CNMI Constitution restricts ownership of real property to people of at least 25% Northern Mariana Islands descent or to corporations entirely controlled and owned by Northern Mariana Islands descent. Privately-owned lands may be leased to individuals of non-Northern Mariana Islands descent for no more than 55 years, and (under Article XI) public lands for no more than 40 years.

Ethnic enclaves in group housing accentuate the economic stratification and language differences between guest and indigenous populations. For example the garment industry on Saipan often provided housing to Chinese workers in large compounds, supplying traditional Chinese food and medicine and sometimes

employing Chinese civil law. Hotels and tourism companies in the CNMI often provide housing for their workers.

Recent changes to the CNMI immigration system will have impact on CNMI social values and issues.

The recent federalization of the CNMI's immigration system is likely to change the source, if not the pattern, of immigrant labor in the Commonwealth. This federal legislation, combined with the collapse of the garment industry, will decrease CNMI's Chinese guest worker population. Over the longer term the Filipino labor force supporting the tourism industry may also contract. These jobs are likely to be taken primarily by migrants from neighboring areas (such as FSM, RMI, and Palau) that are not subject to immigration restrictions (Compact of Free Association, Sec. 141).

Additional social issues impacts of the proposed federalization of CNMI immigration cited in mid-2007 by the Deputy Assistant Secretary of the Interior for Insular Affairs included: (1) security concerns including the need for an effective pre-screening process for aliens wishing to enter the Commonwealth and the implementation of a refugee protection system and (2) the possibility of human trafficking, primarily for prostitution purposes, into the CNMI (Cohen 2007).

Upcoming possible changes to the CNMI land tenure system will also be influential to social values and issues in the region. Beginning in the year 2011, a 1976 Covenant between the United States and the CNMI would permit the amendment of land tenure laws through ballot initiatives. Although substantial support for continuation of the current system exists throughout CNMI, it has been argued that this system results in the concentration of land ownership to a pool of a few families, and that continued demographic change in the CNMI will likely exacerbate this concentration. One possible result of such a landowner monopoly would be that business and residential rental prices could be set independent of market forces (Bartolucci and Shreni 2006).

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## **CHAPTER 6. ENVIRONMENTAL CONSEQUENCES – CNMI**

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The magnitude of the proposed action on CNMI is far less than for Guam so this section presents limited discussion on the following topics by construction and operational phases:

- Economic Impacts
- Public Service Impacts
- Sociocultural Impacts

### **6.1 ECONOMIC IMPACTS**

#### **6.1.1 Construction**

##### Tinian

The construction associated with the proposed action would be minimal, especially relative to construction required for the Tinian Dynasty Hotel. The proposed action on Tinian includes the use of: a platoon battle course, automated combat pistol range, a rifle known distance (KD) range, and field firing range. In order to support training at these ranges, the following construction would have to occur: a range control facility, security fencing and gates, a secure storage facility, a vehicle maintenance facility, ammunition field storage areas, and a bivouac area with dining, restroom, and shower facilities.

Most construction contracts are expected to be fulfilled by contractors based on Saipan or Guam (Tinian Business Panel 2008). A maximum of 180 construction jobs per year, for a two-year period, are expected to be created by the proposed action. This would also lead to the creation of about 35 indirect jobs in the Tinian economy.

While the source of construction workers is uncertain, historically they have consisted of mostly foreign workers. Based on previous private-sector experience, expenditures of foreign construction workers in the Tinian economy are usually negligible. However prime contractors will typically subcontract local Tinian companies for activities such as trash collection, security detail, and house rentals for construction executives (Bridge Investment Group 2008).

No economic costs to the community are anticipated from construction.

##### Saipan

There is no construction, related to the proposed action, expected to occur on Saipan neither is it expected that any “lay down areas” (off-site construction) will be located on the island. There may be some increased, indirect, demand for Saipan’s manufactured or agricultural products, however that impact is likely to be small. Slight beneficial economic impacts are expected for Saipan and no economic costs are anticipated.

##### Rota

There is no construction, related to the proposed action, expected to occur on Saipan neither is it expected that any “lay down areas” (off-site construction) will be located on the island. There may be some positive economic impact to Rota’s agricultural industry as increased population in the area would drive up demand for more food. No economic costs are anticipated.

## CNMI Government

CNMI government revenues will likely increase due to more economic activity generating higher tax revenues. This impact will likely not be substantial and will not, in and of itself, alleviate the government deficit.

### **6.1.2 Operation**

#### Tinian

There is a possibility that 12 to 15 Tinian residents could be employed as security guards, grounds-keeping crew, and sanitation workers to support the proposed action on Tinian.

Local stores and restaurants in San Jose would also benefit from the proposed action if the Marines in training are granted liberty, as has been the case in the past. However such liberty is not currently guaranteed for regular training exercises under the current description of proposed action. Liberty may be available to advanced teams before and after training exercises, though these advanced teams would be much smaller and thus have a lesser economic impact.

Restriction to certain sites during construction and operation would impact Tinian's economy, particularly: tourism, ranching, and the collection with the intent to sell of wild chili peppers.

Restricted access to training sites will negatively impact the island's tourism economy (Marianas Visitors Authority Tinian Office 2008). Much of the Tinian visitor industry provides tours of scenic and/or historic sites on the island to tourists (e.g., the Atomic Bomb Pits where nuclear weapons were loaded into planes bound for Hiroshima and Nagasaki). About 70% of the visited sites are located in the military lease area (Tinian Chamber of Commerce 2009). The Tinian Dynasty runs one historical tour daily, and other independent tour companies such as Fleming Tour, Star Photo Tour, Island Garden Tour, and Hafa Adai Scooter Tour, also run various tours. The proposed ranges in the preferred alternative would restrict access to the most critical historical sites for tour operators, the Bomb Pits just north of Runway Able, for a little more than one week each month during training exercises (Tinian Business Panel 2008).

Tinian ranchers would also be impacted by closure of the land required to build the proposed training ranges. Ranchers have historically exercised grazing rights in the military lease area, through a lease-back agreement. This agreement required the municipal government to pay a dollar per acre per year to lease back particular areas. Because the municipal government has been behind on payment for several years, grazing rights have been allowed on a month-to-month basis. The military would terminate the grazing rights to build the proposed ranges. Tinian ranchers would have to utilize a diminished amount of available grazing land in the southern third of the island.

Finally, loss of access to training areas would mean loss of local gathering access to the wild chili peppers (*capsicum annum*) locally known as *donnisali*, a Tinian export. Many residents earn money by collecting these peppers, nearly all of which grow in the military lease area. It is possible that residents would retain some access to the chili plants by way of 8<sup>th</sup> Avenue during training exercises. However, any chili plants in the south-east quadrant of the military lease area would be either up-rooted during grading or be located in the restricted Surface Danger Zone.

#### Saipan

There are no plans for any operational component of the proposed action to be located on Saipan. Some economic benefits from increased tourism, increased local agricultural consumption, and operational

contracts for Saipan companies may be expected but these impacts would be very small. No economic costs are anticipated.

#### Rota

There are no plans for any operational component of the proposed action to be located on Rota. Rota's agriculture industry may see some positive impact as the increased population would demand more food than at present. No economic costs are anticipated.

#### CNMI Government

The CNMI government revenues will likely increase due to more economic activity generating higher tax revenues. This impact will likely not be substantial and will not, in and of itself, alleviate the government deficit. However, it should be noted that CNMI government recently released a Draft of a report entitled "Strategic Approach: Utilizing CNMI's Natural Resources to Provide Complementary Support to DOD Guam". This report recommends that CNMI adopt a strategy of providing DOD with support services in three areas: Operational Support; Supply and Maintenance; and Quality of life. If this strategy were to be adopted and successfully implemented CNMI's revenues from providing these support services could be substantially increased.

### **6.2 PUBLIC SERVICES IMPACTS**

#### **6.2.1 Construction**

##### Tinian

The construction phase will likely impact only public safety services on Tinian. An increase in the number of construction workers would require the addition of one additional police officer. Foreign construction workers historically keep to themselves and require little police attention (Tinian Department of Public Safety 2008).

#### **6.2.2 Operation**

##### Tinian

Tinian police anticipate few operations phase public safety impacts, if training units are accompanied by military police, as they historically have been (Tinian Department of Public Safety 2008). The Tinian fire department expects no impact from training, although brush fires are common on the island and range fires are possible (Tinian Municipal Directors 2009).

A small number of contracted/civilian fire fighters may be required by the military.

Also, a small number of medical personnel would accompany military training units, and would be expected to assist civilian medical personnel in the event of emergencies.

### **6.3 SOCIOCULTURAL IMPACTS**

#### **6.3.1 Construction**

##### Tinian

The Tinian Department of Public Safety anticipates increased crime and community tensions if the economy permits eventual construction of new casinos (Tinian Department of Public Safety 2008). Historical accounts of the sociocultural impacts of the construction of the Tinian Dynasty Hotel and Casino differ. Some accounts describe a situation where 18 months of construction and 1,800 largely



foreign workers created conflict with local residents that culminated in several hundred construction workers storming the police department complaining of local assaults on workers (Tinian Dynasty Hotel and Casino 2008). Tinian police however recall only one fight between the local population and foreign construction workers in the 1970s (Tinian Municipal Directors 2009).

If military construction coincides with resumed casino construction, there could be additional social tensions. If not, as the expected number of military-related construction workers would be just 10% of the number that built the casino in the late 1990s, the sociocultural impacts of the construction phase would be negligible.

### **6.3.2 Operation**

#### Tinian

Sociocultural impacts during the operations phase would be affected by decreased access to land for the purposes of recreation and cultural activities. During training exercises, local residents would lose access to popular beaches and fishing spots such as Unai Dankulo on the eastern and Unai Chiget on the western side. During training exercises, access to the memorial crosses at the north tip of the island may also be lost. Tinian residents traditionally march in procession to these crosses on All Souls' Day (Tinian Chamber of Commerce 2009).

Military-civilian interaction will likely also be an area of sociocultural impact. Because of the minimal opportunities for liberty, there would be few opportunities for direct military-civilian interaction. While this could prevent friction between locals and Marines, it would also prevent the common everyday interpersonal interactions that could result in mutual understanding between the local and military populations on Tinian.

Another issue that may affect military-civilian relations on Tinian involves Tinian resident expectations for a fully-operational military base. Because Tinian's current economic troubles are locally perceived as stemming from a series of federal decisions coupled with the global finance collapse, any social disruptions caused by the proposed action would have far less impact on Tinian than the wholesale collapse of years of expectations.

## CHAPTER 7.

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DRAFT

Socioeconomic Impact Assessment Study

GUAM AND CNMI MILITARY RELOCATION

Relocating Marines from Okinawa,  
Visiting Aircraft Carrier Berthing, and  
Army Air and Missile Defense Task Force

November 2009

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# **Guam and CNMI Military Relocation EIS/OEIS Socioeconomic Impact Assessment Study**

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## Appendix A

### Overview Guam/CNMI Socioeconomic Impact Assessment Study (SIAS)

# Overview

## Guam/CNMI Socioeconomic Impact Assessment Study (SIAS)

Presented to the  
Federal Regional Council IX  
On September 17, 2008

# Purpose

- The purpose of the Guam/CNMI SIAS is to provide the JGPO, NAVFAC PAC, the Governments of Guam and CNMI with reliable estimates of the population, employment and income impacts on the socioeconomic infrastructure of the respective island economies due to the military buildup scheduled to occur on there over the next several years.

# Major Study Areas

- Socioeconomic Baseline of existing
  - Populations, income and employment
  - Socioeconomic infrastructure (e.g., housing, education, healthcare, public safety, etc.)
- Identification of Construction Phase Impacts
- Identification of Operational Phase Impacts

# Study Steps

- Data Collection
- Development of Assumptions
- Choice of Methodologies
- Validation of Findings
- Report Production



# Study Approach

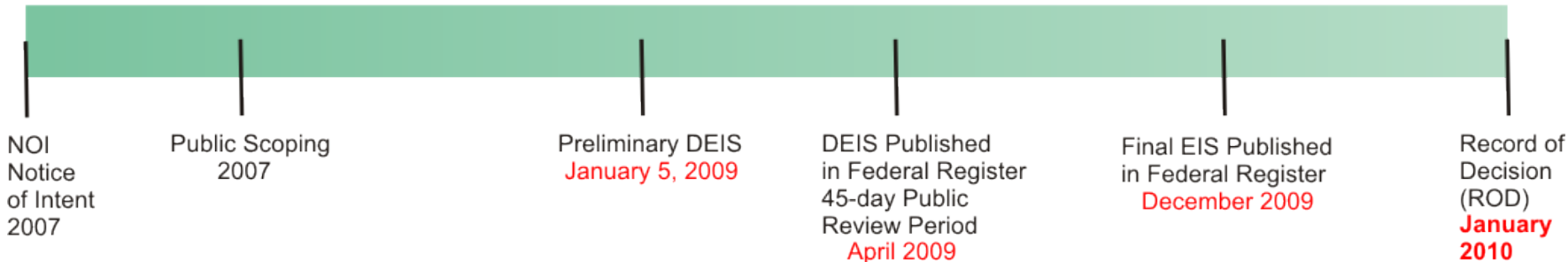
- Collaborative
- Interactive
- Iterative
- Transparent
- Neutral

# Coordination with Other Studies

- SIAS will support the socioeconomic section of the Guam/CNMI Military Relocation EIS
- SIAS will provide a foundation for Fiscal Impact Analysis (FIA) to be conducted by GovGuam with funding from OEA

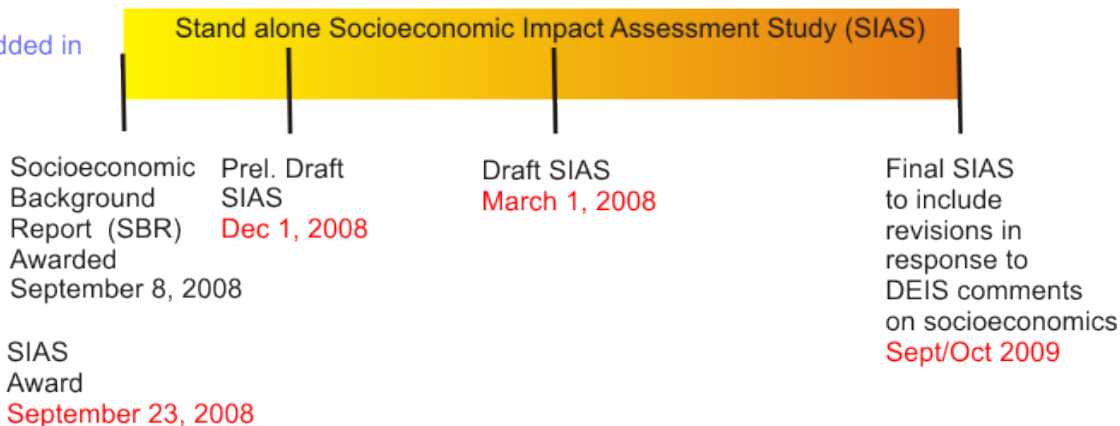
**EIS**

# Studies Milestones

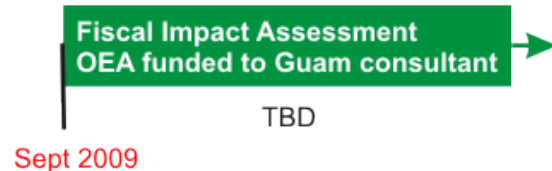


**SIAS**

Socioeconomic issues imbedded in the EIS



**FIA**



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## Appendix B

### Federal Regional Council (FRC) Meeting Summaries

# **Guam and CNMI Military Relocation EIS/OEIS Socioeconomic Impact Assessment Study**

## **Appendix B Table of Contents**

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## **Preliminary Federal Regional Council (FRC), U.S. Department of Health and Human Services (HHS), Office of the Regional Director (ORD) Meeting**

Place/Date/Time: September 15, 2008

Attendees: Thomas E. Lorentzen, Regional Director, HHS ORD  
Emory M. Lee, Executive Officer, HHS ORD

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### **Meeting Summary/Topics Discussed:**

#### 1. Introduction

- a. Provided background of TEC and John M. Knox and Associates.
- b. Explanation of inter-relation between Environmental Impact Statement (EIS/OEIS), Socioeconomic Impact Assessment Study (SIAS) document and Fiscal Impact Assessment (FIA).
- c. SIAS because of the magnitude of the proposed action, and the unique environment of Guam.
- d. GovGuam will hire a consultant to work on the FIA.

#### 2. Preparation for FRC Meetings

- a. Meeting with FRC members in order to explain the purpose of the SIAS and to collect information on contacts on Guam that have the data for the study.
- b. Need to prepare a concise explanation of approach to present on Wednesday.

## **HHS/Office of Public Health Services and FRC/Outer Pacific Committee Meeting**

Place/Date/Time: September 15, 2008

Attendees: Capt. John Walmsley, Senior Health Advisor, U.S. Public Health Service  
Capt. Nadine Simons, Deputy Regional Health Administrator, U.S. Public Health Service  
Dr. Ronald Banks, RADM, Assistant Surgeon General, Regional Health Administrator,  
U.S. Public Health Service

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### **Meeting Summary/Topics Discussed:**

1. Introduction to the FRC Outer Pacific Committee.
2. Federal Funding
  - a. Typically, there is confusion, little guidance, need assistance, need follow up reporting for applications from Guam.

## **HHS/AoA Meeting**

Place/Date/Time: September 15, 2008

Attendees: Anna Cwirko-Godycki, US Dept. of HHA, Agency of Aging

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### **Meeting Summary/Topics Discussed:**

1. Introductions
  - a. Description of HHA Agency of Aging
2. Local Centers/Agencies
  - a. Guam and CNMI have no area agencies on aging
  - b. The local Aging and Disability Resource Centers are one-stop centers for aging and disabilities. They have a database to track people in the system, which was established a few years ago.
  - c. Guam GETCare system could monitor changes
  - d. CNMI – have a similar grant, but unsure what is in place
3. Local Data/Information/Impacts
  - a. Elderly often go to other places (e.g., Hawaii) for serious health issues
  - b. Guam registered 15,000 (“data always suspicious”) clients for chores, day care, transportation, etc.
  - c. Guam health care delivery systems are better than those in the CNMI
  - d. Seniors can be displaced by development
  - e. Guam 2008-2011 Four Year State Plan
4. Local Contacts
  - a. Honolulu – Centers for Medicare Services
  - b. University of Guam
  - c. Guam Director of Social Services
5. Federal Funding
  - a. Funding based upon population-based formulas. Territories receive slightly more funding. Cannot increase funding based upon need.

## **HHS ORD/FRC Follow-up Meeting**

Place/Date/Time: September 16, 2008

Attendees: Thomas E. Lorentzen, Regional Director, HHS ORD  
Emory M. Lee, Executive Officer, HHS ORD

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### **Meeting Summary/Topics Discussed:**

1. Planning for 9/17/08 FRC Meeting Discussion
  - a. One-hour presentation and question and answers
  - b. Presentation available to be posted on the FRC website
2. Introduction to history of FRC
3. FRC relationship with project
  - a. Requested by the Governor of Guam
  - b. History of past assistance with similar projects
  - c. October meeting will be devoted to Guam issues
4. Issues mentioned on recent ORD trip to Guam
  - a. Communication gaps
  - b. Need GovGuam to identify pressure points
  - c. Funding – currently Guam does not possess the funding to be a Pacific military hub

## **Social Security Administration Meeting**

Place/Date/Time: September 16, 2008, 11:00 am

Attendees: Bill Lazell, Executive Officer, Social Security Administration  
Area Director and District Manager of Honolulu District, via telephone

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### **Meeting Summary/Topics Discussed:**

1. Introductions
  - a. Honolulu District oversees Guam and Saipan
2. Local Centers/Agencies
  - a. Field Office in Guam
  - b. Field Office in Saipan
  - c. 2 Contact Stations, visited quarterly, in Tinian and Rota
  - d. Administration services: social security card issue, work authorization changes, change of name, verify appropriate documents, application for retirement benefits, process disability applications including disabled veterans – administer the whole range of benefits under social security benefits,
  - e. Education services: about the program on base to educate people about the programs that are offered, free retirement workshops on base – provide info, answer questions, active out in the community – be accessible and available.
3. Local Data/Information/Impacts
  - a. SSA managers are very active in the community so they have a lot of information.
  - b. Enumeration at Birth
  - c. Increased Processing Needs
  - d. FICA Tax/Immigration Status
  - e. Access to Services
  - f. Staffing Needs
  - g. System Infrastructure

## **Environmental Protection Agency Meeting**

Place/Date/Time: September 16, 2008, 2:00 pm

Attendees: Nova Blazej, Pacific Islands Office, Environmental Protection Agency  
Barry Pollock, Environmental Engineer, Water Division  
Michael Lee, Water Programs Lead and Construction Grants Program Officer, Pacific Islands Office

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
  - a. Guam/CNMI are managed in San Francisco. There is a small contact office in Hawaii that deals more in technical issues – primarily focused on Hawaii.
3. Local Data/Information/Impacts
  - a. Community Infrastructure
  - b. Community Utilities
  - c. Mitigation measures
  - d. EPA Recommendations and Scoping
  - e. Transportation
  - f. Green Jobs/Renewables
  - g. Water Rights
  - h. Permitting Staffing Capacity
  - i. Data Gaps
4. Federal Funding
  - a. EPA office provides a consolidated grant to Guam. Independent funding also given to them from Gov Guam. However, the majority of funding comes from the EPA.
  - b. Michael Wolfram is the program manager for the Guam Consolidated grant.

## Office of Public Health Services Meeting

Place/Date/Time: September 16, 2008

Attendees: Capt. John Walmsley, Senior Health Advisor, US Public Health Service

---

### Meeting Summary/Topics Discussed:

1. Introductions
2. Local Centers/Agencies
3. Local Data/Information/Impacts
  - a. Human Resources – cultural and language issues
  - b. Human Resources – recruiting qualified practitioners
  - c. Migrant worker health issues
  - d. Funding
  - e. Hospital System
  - f. TB Screenings
  - g. Specialty and Emergency Care
4. Local Contacts
  - a. Pacific Island Health Officer's Association (PIHOA) – regional entity
  - b. Health officer for CNMI
  - c. Community Health Centers – speak with HRSA
5. Federal Funding
  - a. HHS Title 10 Program: Family Planning: Guam 2007 Grant: \$465,000, representing the largest chunk that any of the 6 Pacific jurisdictions have received. They've had a very good working relationship with Guam, unlike some other jurisdictions. Work is smooth – no particular obstacles or challenges – Guam is the most savvy at playing by the rules, submitting applications online etc.
  - b. CNMI: haven't had problems with the CNMI family planning program.
  - c. Minority and Women's Health - This program receives very small mini-grants of about \$5,000.
  - d. Medical Reserve Corps Program – has a volunteer on Guam – doesn't receive money.
  - e. Community Health Centers - Christy Onoda from HRSA would be a good place to talk to – they give money for community health centers – consolidated health centers program – Guam receives a million dollars a year for the Northern and Southern community health centers. This year received money to expand at least one of these clinics.

Pacific Health Priorities Determined by PIHOA:

- *Human Resources*
- *Quality Assurance*
- *Surveillance, Data Collection, Analysis*
- *Enhancing regional public health lab capacity*



## **Department of the Interior (DOI), Office of Environmental Policy and Compliance Meeting**

Place/Date/Time: September 17, 2008

Attendees: Patricia Port, Regional Environmental Officer

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
  - a. National Park
  - b. Wildlife Park
3. Local Data/Information/Impacts
  - a. Parks are understaffed
  - b. Park upkeep
  - c. Waste and Trash disposal
  - d. Access issues
  - e. World War II Explosive materials
  - f. Mitigations
4. Local Contacts
  - a. Superintendent of Wildlife Refuge

## **HHS/Centers for Medicare and Medicaid Services Meeting (CMS)**

Place/Date/Time: September 17, 2008

Attendees: (via telephone)

---

### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
  - a. Guam-funded Medically Indigent Program (MIP)
  - b. Website identifies all Medicare-certified facilities in Guam and CNMI – located on Guam and Saipan
  - c. Tinian and Rota hospitals are not certified
3. Local Data/Information/Impacts
  - a. Access on Guam is limited
  - b. Diabetes risk
  - c. Territorial Federal Funding caps – shortfall
  - d. Outer island access of Guam services
  - e. Insurance acceptance issues
  - f. Travel for services
  - g. Workforce issues
  - h. Limited provider network, training, specialty skills
  - i. Retention difficulty
  - j. Economy of Scale issues for treatment
  - k. Accreditation
  - l. Community Health Centers on Guam are excellent
  - m. Administrative Capacity issues
4. Federal Funding
  - a. CMS is the largest health insurance in the US – they spend \$600 billion every year. They are the largest payers for health care in the outer Pacific.
  - b. CMS is the main funder/payer on Guam. Guam's services are basically government-run, although they do have private doctors.
  - c. State Children's Health Insurance Program (SCHIP)

## **Department of Transportation (DOT), Federal Transit Administration (FTA) Meeting**

Place/Date/Time: September 18, 2008

Attendees: Ray Sukys, Director, Office of Planning and Program Development, Federal Transit Administration

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
3. Local Data/Information/Impacts
  - a. Busses only
  - b. Guam and CNMI considered rural
  - c. Congestion Pricing studies
  - d. National Transit Database
  - e. Planning difficulties
4. Local Contacts
5. Federal Funding
  - a. Guam receives less than \$1million in subsidy from FTA. All transit operates on subsidy. Anytime you want to increase service, you have to find that amount of subsidy. Usually “fare-box return” is about 20% (exceptions exist such as BART in San Francisco).
  - b. Govguam Transportation receives a grant from DOT/FTA – they operate their small service through that grant.
  - c. CNMI also receives money through a small block grant – they have some sort of bus system
  - d. Money is awarded as a grant, interaction is minimal. Monies allocated based on their rural status.

### Federal Transportation Funding Avenues

- *Urbanized Areas*
- *Disability*
- *Structural Improvements*
- *Very Small Starts Program*
- *Competitive Bidding*

## **Department of Labor (DOL) / Employment and Training Administration (ETA) Meeting**

Place/Date/Time: September 18, 2008

Attendees: John Jacobs, Federal Project Officer, DOL ETA  
Lawrence Ricci, Executive Assistant to the RA

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
  - a. Guam Contractors Association
  - b. Guam One-Stop Center
  - c. Guam Community College
3. Local Data/Information/Impacts
  - a. Workforce Information Reporting Data – performance reports
  - b. State Plan
  - c. CNMI Strategic Plan
  - d. Data collection often unusable
  - e. Lack of data
  - f. Saipan data from Northern Mariana College – lack of data otherwise
  - g. Lack of governance and connection between state, federal and private partners
  - h. Funding utilization is lacking
  - i. Technology deficits
4. Local Contacts
5. Federal Funding
  - a. NEG/Workforce Innovation Grant

## **United States Department of Agriculture (USDA), Food and Nutrition Service (FNS) Meeting**

Place/Date/Time: September 18, 2008

Attendees: Allen Ng, Regional Administrator, Food and Nutrition Service, Western Region, USDA

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### **Meeting Summary/Topics Discussed:**

#### 1. Introductions

Mr. Ng presented two folders – one with general information on the applicable USDA programs and the second with Guam and CNMI specific information, which were reviewed with the interview committee. This information is all available on [www.fns.usda.gov](http://www.fns.usda.gov)

#### 2. Local Data/Information/Impacts

- a. Guam's participation rate is double that of the national average of 11%.
- b. Nutrition education lacking
- c. Management concerns/capacity issues
- d. Administrative capacity in processing claims
- e. Information technology systems issues
- f. Staff over capacity: Guam caseload is over 800 per worker
- g. Military does participate in food stamp and WIC programs
- h. GovGuam cash flow difficulties

#### 3. Federal Funding

- a. Supplemental Nutrition Assistance Program (SNAP) – food stamps – none on CNMI
- b. National School Lunch Program (breakfast and summer school as well) – capped
- c. Special Supplemental Nutrition Program for Women, Infants and Children (WIC) – grant program
- d. Emergency Food Assistance Program (TEFAP)

## **HHS Administration for Children and Families (ACF) Meeting (Part 1)**

Place/Date/Time: September 18, 2009

Attendees: Richard Ibarra, Office of Head Start, ACF  
Jan Len, Regional Program Manager, Office of Head Start, ACF  
Ernest Vellario, Office of Grants Management, ACF  
Deborah Oppenheim, Family and Youth Services Bureau, Runaway and Homeless Youth Programs  
John Cottingham, Deputy Regional Administrator, USDA, Food and Nutrition Service, Western Region

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Data/Information/Impacts
  - a. Constrained funding
  - b. Not serving every child that is in need
  - c. Staffing turnover
  - d. Increased stressors leading to homelessness
  - e. Incoming population add to pool of professionals
3. Local Contacts
  - a. School superintendents
  - b. Local Head Start office
  - c. Sanctuary – homeless youth shelter
4. Federal Funding
  - a. San Francisco ACF office handles two large discretionary grants programs with ACF staff in the region
  - b. Funding resources are constrained

## **HHS Administration for Children and Families (ACF) meeting (Part 2)**

Place/Date/Time: September 18, 2009

Attendees: Dan Baker, TANF, Regional Program Specialist  
Pat Colonnese, Grants Officer, Region 9  
J.P. Soden, Child Support, Region 9  
Sharon Fujii, Regional Administrator, ACF

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Centers/Agencies
3. Local Data/Information/Impacts
  - a. Currently overwhelmed
  - b. Resource and job challenges
  - c. Automated system, IT challenges
  - d. Capped funding unable to deal with population increase
  - e. Recruitment difficulties
  - f. Lack of data and analysis
  - g. Micronesian populations
  - h. Military as possible labor source
  - i. Increased caseloads
4. Local Contacts
  - a. Department of Health
  - b. University of Guam
  - c. University of Hawaii
  - d. Community Health Centers
5. Federal Funding
  - a. Capped funding and entitlement funding
  - b. Administration for Native Americans

## **Department of Labor (DOL) / Occupational Safety and Health Administration (OSHA) Meeting**

Place/Date/Time: September 18, 2009

Attendees: Ken Atha, Regional Administrator, OSHA  
James Wulff, Director of Enforcement and Investigations

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Data/Information/Impacts
  - a. This year 500 inspections between Guam and CNMI
  - b. Tinian and Rota inspections are minimal
  - c. Construction is a high hazard industry
  - d. Violence in the workplace especially prevalent when workers away from family
  - e. Housing will be a worker issue, including quality
  - f. Inspections will increase
  - g. Workload will increase
  - h. Enforcement
  - i. Language skills needed
3. Local Contacts
  - a. Guam Contractors Association
4. Federal Funding
  - a. Susan Harwood training grant



## **Department of Veteran Affairs (VA) Meeting**

Place/Date/Time: September 18, 2009

Attendees: Roberta Rosenthal, VA, Veterans Health Administration, Network Homeless Coordinator

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### **Meeting Summary/Topics Discussed:**

1. Local Centers/Agencies
2. Local Data/Information/Impacts
  - a. Point-in-Time count: 1,100 homeless on Guam, about 20 self-identified as veterans
  - b. Agencies don't have the capacity to apply for grants
  - c. Jobs for veterans
  - d. Increased housing costs/homelessness
  - e. Military post traumatic stress disorder
3. Local Contacts
  - a. Guam Salvation Army
  - b. Public Housing Authority
  - c. Regional Director VA
  - d. National Guard
4. Federal Funding
  - a. Section Eight housing vouchers

## **FRC Secretariat Debrief**

Place/Date/Time: September 18, 2009

Attendees:

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### **Meeting Summary/Topics Discussed:**

1. Introduction: Interagency Group for Insular Areas (IGIA)
2. Introduction: Detailing and Power Point presentation of SIAS timing
3. Discussion on FRC role within SIAS
4. Guam Issues Inventory document

## **General Services Administration (GSA) Meeting**

Place/Date/Time: September 19, 2009

Attendees: John W. Boyan, Assistant Regional Administrator, Federal Acquisition Service, GSA  
Darlene Ayers-Johnson, Senior Advisor, Office of the Regional Administrator, GSA  
Jeff Neely, Assistant Regional Administrator, Public Buildings Service, GSA  
Peter G. Stamison, Regional Administrator, Office of the Regional Administrator, GSA  
Rob Shepard, Director, Office of OneGSA  
Jim Lila, Business Process Manager, Office of OneGSA

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Data/Information/Impacts
  - a. GSA has transactional data

## **Food and Drug Administration (FDA) Meeting**

Place/Date/Time: September 19, 2009

Attendees: Tom Sidebottom, Special Assistant for Science, FDA  
Captain Nadine Simmons, US Public Health Service, Deputy Regional Health Administrator

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### **Meeting Summary/Topics Discussed:**

1. Introductions
2. Local Data/Information/Impacts
  - a. FDA Hawaii Risk Assessment Committee will be holding an educational meeting in Guam Spring 2009
  - b. Anticipating growth
  - c. Majority of FDA work with the military
3. Local Contacts
  - a. Hawaii office state liaison

## Appendix C

### Socioeconomic Impact Assessment Guam Public Service Agency Surveys

# Guam and CNMI Military Relocation EIS/OEIS Socioeconomic Impact Assessment Study

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**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: **Guam Public School System**

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title:

Phone:

Email:

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title:

Phone:

Email:

**B. Data and Decisions About Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*		FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Total					
Check if no. is <u>actual</u> or <u>authorized</u> in budget:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>					
A. Teachers	Elementary		1031	1037	1035
	Secondary		493	497	504
	High School		522	502	514
	Total		2046	2036	2053
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B. Support Staff	Elementary		742	626	1035
	Secondary		252	204	504
	High School		260	245	514
	Total		1254	1075	2053
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
C.	Elementary				
	Secondary				

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

	High School				
	Total				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: For schools, we assume that Category A would be overall teachers (not all employees), but please advise if there are other key categories considered critical for evaluating service standards – e.g., specialists such as special education teachers.

*Explanation of identified Key Professional Categories, if necessary:*

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Elementary							14555	14491	14193	14346
Secondary							6852	6767	6894	6887
High							9371	9582	9486	9661
Total							30778	30840	30573	30894

**C. Other Data Questions**

2. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 200
Operating (not including new facilities)	\$	\$	\$ 167,419,094	\$ 189,753,771
Capital (new facilities, etc.)	\$	\$	\$	\$
<i>(if above breakdown not available) Total</i>	\$	\$	\$ 167,419,094	\$ 189,753,771



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

October 30, 2008

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Guam Community College

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Richard Quiambao / Institutional Researcher

Phone:

Email: richard.quiambao@guamcc.edu

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Mary A.Y. Okada / President

Phone: (671) 735-5700

Email: mary.okada@guamcc.edu

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*		FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Total			215	210	220
Check if no. is <u>actual</u> or <u>authorized</u> in budget:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<b>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</b>					
A.	Adult Education		3	4	5
	Apprenticeship		5	2	4
	Continuing Ed		2	2	4
	Degrees & Cert.		205	202	207
	Total		215	212	220
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B.	Adult Education				
	Apprenticeship				
	Continuing Ed				
	Degrees & Cert.				
	Total				
Please check if above numbers were <u>actual</u>		<input type="checkbox"/> actual	<input type="checkbox"/> actual	<input type="checkbox"/> actual	<input type="checkbox"/> actual

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

(filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> auth.	<input type="checkbox"/> auth.	<input type="checkbox"/> auth.	<input type="checkbox"/> auth.
--	--------------------------------	--------------------------------	--------------------------------	--------------------------------

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For educational institutions, we assume this would be *teachers* (not all employees) – but is there any distinction by degree, or other category as well?

*Explanation of identified Key Professional Categories, if necessary:*

These staffing levels (actual) do not include the growth budget submission that the college has included in our request for appropriations every year. These staffing patterns can be made available on request. The growth budget was not funded in its entirety.

**2. Your Service Population:**

a. Is everyone on Guam able to enroll at your institution?

- Yes
- No, there are certain eligibility criteria (*Describe below:*)

b. Does your agency provide services to (*check one best answer*):

- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

Temporary does not include H2B.

c. Are there are any restrictions on providing educational services to “H2B workers” on temporary work visas from foreign countries?  Yes  No

(*If Yes, explain below, or use space for any other explanation:*)

Courses must be offered through Continuing education program.

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Class size per instructor OR
- Ratio of total professional staff to total island population (including military) OR
- Ratio of total professional staff to civilian population only OR
- Some other quantifiable service standard

(*Explain or describe as needed below:*)

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population, or Y students per instructor*), its source, and whether it is a locally-adopted target for desirable service

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.)  per (No.)  of
- Source or reference:
- Is this:  Locally-generated target  National target  Statistical average

(Other or explanation:)

d. If Yes: Do you believe that standards on Guam should properly include some calculation of ratio of key professional staff to (check one best answer):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(If other, or you wish to add clarifications, please write below:)

**4. Actual Staffing/Service Level Statistics:**

a. Does your agency maintain estimates of your service level in terms of the ratio of students to teachers (or whatever else you described above)?  Yes  No

b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per (how many?)					of (pop. type:)				

**5. Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

New staffing is determined by the need for additional career and technical education workers and the demand for such classes from industry. Accreditation requirements indicate that in order to develop a new program the college must be able to sustain the program. Oftentimes, the college "pilots" the course through our continuing education office before finalizing the program.

**6. Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

Adequate service is dependent upon the availability of facilities and the recruitment of faculty in certain specialized areas.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

<b>Budget</b>	<b>FY 1990</b>	<b>FY 2000</b>	<b>FY 2005</b>	<b>(Most current available:) FY 200</b>
Operating (not including new facilities)	\$ 8398736	\$ 15569267	\$ 15550497	\$ 20224046
Capital (new facilities, etc.)	\$ 1032855	\$ 25562926	\$ 262254	\$ 70250
<i>(if above breakdown not available) Total</i>	\$ 9431591	\$ 15824896	\$ 15812751	\$ 20294296

**8. Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

<b>Location</b>	<b>Check if Space Is:</b>		<b>Check Adequacy of Space</b>		
	<i>Owned</i>	<i>Leased</i>	<i>1*</i>	<i>2*</i>	<i>3*</i>
Guam Community College main campus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Please list any additional key locations/facilities:</b>					
Southern High School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Simon Sanchez High School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Okkodo High School	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele

\* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people

\* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

**9. Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve:

	<b>No</b>	<b>Yes, Unpublished*</b>	<b>Yes, Published at Following Place**</b>
Active-Duty Military	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> GCC Fact Book, Annual report, quarterly reporting requirements as stipulated in law.
FAS Compact State Immigrants	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> GCC Fact Book, IPEDS
Other Ethnic Breakdowns	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> GCC Fact Book, IPEDS, Annual report

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

**10. Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data about enrollment that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

No

Yes, unpublished

Yes, published at: GCC Ten-year master plan

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

*(If Other or have comment, write below:)*

**D. Agency Manpower Factors**

**11. Turnover:**

- a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected?

**12. Labor Availability:**

- a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Nurses. GCC recruits above-step (salary scale) for Nurses.

**Follow-up Questions (via Email)**

- 1. Could we have a copy of the growth budget submission that you included in your request for appropriations?** I have attached our growth budget requests from 2004-2009
- 2. You list a standard target of 1 faculty per 13 students minimum. What would be the maximum number of student to faculty ratio that GCC would target?** GCC has a minimum of 13 students for most classes and a maximum of 35. Maximum class sizes depend on the class type and the course requirements.
- 3. Could you provide us with unpublished statistics regarding the number of active-duty military and military dependents/family members that take classes at GCC?** Information pending
- 4. Is it possible to provide me to the link to the GCC Ten Year Master Plan?** Attached
- 5. Can you explain what above-step salary scale for GCC's recruitment of nurses mean, and describe the role that these nurses play (instructors, career advisors etc.)** See attached copy of Board policy 420 on above-step recruitment. Nurses perform instructional functions. There are also specific requirements necessary to continue our Nursing programs. I will have to get the specifics of those requirements.

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency:

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title:

Phone:

Email:

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title:

Phone:

Email:

*If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.*

**B. Staffing and Service Levels**

1. **Staffing:** Year 2005 data is most critical for this study, because it is considered the "baseline" year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*		FY 1990	FY 2000	FY 2005	(Most current available:) FY 2007
Total					
Check if no. is <u>actual</u> or <u>authorized</u> in budget:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>					
A. Teachers	Professors		45	38/37	40/38
	Associate Professors		72	70/70	76/71
	Assistant Professors		54	62/45	60/49
	Instructors		20	24/24	28/26
	Total		191	194/176	204/184
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
B.	Adjuncts		51	64	62
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For educational institutions, we assume this would be the types of *teachers* listed under Category A – but are there additional key personnel for which staffing ratios are often calculated?

*Explanation of identified Key Professional Categories, if necessary:*

NOTE: For FY2005/2007, the numbers in slash are auth/actual (i.e. 36/35 is 36 auth, 35 actual). For FY08/09, UOG was 22 faculty short of "auth" due to budget constraints. UOG has compensated by hiring more adjuncts, increasing overloads for FT faculty, and instituted austerity financial measures to protect remaining funds to support payroll and other critical expenses. While other programs like nursing are extremely overloaded, the average

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ratio for FT to adjunct is at 34%. UOG's goal is to keep FT to adjunct ratios at 25% or less. There are other personnel needs in staff and administrators, however, data provided covers only faculty as they are our core group and most important to articulate for this report.

## 2. Your Service Population:

a. Is everyone on Guam able to enroll at your institution?

Yes

No, there are certain eligibility criteria (*Describe below:*)

While UOG is an open enrollment institution, there are minimum requirements. Example, for individuals seeking a degree, a high school diploma (or equivalent) is required. For individuals not seeking a degree, must have stopped high school attendance for the past four years.

b. Does your agency provide services to (*check one best answer:*)

All eligible permanent or temporary *residents* on island, including military;

All eligible *residents*, including military dependents but not active-duty military;

All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

This includes non-resident/off-island personnel visiting who may want to take course(s) prior to returning to their home of record. In academics, non-residents have a different tuition rate than "residents".

c. Are there are any restrictions on providing services to "H2B workers" on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes  No

(*If Yes, explain below, or use space for any other explanation:*)

Per visa regulations, H2B workers may enroll in courses at UOG for incidental studies (i.e. cannot be degree seeking).

## 3. Staffing Standards or Targets Reflecting Service Levels:

a. In regard to the ratio of staffing to service population – does your agency know of or target any "standard," whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

Class size per instructor OR

Ratio of total professional staff to total island population (including military) OR

Ratio of total professional staff to civilian population only OR

Some other quantifiable service standard

(*Explain or describe as needed below:*)

Most of UOG's undergraduate academic programs do not limit the number of students accepted in the majors, however matriculation can be limited to class size

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capacities. Normal classroom sizes range from 25-30 students. However, there are few with capacities of 80-180 students.

c. If Yes: Please state what that standard is (*i.e.*, *X professionals per 10,000 of eligible population, or Y students per instructor*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.)  per (No.)  of
- Source or reference:
- Is this:  Locally-generated target  National target  Statistical average  
(*Other or explanation:*)

d. If Yes: Do you believe that standards on Guam should properly include some calculation of ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please write below:*)

The ratio should be based on functions to perform resulting in workload requirements.

However, there are times when a position is required aside from a workload or a ratio. It depends on the organization being assessed.

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of students to teachers (or whatever else you described above)?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
		17	19	18	20	24	25	21	
Numbers above are per ( <i>how many?</i> )				of ( <i>pop. type:</i> )					

**5. Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Other factors affecting decisions on which faculty positions to fill are: (1) Ability to obtain sustainable funding; (2) Evidence of a demand (students waiting to take a course(s)/degree program; (3) Ability to hire in hard to hire positions; (4) Projected

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workforce needs showing sustainability; (4) Requests for research/intern support to GovGuam agencies, businesses, military, and/or community (i.e. environmental, cultural preservation, economic assessment, statistical assessments).

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:**  
Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

None.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available): FY 2007
Operating (not including new facilities)	\$	\$	\$	\$
Capital (new facilities, etc.)	\$	\$	\$	\$
<i>(if above breakdown not available) Total</i>	\$	\$	\$ See encl 1.	\$ See encl 1.

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
University of Guam main campus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Please list any additional key locations/facilities:</b>					
See attached List - Encl 2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	UOG Fact Book
Other Ethnic Breakdowns	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	UOG Fact Book, Integrated Postsecondary Education Data System (IPEDS)

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.  
 \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([mk@johnmknox.com](mailto:mk@johnmknox.com)); phone for either is 808-523-1352.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data about enrollment that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
  - Yes, unpublished
  - Yes, published at:
- (If Other or have comment, write below:)
- 

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

While turnover is still primarily retirement and other job opportunities, there are at least 4 personnel within this year who left UOG for military buildup related positions within the federal government. We anticipate this to increase, but, not sure which occupations will be affected. While numbers are low, it has an impact on a university of our size when there are current shortages already in existence.

b. If Yes, what types of positions have been most affected?

The positions affected have been program coordinators for federally funded programs, assistive technology for the disabled, and a research assistant.

12. **Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

*If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.*

The difficulty in hiring is funding related, not from the military buildup. It affects all positions and priority of hires have been established to fill critical shortages starting with faculty, then key support staff, then administrators, respectively. Additionally, there are several initiatives being reviewed addressing cost saving and revenue generating measures to live within a sustainable financial budget.

Revenue Source	2005 Requested Budget	2005 Actual Budget*	2007 Requested Budget	2007 Actual Budget*
Government of Guam Appropriation	25,681,990	24,862,500	31,723,732	26,618,074
Supplemental				500,000
Transfer from YEC for Gen Ops	-	500,000		
Tuition Fund Projected Net Revenue	4,206,174	3,911,813	6,376,598	6,363,366
Transfer for CES				50,000
Federal Matching Funds	1,508,000	1,508,000	1,508,000	1,508,000
UOG Higher Education Endowment Fund	-	390,000		
Enterprise Development Initiative Net Revenue			300,000	(12,929)
Saipan Center Net Revenue			130,289	
Inf'l Accounting Institute Projected Net Revenue	400,000	148,150	200,000	11,000
PDLLC Fund Projected Net Revenue	500,000	-		
<b>Total Revenues</b>	<b>32,296,164</b>	<b>31,320,463</b>	<b>40,238,619</b>	<b>35,037,511</b>

\*Source: Variance Analysis report  
DEC 3, 2008

**MEMO**

**To:** David Okada  
**From:** Sandra McAuliffe  
**Date:** December 3, 2008 (Updated)  
**RE:** Data input for JMK & Associates, Inc.  
For Socioeconomic Impact Study for Military Buildup

*I was asked by Sonny on 11/12/08 to fill in Part C, Item No. 8 'Facilities Providing Public Services'.  
Below is my input:*

**LOCATION:** UNIVERSITY OF GUAM'S MAIN CAMPUS  
All space is owned by the University of Guam (Gov. Guam)

<u>Facility Name:</u>	<u>Function of Facility Space:</u>	<u>Check Adequacy of Space:</u> <u>[Indicate 1, 2, or 3 Below.]</u>
Dean Circle Hs. 1-35	CEDDERS programs	3 (New Facility)
CNAS Building	College of Natural & Applied Sciences	3
ELI Building	English Language Institute	3
JELG-SBPA Building	School of Business & Public Administration	3
Student Center	Student Service Offices	3
Tan Siu Lin Building	RFK Library	2 (only to 3 <sup>rd</sup> floor)
Fine Arts Building	Theater	3 (Annex Needed)
Science Building	Laboratories & Classrooms	3
Health-Science Building	Labs & Classrooms	2 (2 <sup>nd</sup> Floor)
MARC Building	Pacific Resource Library	3
Computer Center Building	Community Data Collection Resource Center	3
Dorm I	TRIO Programs, ROTC, Classrooms	3
Dorm II	Student Housing	3
Dorm III	Student Housing	3
Warehouse A	Classrooms	3
Warehouse B	Classrooms	3
COE Building	College of Education	3
CLASS E/C Building	English & Communications programs	3
CLASS Lecture Hall	Community Lecture Hall	1
CLASS HSS Building	Humanities & Social Sciences programs	3
Field House	Athletic Events, Disaster Center, Community Use	2 (Wing Expansion)

ENCL 2

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Guam Memorial Hospital Authority

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Hospital Chief Planner/William C. Kando

Phone: (671) 647-2316

Email: william.kando@gmha.org

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Hospital Administrator/CEO/PeterJohn D. Camacho

Phone: (671) 647-2418

Email: peterjohn.camacho@gmha.org

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

<b>Staffing (FTE if possible)*</b>	<b>FY 1990</b>	<b>FY 2000</b>	<b>FY 2005</b>	<b>Most current available FY 2008</b>
Total Staffing Numbers	N/A	1123.5	1011	1012.5
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
<b>Key Professional Categories **</b>				
A. Physicians	N/A			
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
B. Nurse/Allied Health	N/A			
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
C. All Others	N/A			
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. Please be clear whether you are providing FTE counts or something else.

\*\* We assume you will specify “physicians” as category A, but are unsure if there are also standards for other professional categories such as nurses.

*Explanation of identified Key Professional Categories, if necessary:*



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**2. Your Service Population:**

- a. Are there any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes  No

*(If Yes, explain below, or use space for any other explanation:)*

- b. Please describe any other groups of people who may be ineligible for services, or have restrictions on levels of service:

**3. Staffing Standards or Targets Reflecting Service Levels:**

- a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

- b. If Yes: Is that standard based on the ratio of key professional staff to:

- The entire population (including military and tourists) OR  
 Civilian resident population only OR  
 Some other way of defining the eligible population (*Describe below:*)

- c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

• What is standard? (*No.*)  of  per (*No.*)  of

• Source or reference:

• Is this a:  Locally-generated target  National target  Statistical average

*(Other or explanation:)*

- d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)  
 All eligible permanent or temporary *residents* on island, including military;  
 All eligible *residents*, including military dependents but not active-duty military;  
 All eligible *residents* but not active-duty military or military dependents.

*(If other, or you wish to add clarifications, please write below:)*

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No

- b. If Yes: Please provide those numbers for as many as possible of the years below, either by district, or in total. Again, 2005 data is of particular interest to us.

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

Type of Staffing	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Numbers above are per (how many?)				of (pop. type:)					

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Guam's current population is growing by approx. 3,000 per year. Especially in light of the impending Civilian/Military Buildup, we anticipate Guam's population quickly reaching approx. 200,000 within the next 5 to 10 years. The Guam Memorial Hospital will certainly be affected by temporary civilian construction workers potentially requiring both primary and acute care services (e.g., Emergency Medical Department, etc.).

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators (such as hospital beds or examination rooms) of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

Guam's current population is approx. 175,000. GMHA has calculated, based upon the current U.S. national average of acute care beds per 1,000 population being approx. 2.7, that Guam needs approx. 500 acute care beds. GMHA, with an acute care bed capacity of 158, is the only civilian, acute care hospital on Guam. Therefore, GMHA believes there is a severe shortage of acute care beds on Guam; and that this shortage must be addressed by either expanding the existing Guam Memorial Hospital or building a much larger replacement public hospital. GMHA believes this acute care bed shortage will be further exacerbated by the anticipated population increases that will occur with the impending Civilian/Military Buildup.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2009
Operating (not including new facilities)	\$	\$ 70 Mil	\$ 73 Mil	\$ 89.9
Capital (new facilities, etc.)	\$	\$	\$	\$
(if above breakdown not available) Total	\$	\$	\$	\$

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Guam Memorial Hospital	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please add any other clinics or medical facilities under the Authority's jurisdiction:</i>					
Skilled Nursing Unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Ethnic Breakdowns	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

GMHA maintains stats on the numbers of FAS Compact State Immigrants cared for at GMH.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

12. **Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Medical Staff, Nursing Staff, and Allied Health Professionals have been and continue to be the most difficult positions to fill and retain, as GMHA has difficulty competing for them due to global shortages for these types of positions. Some recruitment and retention strategies that GMHA has had to employ is increasing the compensation for many of these types of positions and recruiting off-island.

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: **Department of Public Health and Social Services – Bureau of Communicable Disease Control**

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Josephine T. O'Mallan, BCDC Administrator

Phone: 671-735-7142

Email: josephine.omallan@dphss.guam.gov

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Suzanne A. Sison, DDS, MBA, Acting Chief Public Health Officer

Phone: 671-735-7167

Email: braces@ite.net

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 2008
Total			23	33
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>				
A. Communicable Disease Control Positions			13	16
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B. Laboratorian Positions		10		6
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs.

\*\* Example: Physician, or nurses or mental health professionals. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees).

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

-- STD, HIV and TB related services are available to everyone; eligibility criteria apply for certain Ryan White Part B Program.  
-- Immunization services - (1) Vaccines For Children (VFC) - Purchased Vaccines: Children 0-18 years old who meet at least one of the following Criteria- Medicaid eligible; uninsured; American Indian or Alaskan Native; or Underinsured (must receive VFC vaccines at a Federally Qualified Health Center)  
(2). 317-Purchased Vaccines: all non-VFC eligible children 0-18 years of age. Adult Vaccines- Influenza Vaccine: adults 50 years and up; high risks adults 19-49 years old with a doctor's prescription.  
Pneumococcal Vaccine: adults 65 years and up; high risk adults 19-64 years old with a doctor's prescription.  
-- Laboratory services are specific to STD, HIV, TB, Immunization, MCH respective program eligibility requirements.

b. Does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

Same as above.

c. Are there are any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes  
 No

(*If Yes, explain below, or use space for any other explanation:*)

Yes, for Immunization and Ryan White HIV health care/medical services.

No, for STD, HIV and TB related services.

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

• What is standard? (*No.*)  per (*No.*)  of

• Source or reference:

• Is this:  Locally-generated target  National target  Statistical average

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

(Other or explanation:)

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (check one best answer):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(If other, or you wish to add clarifications, please write below:)

**4. Actual Staffing/Service Level Statistics:**

a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No

b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per (how many?)				of (pop. type:)					

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Number of clients accessing services  
 Increase in STDs, HIV, TB and other infectious communicable diseases  
 Communicable disease outbreaks  
 Funding availability

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

Interventions and prevention activities or services. There is available data.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2008
Operating (not including new facilities)	\$	\$	\$ 1,068,891	\$ 1,344,515
Capital (new facilities, etc.)	\$	\$	\$	\$

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

(if above breakdown not available) Total	\$	\$	\$	\$
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8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Central Public Health, Mangilao	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**		
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

[Empty text box]

b. If Yes, what types of positions have been most affected?

[Empty text box]

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

[Empty text box]

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

[Empty text box]

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Department of Public Health and Social Services – Division of Environmental Health

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Cynthia Naval  
 Phone: 671-735-7221  
 Email: cynthia.naval@dphss.guam.gov

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: M. Thomas Nadeau (for division matters)  
 Phone: 671-735-7221  
 Email: masatomo.nadeau@dphss.guam.gov

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 2007
Total		26	17	17
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>				
A. Environmental Health Specialists		6	7	7
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B. Public Health Inspectors		9	4	1
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs.

\*\* Example: Physician, or nurses or mental health professionals. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees).

**2. Your Service Population:**

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

b. Does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

c. Are there any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes

No

(*If Yes, explain below, or use space for any other explanation:*)

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)  
 Number of regulated facilities.

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (*No.*)  4 inspections per (*No.*)  year of  regulated facilities
- Source or reference:  Statutory Mandate
- Is this:  Locally-generated target  National target  Statistical average

(*Other or explanation:*)

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please write below:*)

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

Note this reflect facilities operated by all eligible people.

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
	1:563					1:900		1:1450	1:1316
Numbers above are per (how many?) each of (pop. type:) inspection									

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

The above response is specific to regulated facilities (i.e., dormitories, bars, massage establishments, eating facilities, etc.), it does not include regulation of imported commodities, such as food, drugs, cosmetics, and medical devices.

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. Advise us if you have actual data about these, and we will follow up to get that data.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2007
Operating (not including new facilities)	\$	\$ 895,105	\$ 1587867	\$ 2169237
Capital (new facilities, etc.)	\$	\$ 0.00	\$ 0.00	\$ 0.00
(if above breakdown not available) Total	\$	\$ 895,105	\$ 1587867	\$ 2169237

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Central Public Health Building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele  
 \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people  
 \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bureau of Statistics
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

No

Yes, unpublished

Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

Professional field personnel to enforce regulatory mandates.

12. **Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and this is believed due to the announced buildup (*explain below:*)

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Professional field personnel to enforce regulatory mandates.

Seeking the introduction and passage of proposed law designed to modernize and revive the division to increase standards, compensation, and ability to recruit and retain professional field personnel

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Department of Public Health and Social Services- Bureau of Family Health and Nursing Services

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Margarita B. Gay, BFHNS Administrator

Phone: 671-735-7111

Email: margarita.gay@dphss.guam.gov

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Suzanne A. Sison, DDS, Acting Chief Public Health Officer

Phone: 671-735-7167

Email: braces@ite.net

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Total			25	
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<b>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</b>				
A. Nursing Staff			25	
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
B.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs.

\*\* Example: Physician, or nurses or mental health professionals. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees).

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR  
 Only certain income, age, or other demographic groups (*Describe below:*)  
No insurance, women and children, TB clients, STD clients

b. Does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)  
 All eligible permanent or temporary *residents* on island, including military;  
 All eligible *residents*, including military dependents but not active-duty military;  
 All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

c. Are there any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes

No

(*If Yes, explain below, or use space for any other explanation:*)

We only deal with women and children with no insurance.

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR  
 Only certain income, age, or other demographic groups (*Describe below:*)

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (*No.*)  per (*No.*)  of
- Source or reference:
- Is this:  Locally-generated target  National target  Statistical average

(*Other or explanation:*)

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)  
 All eligible permanent or temporary *residents* on island, including military;  
 All eligible *residents*, including military dependents but not active-duty military;



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- All eligible *residents* but not active-duty military or military dependents.  
(If other, or you wish to add clarifications, please write below:)

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per (how many?)				of (pop. type:)					

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

An increase of nursing staff in the clinic area and community nursing services. An additional of 20 nursing personnel can adequately staff all the clinics offered in Central Public Health (MCH, FP, Child Health, Women's Health, Immunization, TB clinic, STD clinics, CDCMD clinics). Also I will allocate 10 CHNs to the Northern part of the island, due to the increased population will be in the Military build-up. I will increase the CHNs available to assist with home visiting services for MCH clients, STD clients, CDC clients, TB contact screening and TB daily strep shots, and Immunizations to those are who are our priorities and the greatest need our services the most. I will increase the Immunization and Community - Base outreaches and to add more of her caseload due to the increased population in the Northern area.

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 200
Operating (not including new facilities)	\$	\$	\$ 1055826	\$
Capital (new facilities, etc.)	\$	\$	\$	\$
(if above breakdown not available) Total	\$	\$	\$	\$

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

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Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Central Region Public Health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Northern Region Public Health (Satelite Station)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> BFHNS Weekly activity report and then calculate every month and stated in the CHN Supervisor's Quarterly or Annual Reports.
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> BFHNS Weekly activity report and then calculate every month and stated in the CHN Supervisor's Quarterly or Annual Reports.

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

But need to time to locate them if we still have a copy stored.

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup

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Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

Community Health Nurse I, Community Health Nurse II, Licensed Practical Nurse, Word Processor, Certified Nurse Aid II, Pediatrician

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

CHN I, CHN II, LPN II, CNA II, Pediatrician

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**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: **Department of Public Health and Social Services – Bureau of Primary Care Services**

1. **Facilities:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Northern Region Community Health Center	x	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>
Southern Region Community Health Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

**a. Discuss if service provision differs at each location.**

The Northern and Southern Region Community Health Center provide primary health care, acute outpatient care, and preventive services. The Northern provides special kids clinic services to children with special health care needs. This clinic is a multidisciplinary approach involving the Pediatric Evaluation and Developmental Services, DPHSS Medical Social Worker, PEDS nurse, and UOG CEDDARS staff.

**2. Staffing of your bureau**

Year 1990, 2000, 2005, most current (see Staffing Pattern)

- 1990: Data Unavailable
- 2000: 22 FTEs
- 2005: 42 FTEs
- 2008: 44 FTEs
- Current: 55 FTEs

Indicating types of staffing

Providers include: OB/GYNs, Family Practice, Internist, and Pediatricians  
 Mid-level Providers include: Nurse Practitioners and Certified Nurse Midwife

Description of the split of Primary Care into a separate bureau and how that affects staffing numbers

The Bureau of Primary Care Services was established in 1998, which comprises both the Northern and Southern Region Community Health Centers. Before the Bureau was established, there were no primary care services. All services prior to 1998 were limited to preventive services under the Maternal Child Health Program, Bureau of Family Health and Nursing Services. Southern Region Community Health Center was under the Bureau of Family Health and Nursing Services during this time. The staffing numbers have been affected in terms of now the CHCs are able to recruit more providers and support staff under the Bureau of Primary Care Services. This is evident by the increase in staffing from 22FTEs in 2000 to 55 FTEs in 2009.

Key staffing in your bureau.

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Key Staff: Physicians, clinical psychologist, nurse practitioners, certified nurse midwife, registered nurses, licensed practical nurses, medical record clerk, laboratory technicians, laboratory director, microbiologist, CHC executive director, medical director, administrative support staff (cashiers, word processing secretary, clerk supervisors, medical record clerks, clerks, pharmacists, pharmacy technicians)

Labor availability for key staffing positions

There are vacancies in the following:

Physician, nurse practitioner, pharmacist, pharmacy technician, lab technician, program coordinator IV, quality assurance coordinator, computer analyst, administrative assistant, medical record clerk, and nurses.

**3. Your Service Population:**

Eligibility Criteria

Anyone can use the services of the Guam Community Health Centers (Northern and Southern Region Community Health Centers), regardless of income, family size, and ability to pay. Being a Federally Qualified Health Center, the CHCs do offer a Sliding Fee Program based on the federal income poverty guidelines (income and family size). Thus, patients receive discounts ranging from 100%, 75%, 50%, and 25% from their medical and ancillary bill.

How this eligibility is verified

The patient completes the “Sliding Fee” application. Residency is verified by the village mayors. The patient attaches their 2 last check stubs and provides other sources of income amount on the form. These documents are submitted along with their application to the Mayor’s Office or the CHC Business Office. The CHC ED reviews all the documents and determines eligibility based on the patient’s income and family size using the federal poverty guideline.

Data on the number of individuals in the following groups seen by the Bureau of Primary Care:

*Active Duty Military* (None all go to the Naval Hospital or Andersen Air Force Clinic. However, any active military personnel is able to obtain STD/HIV testing and see a medical provider for consultation.

*Military Dependents* (None all go to the Naval Hospital of Andersen Air Force Base

*H2B Workers* (No current data is available since the CHCs do not track H2B workers. They would be considered uninsured if they have no health insurance.

*Compact Impact / FSM*

**ENCOUNTERS COMPACT-IMPACT 2002-2006**

FY	Chuuk	Kosrae	Pohnpeian	Yapese	Other	Marshallese	Palauan	TOTAL
2002	2605	37	328	147	0	35	265	3417 (16.9% of total FY 2002 encounters)
2003	4026	82	446	160	0	88	340	5142 (21.3% of total FY 2003 encounters)
2004	4,686	30	467	344	112	64	651	6,354 (26% of total FY 2004 encounters)
2005	6,459	48	884	403	132	80	748	8,754 (27.7% of total FY 2005 encounters)

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2006	5532	62	920	398	102	80	699	7,793 (23%)
2007	4838	49	715	371	0	105	717	6,795 (21.2%)
2008	6397	122	900	466	50	96	941	8,972 (23.9%)

Year	Ethnicity	Encounters	Patients
Total Jan-Dec 08	Chuukese	6397	4223
Total Jan-Dec 08	Marshallese	96	65
Total Jan-Dec 08	Yapese	466	314
Total Jan-Dec 08	Kosrean	122	71
Total Jan-Dec 08	Palauan	941	644
Total Jan-Dec 08	Pohnpeian	900	615
Total Jan-Dec 08	Other Pacific Islander	50	47
Total Jan-Dec 08	GRAND TOTAL	8972	5979

*Uninsured/Insured*

The CHCs' payor mix

**INSURANCE OF CHC USERS YEAR 2002-2008**

Insurance	2002	2003	2004	2005	2006	2007	2008
None/Uninsured	4230	4,349	2,968	4577 (33%)	4979 (35.9%)	3,353 (24%)	3,888 (29%)
Medicaid	4920	3624	5297	4781(34%)	5,370 (38%)	5,952 (42.9%)	6,130 (46%)
Medicare	204	17	59	79 (0.56%)	85	77	90(1%)
MIP	2302	3245	3,120	3845 (27%)	2928 (21%)	4019 (29%)	2,950 (22%)
Private	1053	846	731	700 (5%)	636 (4.5%)	460 (3.3%)	319 (2%)
<b>TOTAL</b>	<b>12709</b>	<b>12,081</b>	<b>12,175</b>	<b>13,982</b>	<b>13,998</b>	<b>13,861</b>	<b>13,377</b>

**4. Services Accessed**

Types of Services generally accessed by the following populations (Statistics if available):

Active Duty Military (STD/HIV testing)

Military Dependents (WIC program)

H2B Workers (Primary Care Services, Acute outpatient care, and preventive services)

Services provided to FSM (Compact-Impact):

The FSM population reside in the isolated areas that lack infrastructure for electricity, water, and sewage systems and so many extended family members live in a small, single dwelling (more than 10 people living in a small tin roofed shack). Living in overcrowded and substandard unsanitary conditions, they have high rates of Hepatitis B, Tuberculosis, Cholera, Hansen's disease, etc. Additionally, children show advanced presentation of skin diseases (scabies, impetigo), ascariasis (intestinal worm), fungal infections, wound sores, asthma, and other respiratory diseases. FSM children also have delayed immunizations predisposing them to a host of childhood diseases (measles, mumps rubella, whooping cough, diphtheria, pertussis, tetanus etc). Unplanned pregnancies are also prevalent among FSM women because they want to have as many children born on Guam to ensure U.S. citizenship for their children. Thus, their children are a source of income, by being U.S. citizens. As U.S. citizens, they are eligible for food stamp, WIC, MIP, welfare, Temporary Assistance to Needy Families

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(TANF), and other federal public assistance programs. Although they desire to have as many children as they can, they lack parenting skills and do not take on the responsibilities of parenthood such as undergoing early and adequate prenatal care, which puts them at risk for pregnancy complications (preterm labor, preeclampsia, gestational diabetes, low birth weight, etc). A growing number of FSM women are also giving birth to infants born with congenital anomalies, hearing and/or vision problems. Furthermore, FMS adults also have chronic disease problems most especially diabetes and hypertension so they need health care maintenance and education on chronic disease control and prevention.

Services provided to Uninsured and Insured:

The CHCs provide an array of services including: general primary medical care, emergency medical services, urgent medical care, diagnostic laboratory services, gynecological & obstetrical care, prenatal care & postpartum care, pediatric vision, hearing, and dental services, immunizations, well child services, family planning, STD/HIV counseling and treatment, TB therapy, cancer, communicable diseases, chronic disease care, health education, case management, outreach, mental health services & substance abuse services, nutrition, and social services.

**5. Staffing Standards or Targets Reflecting Service Levels:**

- a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?   xYes    No
  
- b. If Yes: Is that standard based on the ratio of key professional staff to:
  - Everyone (no eligibility criteria) OR
  - Only certain income, age, or other demographic groups (*Describe below:*)
  
- c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).
  - What is standard? (*No.*)  per (*No.*)  of
  - Source or reference:
  - Is this:  Locally-generated target   X National target    Statistical average
  - (*Other or explanation:*)

**6. Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Uniform Data System Report has the following provider productivity:

Family Practice: 3,830 encounters  
Internal Medicine: 3,755 encounters  
OB/GYN: 3,616 encounters  
Pediatrics: 3,937 encounters

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Nurse Practitioner: 2,811 encounters  
 Certified Nurse Midwife: 2,491 encounters

As the number of patients seeking services at the CHCs continues to increase, then the number of providers need to likewise increase in size. For every provider that is recruited, there needs to be 4 additional support staff recruited (i.e., nurse aide, nurses, medical record clerk). The Bureau of Primary Care has established standard for the various mixture of physicians and mid-level providers.

The number of patients coming to the CHCs on a walk-in basis  
 Possible communicable/infectious disease outbreaks causing patients to obtain primary health care services  
 Patients not being able to access primary health care services in private clinics/private pharmacies.  
 Guam Memorial Hospital Emergency Room overflow (hospital exceeding its medical and bed capacity)  
 Guam Memorial Hospital Emergency Room referrals for patient follow up since patients lack a medical home, health insurance, and/or a primary provider.

Health Insurance premiums being so astronomical so health care in unaffordable and patients wait until their condition warrants immediate medical attention and/or hospitalization.

7. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

The number of patients being admitted to GMHA due to the lack of health insurance or lack of primary health care provider is another indicator that can be used to determine whether or not adequate service is being provided to the existing Guam population. The number of admissions that are preventable if the patient was provided primary health care and preventive health care maintenance can also be examined.

Patient Satisfaction Survey provides feedback of services provided by the CHCs.  
 Number of walk-in patients being turned away (i.e., rescheduled)  
 Number of patients referred to private health clinics.  
 Comments provided to CHC board members regarding the CHC services.  
 Number of patients going to GMHA Emergency Room due to lack of medical care at the primary care level.

Telephone complaints made to the BPCS Administrator and Section Supervisors  
 Written Incident Reports and corrective action plans  
 Chart audits (identify health disparities such as immunizations, diabetes, hypertension, etc)  
 Uniform Data System Report (UDS report)-provides clinical outcome measures  
 Clinical and Financial Performance measures (required for all FQHCs to report)

8. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

<b>Budget</b>	<b>FY 1990</b>	<b>FY 2000</b>	<b>FY 2005</b>	<b>(Most current available:) FY 2008</b>
Operating (not including new facilities)	\$	\$ 878,054	\$ 3,115,117	\$ 4,928,243
Capital (new facilities, etc.)	\$	\$ 0	\$ 0	\$ 2,165,671 (NRCHC) \$6,950,090 (SRCHC)
<i>(if above breakdown not available) Total</i>	\$	\$ 878,054	\$ 3,115,117	\$ 14,044,004



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9. **Capacity:** By “capacity,” we mean staffing, facilities, funding, modern technology, training, management skills, etc. The following questions are more oriented to identifying capacity problems, but we would of course also like to know if all is well.

**Important evidence of strains on agency capacity that have yet to be solved (e.g., penalties levied by the federal government):** The Salary of health professionals and support staff is not comparable to the U.S., which makes it very difficult to recruit and retain health professionals and support staff. Although the Hay Study stipulates that the Government of Guam needs to increase its salaries, the government of Guam has not implemented any salary adjustments over the past decade. Currently, other autonomous agencies are implementing salary adjustments, however, the line agencies are not implementing any salary adjustments, which violated a unified pay scale through the entire government of Guam workforce.

The government of Guam’s Medicaid and Medically Indigent programs have not been paying promptly so private health clinics open and close their doors. Some private physicians and private pharmacies refuse to accept these government insurance plans since they have not paid all debts. As a result, many patients are going to the Northern and Southern Region Community Health Center because they are the “safety-net providers”, taking patients regardless of their ability to pay. With the continuous increase in the number of patients, the Guam CHCs need to recruit more providers and support staff since the current ratio of providers to the target population is far below its ability to accommodate the number of patients in need of primary health care, acute outpatient care, and preventive services.

Malpractice insurance in Guam is very astronomical, which deters physicians from relocating and starting a new practice on island.

**Recent or imminent changes in your capacity that had nothing to do with the military buildup (perhaps things approved before the announced buildup):** Recently, the Northern Region Community Health Center has expanded its physical space by an additional 9,500 sq.ft (7,000 sq ft in clinic space and 2,500 sq. ft in pharmacy space). This physical expansion means that the Northern Region Community Health Center has doubled its size of examination rooms (from 8 to 16) so there is now enough space to recruit additional providers and support staff.

In May 2009, construction groundbreaking will commence in terms of expanding the Southern Region Community Health Center (i.e., doubling up its space capacity).

The Department of Public Health and Social Services was awarded \$6,000,000 from the Guam Economic Development Authority Tobacco Settlement Asset-Backed Bond Series 2007 and \$562,090 through the Community Development Block Grant funded by the U.S. Housing and Urban Development for the physical expansion and renovation of SRCHC. Additionally, the Governor of Guam earmarked \$388,000 from the Capital Improvement grant to the Department of Public Health and Social Services, SRCHC for its renovation and expansion. Plans are underway to: construct a new clinic addition of approximately 8,617 sq. ft to the existing SRCHC inclusive of six exam rooms, a waiting room, an isolation room with shower, a room with multiple oxygen outlets, a decontamination room, a medical record office, a medical records file room, administration offices, a classroom, a supply room to store Strategic National Stockpiles, and a generator room; convert the current dental area into a pharmacy; and renovate the existing facility to include: the installation of fire sprinklers, a fire hydrant, automatic doors, handrails, ramps at all entrances, a service elevator, a sewer system, a water tank, a security alarm, a chain-linked fence, a new generator, and electrical wirings for oxygen hook-up outlets; the replacement of air ducts, ventilation system, and tiles; fixing all roof cracks; and painting the interior and exterior building, a project costing approximately \$6,950,090.

**Recent or imminent changes in your capacity that are linked to the buildup (such as federal grants related to the military buildup):** HRSA officials have placed “workforce development” and “provider recruitment” through the NHSC on the “front burner” as they assist Guam in preparing for the military buildup. In August 2008, HRSA provided the CHCs with \$15,000 to utilize for recruitment efforts. This funding has

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been used to pay the travel expenses of the CHC physician (the CHC recruiter) who attended the NHSC conference in an effort to hire more NHSC scholars and/or loan repayment recipients. Additionally, the remaining of this money paid for the travel expenses of a NHSC scholar during her site visit to Guam in October 2008 as well as the relocation cost of a NHSC scholar (nurse practitioner) and a NHSC loan repayment recipient (family practitioner), both employed at the CHCs. Some of these money was also used to pay for the HB-1 fees for the recruitment of a physician for the CHCs. This physician is anticipated to begin working at the CHCs sometime in 2009. With the help of HRSA in continually availing funding for travel and relocation expenses for NHSC providers as well as funding to pay for HB-1 fees for the recruitment of physicians, the CHCs would undoubtedly have potential candidates willing to relocate to Guam.

**Solid plans or proposals that would improve your capacity but have not yet been funded or implemented. (We will ask if you can provide copies or links, if available).**

- Additional funding to recruit more providers, mid-level providers and support staff.
- Additional funding for salary adjustment in order to offer lucrative salaries to entice the recruitment and retention of health professionals and support staff.
- Continual federal support through the National Health Services Corp. to recruit more providers, mid-level providers, and clinical psychologists.
- Continually increasing federal funds for the Community Health Center.
- Participation in the 340 B Drug Discount Pricing Program by working with HRSA and Amerisource Bergen.
- Continually updating Health Professional Shortage Area and Medically Underserved Area scores to recruit providers and mid-level providers through the National Health Services Corp.
- Additional funding for Medicaid and Child Health Insurance Program (SCHIP).
- Procurement of an Electronic Health Record
- Telemedicine, teleradiology, and teleeducation.

**Specific implications of the buildup for facilities needs, including infrastructure/ technology?**

Construction phase: Southern Region Community Health Center Expansion and Renovation Project in progress (including sewage infrastructure, fire sprinklers, automatic transfer switch for generator, telecommunication infrastructure, security system upgrade, and water storage tanks)

Operations phase: Increase medical capacity by recruiting more providers and support staff.

### **FOLLOWUP QUESTIONS (via email)**

**Is the current Southern Clinic owned or leased?** The SRCHC is owned by the Guam Department of Public Health and Social Services

**Of the staffing numbers that you provided - do these include all positions (including vacant) or just those that are filled?** The staffing numbers are only positions that are filled (does not include vacancies)

**Of the vacant positions in your agency, what are the barriers to filling these positions?** Funding to support these positions is the greatest barrier to recruitment. The CHCs are able to recruit providers if given funding by the local government. The National Health Services Corp. has been assisting Guam in recruiting providers.

**How long is the process to verify that a patient is eligible for service(sliding fee application, check by mayor etc.)?** The mayors assist clients in completing the SF application as well as verifying the identity of family members. Once the applications are complete (which can be done within 1 day, the application is hand delivered to the Guam CHCs on the same day or the next day. When it is delivered to the Guam CHCs, it takes

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less than 1 week for the CHC Executive Director (also named the BPCS Administrator) to approve the Sliding Fee application.

**What about in the case of emergencies?** With emergencies, we can process the Sliding fee application within 1-2 days.

**In terms of staffing ratio targets - are there national targets? Can you direct us to somewhere where we might be able to access such targets?** There are national targets. The U.S. Bureau of Primary Care Services has a staffing ratio for the national average. The UDS (Uniform Data System Report provides national averages for staffing ratios and productivity.

**Do you keep records of staffing to population/cases ratios through the years?** Yes.

**Of the numbers provided from the Uniform Data System Report regarding provider productivity, are these per year/per practitioner?** The data for provider productivity are per year per specialty. So if we have 2 family practitioners, we report the family practice productivity of both family practitioners (one practicing at NRCHC and the other at SRCHC as combined for the entire calendar year.

**What are the standards that the Bureau of Primary Care has established for the mixture of physicians and mid-level providers?** The National standard for the mixture of physicians and midlevel providers are as follows:

Family Practice: 3830  
Internal Medicine: 3,755  
OB/GYN: 3,616  
Pediatric: 3,937

Mid Level  
Nurse Practitioner: 2,811  
Certified Nurse Midwife: 2,491

**How often does GMHA send emergency over-flow patients to the Bureau's clinics?** GMHA refers patients who have no primary care provider and/or health insurance to the Guam Community Health Centers after they are discharged from the GMHA ER or after hospitalization. Referrals are daily. In terms of overflowing, if the patients coming to the GMHA ER are non-emergent, they are referred to the Guam CHCs. However, if patients are in need of hospitalization and GMHA is already in "code red" (i.e., bed capacity has reached its optimum level), no one is sent to the CHCs because we are a primary care facility (provide only outpatient care services). Although the CHCs do have a hospitalist who provides in-patient care services only for CHC patients, he does all in-patient care services at GMHA.

**What is a "medical home"?** A medical home is a primary health care setting where patients can receive comprehensive, continuous, and culturally appropriate care. In other words, patients can always go to the same primary care clinic to access health care, acute outpatient, and ancillary services at every visit and care is coordinated in lieu of being fragmented. Additionally, care is holistic so that patients in need of other services other than health care (i.e., mental health, substance abuse, employment, social services, specialty care, etc. are also linked to community-based organizations, public and private health service delivery systems.

**Are there any recent UDS reports that you could share with us that you feel reflect good indicators regarding level of service provision at the clinics?** The UDS report mandates clinical and financial performance measures on the following indicators:

- percentage of 2 year olds fully immunized;
- percentage of adult diabetics with a hemoglobin A1 c value less than or equal to 9%;
- number of patients with hypertension whose blood pressure reading is less than 140/90;

## **Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- percentage of women who entered prenatal care in the first trimester of pregnancy;
- percentage of low birth weight babies;
- number of women with PAP test;
- Total Cost Per Total Patient;
- Medical Cost Per Medical Encounter;
- Change in Net Assets to Expense Ratio;
- Working Capital to Monthly Expense Ratio;
- Percentage of Overall Charges Collected.

**Where do you get your funding (percentages)?** The percentage of CHC funds are derived from the following sources:

- 44% Local funding (Healthy Futures and general fund-monies collected from the Government of Guam taxes including alcohol and tobacco)
- 22% Federal funding-Funding from Health Resources and Services Administration (HRSA)
- 19% Compact Impact-Funds received by the local government as a result of the Compact of Free Association (negotiation made between the federal government and the Government of Guam for the migration of citizens from the Federated States of Micronesia to Guam)
- 15% Program Income Fund-revenues collected from Medicare, Medicaid, private insurance indemnities, and self-pay patients.

**What is the Hay Study?** A consultant was hired over a decade ago to assess the government of Guam positions and determine the salary pay range for every position within the government and for each position, there is a pay scale range from A to Z with corresponding steps from 1 through 20. Step 1 to 7 is the range of salary increments, which is performed annually; Step 8 to 10 is the salary increment range so the employee at this step is evaluated every 18 months. When staff reaches Step 10, they are then given increments every 2 years until they reach Step 20. The result of this assessment was the creation of a government of Guam wide unified pay scale.

**Can you further explain the unified pay scale?** The unified pay scale was supposed to be a pay scale so that a specific position title is the same no matter where the person works within the government of Guam entity. For instance, a person with the program coordinator IV position title working at the Guam Public School System would have the same salary as a program coordinator IV working for the Department of Public Health and Social Services. However, the unified pay scale is no longer in place since only certain agencies have had salary increment adjustments, while other agencies such as Department of Public Health and Social Services were left behind without approval for a salary adjustment.

Currently, the salaries of all public health employees are far below the national rate, the Guam private health clinics, as well as other government of Guam employees working at the Guam Public School System and public safety (i.e., Guam Fire Department and Guam Police Department) since these agencies recently had salary increases.

**Will the new Southern Clinic include dental facilities?** No. The CHCs used to have dental services at SRCHC. However, these dentists sought employment with the private sector since the salaries are far more lucrative than those offered by the Department of Public Health and Social Services. Another barrier to recruiting dentists is the current law mandates all dentists to have a license on Guam. To do so, they have to take a dental exam and pass it regardless if they have a valid U.S. dental license. The exam costs \$2,500 and most dentists do not want to retake a dental exam. Although efforts were made to grandfather those dentists with U.S. license(s) to likewise practice in Guam, the Guam Dental Board does not want to change this law. Thus, it is very difficult to recruit dentists from the U.S. and for them to relocate to a remote island.

**Did you have a ratio of population or provider to square footage that you used as a standard when designing the new Southern Clinic?** When we designed NRCHC in 2006, we had technical assistance from

## ***Socioeconomic Impact Assessment Guam Public Service Agency Questions***

Capital Link, a non-profit organization specializing in capital improvement projects for health clinics. According to the consultants, 2,500 sq. ft per provider was used as the calculation to compute the design of NRCHC. Additionally, HRSA provided technical assistance in re-engineering the clinic flow so the consultants recommended that there should be three exam rooms per provider. (Each exam room is 125 sq. ft).

**What will happen to the existing Southern clinic?** When we begin construction in May 2009, phase I of the construction will be the addition of 8,000 sq ft of space and the renovation of one side of the facility (the right side of the building). Thus, the Food Stamp and WIC programs would be temporarily relocated to another place outside of SRCHC. In other words, SRCHC would no longer provide Food Stamp and WIC services on site, so these services would have to be temporarily relocated elsewhere. Thus, the pharmacy, administration, and cashier units, which are currently located at the right side of the building would also have to move to the left side of the building. In order to do this, the rooms filled with supplies on the left side of the building would no longer be used as storage rooms, but would now be occupied by the pharmacy, cashier, and administration units. Thus, the supplies in these storage rooms will be relocated so that the space will be available to accommodate the pharmacy, administration, and cashier operation.

When phase I is complete, everyone will move into the expanded wing and renovated area (right side of the building) in order for phase II (left side of the building) to begin construction and renovation. Phase II includes a second floor addition. The contractor will block off all construction area to ensure the safety of patients and staff. When the phase II of the construction is complete, the nursing, medical record, pharmacy, cashier, lab, and administration units will move into their designated areas throughout the first and second floor. Additionally, the Food Stamp and WIC program services would now be able on site so the Food Stamp and WIC staff would move back to SRCHC.

**How will patients be serviced during the construction period?** All construction area sites will be blocked off completely so that no patient enters into the construction area. One main door entrance will be accessible, thus allowing patients to come in for primary health care, acute outpatient care, and preventive services. However, Food Stamp and WIC services would no longer be available on site, so these program personnel would have to be temporarily relocated so such services are no longer on site.

Primary health care services and ancillary services (i.e., lab and pharmacy services) would continue at one side of the building (left side of the building) where the nursing unit is currently located. Once phase I of the construction is complete, the nursing, lab, pharmacy, cashier, and administration units will move to the right side of the building so that phase II of the construction will begin. Patients in need of primary care services would continue to come in. Food Stamp and WIC services would continue to cease on site until the entire construction expansion and renovation of SRCHC is completed.

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: **Department of Public Health and Social Services – Division of Public Welfare**

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: **Linda Susuico**

Phone: **671 735 7300**

Email: **linda.susuico@dphss.guam.gov**

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: **J.Peter Roberto, ACSW**

Phone: **671 735 7012**

Email: **caring.communities@gmail.com**

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

				(Most current available) FY 200
Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	200
Total				
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<b>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</b>				
A. Eligibility Specialists, Eligibility Specialist Supervisors, Claims Specialists, CPIRO Review Officer, Quality Assurance Coordinator, Social Workers, Homemakers, Social Services Supervisors, Program Coordinators, Management Analysts, Quality Control Reviewers, Public Welfare Investigators				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
B.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs.

\*\* Example: Physician, or nurses or mental health professionals. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees).

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

b. Does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

c. Are there any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes

No

(*If Yes, explain below, or use space for any other explanation:*)

H2B workers are normally sponsored with housing and other needs allowances

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

Payment Accuracy and error rate

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (*No.*) Eligibility Worker per (*No.*) 200 of New Approval, Reopen, and Renewal cases

- Source or reference: Quality Control and Supervisory Reviews

- Is this:  Locally-generated target  National target  Statistical average

(*Other or explanation:*)

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please write below:*)

**4. Actual Staffing/Service Level Statistics:**

a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No

b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per ( <i>how many?</i> )					of ( <i>pop. type:</i> )				

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Workload per worker, Timeliess of processing applications, payment accuracy, determination of eligibility accuracy

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 200
Operating (not including new facilities)	\$	\$	\$	\$
Capital (new facilities, etc.)	\$	\$	\$	\$
( <i>if above breakdown not available</i> ) Total	\$	\$	\$	\$

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Central Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Northern Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Southern Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**		
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Management, Eligibility Specialists, Social Workers, Program Coordinators, Management Analysts  
====> for now, do what we can

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Department of Mental Health and Substance Abuse

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Doris Crisostomo

Phone: (671) 647-5335

Email: healthyguam@gmail.com

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Robert Kono

Phone: (671) 647-5325

Email: bobkono@yahoo.com

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 2009
Total	Not Available	111	153	125
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>				
A.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: Physician, or nurses or mental health professionals. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient.

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

For schools, it may be *teachers* (not all employees). A few agencies might have more than one such category, but most will have just one.

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)  
Individuals and families without health insurance.

b. Does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

c. Are there are any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes

No

(*If Yes, explain below, or use space for any other explanation:*)

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (*No.*) A Population of 6000 per (*No.*) 1 of Core Mental Health Professional and a Population of 20,000 per 1 of Psychiatrist

- Source or reference: HPSA Designation Criteria for Mental Health

- Is this:  Locally-generated target  National target  Statistical average

(*Other or explanation:*)

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please write below:*)

**4. Actual Staffing/Service Level Statistics:**

a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No

b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per ( <i>how many?</i> )				of ( <i>pop. type:</i> )					

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

As Guam's single state agency, DMHSA staffing is based on the most prioritized and critical services:

1. Emergency Services
2. Inpatient, acute care
3. Medication dispensation
4. Residential treatment services
5. Outpatient services
6. Prevention/outreach activities

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

DMHSA does not have a current number of clients. It has partially implemented a data collection software, called TIER, but data is not yet available.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

	FY 1990	FY 2000	FY 2005	(Most current available) FY 200
<b>Budget</b>				
Operating (not including new facilities)	\$	\$	\$	\$
Capital (new facilities, etc.)	\$	\$	\$	\$

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

<i>(if above breakdown not available)</i> Total	\$	\$ 5.5m (excluding federal grants)	\$ 6.8m (excluding federal grants)	\$ 12.7m (including federal grants)
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8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Guma Hinemlo'	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Guma IFIL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Therapeutic Group Home	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rays of Hope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**		
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
FAS Compact State Immigrants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other Ethnic Breakdowns	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

*Add notes or explanations below:*

DMHSA keeps clinical records/charts but the data collection software has not been fully implemented to produce statistics.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

*(If Other or have comment, write below:)*

**D. Agency Manpower Factors**

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**11. Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Department of Integrated Services for Individuals with Disabilities

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Dr. Zeni Natividad

Phone: (671) 475-4646

Email: doczeni@gmail.com

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Mrs. Rosanne S. Ada

Phone: (671) 475-4646

Email: rosanneadad@aol.com

**B. Data and Decisions About Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 2008
Total			11	14
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>				
A. Social Workers			3	6
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B. Counselors			8	8
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: Physicians, nurses, vocational professionals etc. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees). A few agencies might have more than one such category, but most will have just one.



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

Everyone (no eligibility criteria) OR

Only certain income, age, or other demographic groups (*Describe below:*)

The Division of Vocational Rehabilitation caters to individuals with disabilities whose disability is an impediment to employment. The Division of Support Services require doctor's certification of disability.

b. Does your agency provide services to (*please check one best answer*):

All eligible *people* on island, including non-residents (e.g., tourists)

All eligible permanent or temporary *residents* on island, including military;

All eligible *residents*, including military dependents but not active-duty military;

All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please describe below:*)

c. Are there are any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes

No

(*If Yes, explain below, or use space for any other explanation:*)

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

Everyone (no eligibility criteria) OR

Only certain income, age, or other demographic groups (*Describe below:*)

To only eligible VR clients

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

• What is standard? (No.) 1 per (No.) 30,000 of island population

• Source or reference: Approved State Plan

• Is this:  Locally-generated target  National target  Statistical average

(*Other or explanation:*)

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*please check one best answer*):

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

*(If other, or you wish to add clarifications, please write below:)*

But the ratio will be based on specialty type, not exactly average population size

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
						11			13
Numbers above are per <i>(how many?)</i> undetermined of <i>(pop. type.)</i> specialty type									

- 5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

Please note that the number of counselors reflect specialty areas, e.g. for the vision- impaired, Dept of Corrections (forensic cases), Dept of Mental Health (mental illness), high school transition, etc. For the build-up, we anticipate increase in disability categories such as stress (PTSD) and physical-related disorders. For new families, the stress would be related with adjustment to new living situation to island living.

- 6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

The Dept has limited access to adaptive technology that can adequately serve individuals with various disabilities. One Division (DSS) which is locally funded does not (1) have enough private rooms for consumer interview, (2) have working vehicle for field work. Both DVR and DSS have limited access to contracted professional services such as psychologists, psychiatrists, sign language interpreters, etc.

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2008
Operating (not including new facilities)	\$	\$	\$ 2,715,465	\$ 4,493,945
Capital (new facilities, etc.)	\$	\$	\$ 0	\$
<i>(if above breakdown not available) Total</i>	\$	\$	\$ 2,715,465	\$ 4,493,945

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Suite 703 at DNA Bldg in Hagatna, Guam	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Suite 601 & 602 at DNA Bldg in Hagatna, Guam	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele

\* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people

\* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**		
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

No

Yes, unpublished

Yes, published at:

**D. Agency Manpower Factors**

11. **Turnover:**

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected?

Social workers

**12. Labor Availability:**

- a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Social workers, program coordinators, counselors. The problem is not the lack of applicants to these positions, but the because of the lack of funding.

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency:

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title:  CPT. FRED CHARGUALAF

Phone:  475-0049

Email:  FRED.CHARGUALAF@GPD.GUAM.GU

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title:  PAUL SUBA, CHIEF OF POLICE

Phone:  472-8911

Email:  prsuba@gmail.com

**B. Staffing and Service Levels**

1. **Staffing:** Year 2005 data is most critical for this study, because it is considered the "baseline" year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*		FY 1990	FY 2000	FY 2005	Most current available FY 2009
Total Staffing Numbers					
Check if no. is <u>actual</u> or <u>authorized</u> in budget:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<b>Key Professional Categories ** by precinct, if available</b>					
A.	Yigo				
	Dededo			29	43
	Tumon/Tamuning			38	45
	Hagatna			37	37
	Agat			35	43
	Talofofo				
	Total			139	168
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
B.	Yigo				
	Dededo				
	Tumon/Tamuning				
	Hagatna				
	Agat				
	Talofofo				
	Total				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. Please be clear whether you are providing FTE counts or something else.

\*\* For example, we would assume the ratio of *sworn police officers* (not all employees) to population is the key category in determining if levels of service are sufficient. Correct? Other category?

Explanation of identified Key Professional Categories, if necessary:

If any questions about this form, contact Amber Guillory ([amg@johnmknnox.com](mailto:amg@johnmknnox.com)) or John Knox ([jmk@johnmknnox.com](mailto:jmk@johnmknnox.com)); phone for either is 808-523-1352.

2. Your "Service Population" (for Police, Those You Protect):

a. When you calculate the number of people included in each of your "Precinct Populations," do you include: (check one best answer):

- All eligible *people* in the area, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* in the area, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(If other, or you wish to add clarifications, please describe below:)

b. Are there are any restrictions on your jurisdiction over "H2B workers" (as either victims or perpetrators) on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes  No

(If Yes, explain below, or use space for any other explanation:)

3. Staffing Standards or Targets Reflecting Service Levels:

a. In regard to the ratio of staffing to service population – does your agency know of or target any "standard," whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to population of:

- Civilian residents only OR
- Including additional groups such as military, dependents, tourists, etc. (Describe below:)

c. If Yes: Please state what that standard is (i.e., X professionals per 10,000 of eligible population), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

• What is standard? (No.)  of  per (No. )  of

• Source or reference:

• Is this a:  Locally-generated target  National target  Statistical average

(Other or explanation:)

d. If Yes: Do you believe that staffing standards on Guam should properly be based on the ratio of key professional staff to (check one best answer):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(If other, or you wish to add clarifications, please write below:)

**4. Actual Staffing/Service Level Statistics:**

a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No

b. If Yes: Please provide those numbers for as many as possible of the years below, either by district, or in total. Again, 2005 data is of particular interest to us.

Year	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Yigo Precinct							0			0
Dededo Precinct							29			43
Tumon/Tamuning Precinct							38			45
Hagtna Precinct							37			37
Agat Precinct							35			43
Talofofo Precinct							0			
Total		273	284	273	255	275	139	319	309	168
	Numbers above are per (how many?)						of (pop. type:)			

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

- HOMELAND SECURITY TRAINING/CONFERENCE  
 - MILITARY DEPLOYMENTS  
 - CRIME RATE AT VILLAGES

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. Advise us if you have actual data about these, and we will follow up to get that data.

NO RE



**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2008
Operating (not including new facilities)	\$	\$	\$ 19,629,166	\$ 22,803,471
Capital (new facilities, etc.)	\$	\$	\$ 0	\$ 0
(if above breakdown not available) Total	\$	\$	\$ 19,629,166	\$ 22,803,471

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth. (Are there locations in addition to the main precinct stations?)

Location	Check if Space is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Yigo Precinct main station	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dededo Precinct main station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tumon/Tamuning Precinct main station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hagtna Precinct main station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agat Precinct main station	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talofofo Precinct main station	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele  
 \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people  
 \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Arrested:** Do you have published or unpublished data that would allow us to identify percentages of people arrested in each of the following groups?

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bureau of Stats + Planning
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bureau of Stats + Planning

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.  
 \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

If any questions about this form, contact Amber Guillory (amg@johnmknnox.com) or John Knox (jmk@johnmknnox.com); phone for either is 808-523-1352.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

**11. Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

Psychologist

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

WE CONTINUE TO REQUEST FOR INTERESTED APPLICANTS

**GUAM POLICE DEPARTMENT**  
Planning, Research and Development  
233 Central Avenue  
Tiyan, GU. 96913

December 20, 2007

Mr. David Kiernan  
John M. Knox & Associates  
1001 Bishop St.  
ASB #1542  
Honolulu, HI. 96813

Dear Mr. Kiernan,

Reference to your letter, dated November 28, 2007, requesting for Guam crime stats and employee data, please find enclosed the following:

Offenses Known to Law Enforcement, Trend 2002 - 2006  
Number of Full-time Law Enforcement Employees, as of October 31, 2007  
Full-time Law Enforcement Employees: Officer Rate per 1,000 Inhabitants, 2006  
Precinct Population: 2002 - 2006

We hope that these information will help you. Happy Holidays from all of us here – Guam Police Department.

Sincerely,



MS. DEE B. SAN NICOLAS  
Statistician II

enclosures: 5  
File/COP December 10, 2007

Precinct Population  
2002 - 2006

Neighborhood Patrol Division		2002	2003	2004	2005	2006
<b>Dededo Precinct Command (Beats 1-7)</b>		<b>64,977</b>	<b>65,999</b>	<b>67,947</b>	<b>68,005</b>	<b>68,996</b>
Dededo		44,716	45,420	46,941	46,800	47,482
Yigo		20,261	20,579	20,906	21,205	21,514
<b>Tamuning/Tumon Precinct Command (Beats 8 - 12)</b>		<b>18,740</b>	<b>19,034</b>	<b>19,337</b>	<b>19,613</b>	<b>19,899</b>
<b>Hagatna Precinct Command (Beats 13-19)</b>		<b>50,053</b>	<b>50,841</b>	<b>51,660</b>	<b>52,385</b>	<b>53,148</b>
Hagatna		1,145	1,162	1,181	1,198	1,215
Barrigada		9,001	9,143	9,288	9,421	9,558
MongMong-Toto-Maite		6,081	6,177	6,275	6,364	6,457
Mangilao		13,851	14,069	14,292	14,496	14,707
Chalan Pago		6,162	6,259	6,359	6,449	6,543
Sinajana		2,968	3,015	3,053	3,107	3,152
Agana Heights		4,099	4,164	4,230	4,290	4,353
Yona		6,746	6,852	6,982	7,060	7,163
<b>Agat Precinct Command (Beats 20 - 27)</b>		<b>27,287</b>	<b>27,719</b>	<b>28,156</b>	<b>28,561</b>	<b>28,976</b>
Asan		2,174	2,209	2,244	2,276	2,309
Piti		1,733	1,761	1,787	1,814	1,840
Talofoto		3,345	3,398	3,451	3,501	3,552
Santa Rita		7,803	7,926	8,052	8,167	8,285
Agat		5,884	5,977	6,072	6,159	6,248
Umatac		923	937	952	966	980
Merizo		2,250	2,286	2,322	2,355	2,390
Inarajan		3,175	3,225	3,276	3,323	3,372
(G) XL/Precinct Population Trend						
Source: Bureau of Statistics and Plans ( Population Projections by Village 2001 - 2010)						

## Law Enforcement

Because of the differing service requirements and functions, care should be taken when using the data presented in this section to draw comparisons between and among the staffing levels of Guam Police Department. What follows is not intended as recommended or preferred officer strength; the data should be viewed merely as guides.

This section of Crime in Guam ( 2006 Uniform Crime Reports) presents data as the number and rate of sworn law enforcement officers with Guam Police Department. The data are broken down by precincts and population. We compute the rate of sworn law enforcement employees by taking the number of employees (sworn officers only) dividing by the population for each precinct in which police provide law enforcement service, and multiplying by 1,000.

The demographic traits and characteristics of a jurisdiction affect its requirements for law enforcement service. For instance, a business community like the villages of Tamuning, Tumon and Harmon require more law enforcement presence than a community of the same size that has no urban center nearby. A community with legal gambling (game rooms) may have different law enforcement needs than one near a military base. The needs of a community, like the village of Dededo , with a highly mobile or seasonal population may be very different from a village, like Mangilao, whose population is relatively stable.

Similarly, the functions of law enforcement agencies are significantly diverse. They patrol local streets and highways, they protect citizens in Guam's smallest villages and largest communities, they conduct investigations on offenses around the block or around the island. Patrol officers in one area may enforce traffic laws on highways; in another area, they may be responsible for investigating violent crimes. These and other duties have an impact on police staffing levels.

Because of the differing service requirements and functions, care should be taken when using the data presented in this section to draw comparisons between and among the staffing levels of law enforcement agencies. What follows is not intended as recommended or preferred officer strength; the data should be viewed merely as guides. Adequate staffing levels can be determined only after careful study of the conditions that affect the service requirements in a particular jurisdiction.

**NUMBER OF FULL-TIME LAW ENFORCEMENT EMPLOYEES  
AS OF OCTOBER 31, 2006**

<b>FULL-TIME EMPLOYEES, By Sex, 2006</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Full-time law enforcement officers	296	23	319
Full-time civilian employees	17	44	61
<b>Total full-time employees</b>	<b>313</b>	<b>67</b>	<b>380</b>

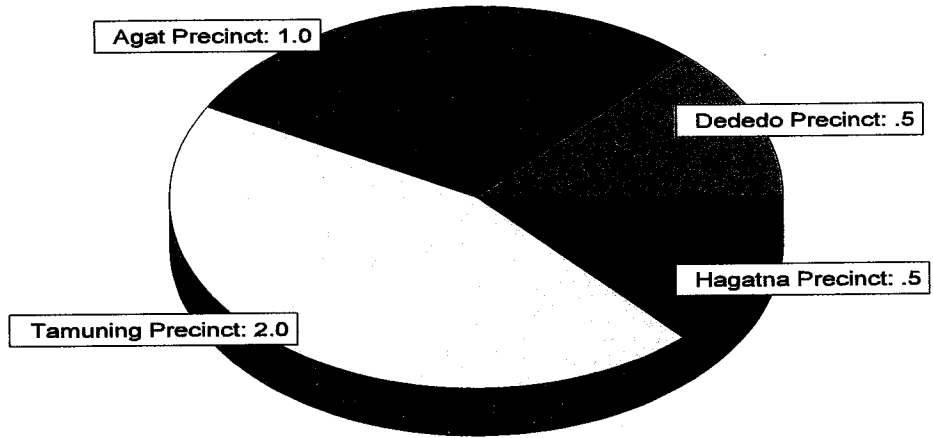
<b>Law Enforcement Employees</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<i>Full-time law enforcement officers</i>	<i>273</i>	<i>255</i>	<i>275</i>	<i>318</i>	<i>319</i>
Full-time civilian employees	58	50	59	57	61
<b>Total full-time employees</b>	<b>331</b>	<b>305</b>	<b>334</b>	<b>375</b>	<b>380</b>
<i>Percent change</i>	<i>-4.0</i>	<i>-8.0</i>	<i>9.5</i>	<i>12.3</i>	<i>1.3</i>

**Law Enforcement Officers  
by Precincts, 2006  
(rate per 1,000 Inhabitants)**

<b>Precincts</b>	<b>Population</b>	<b>Number of Officers</b>	<b>Rate</b>
Dededo Precinct	68,996	31	.5
Tamuning Precinct	19,899	33	2.0
Hagatna Precinct	53,148	28	.5
Agat Precinct	28,976	29	1.0

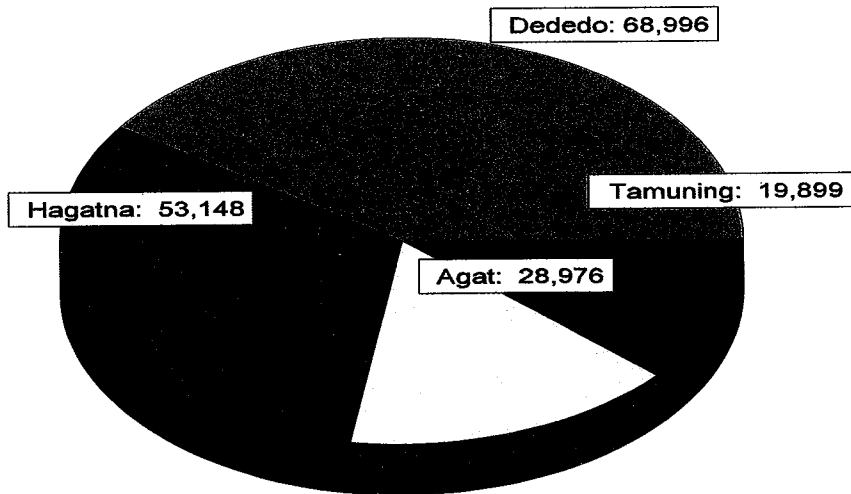
Offenses Known to Law Enforcement, Trend	2002	2003	2004	2005	2006
Murder and Nonnegligent Manslaughter	2	8	9	7	11
Forcible Rape	172	219	161	151	180
Robbery	75	60	104	105	72
Aggravated Assault	222	207	190	125	147
Burglary	913	1126	1292	1468	1292
Larceny-theft	2391	2459	2053	2851	2639
Motor Vehicle Theft	221	231	311	315	213
Arson	8	8	16	17	33
<b>Total Part I Offenses</b>	<b>4004</b>	<b>4318</b>	<b>4136</b>	<b>5039</b>	<b>4587</b>
Other Assaults	835	967	1028	870	948
Forgery and Counterfeiting	59	35	49	78	65
Fraud	236	218	254	239	254
Embezzlement	5	1	0	0	11
Stolen Property: buying, receiving, possessing	26	12	7	70	40
Vandalism	1310	1531	1591	1419	1500
Weapons Violations	85	197	72	92	60
Prostitution and Commercialized Vice	3	2	2	2	0
Sex Offenses	5	0	5	9	21
Drug Abuse Violations	211	300	207	203	277
Gambling	0	1	0	0	2
Offenses Against Family and Children	435	842	789	587	590
Driving Under the Influence	972	695	538	817	836
Liquor Laws	93	133	128	131	79
Drunkennes	110	269	375	353	175
Disorderly Conduct	1230	1829	1128	1030	1156
Vagrancy	0	0	0	0	0
All Other Offenses	1281	1973	821	1276	1005
Suspicion	0	0	0	26	0
Curfew and Loitering Laws Violations	0	0	0	0	0
Runaways	31	137	279	238	274
<b>Total Part II Offenses</b>	<b>6927</b>	<b>9142</b>	<b>7273</b>	<b>7440</b>	<b>7293</b>
<b>Grand Total: Part I and Part II Offenses</b>	<b>10931</b>	<b>13460</b>	<b>12409</b>	<b>12479</b>	<b>11880</b>
<i>Percent change</i>	<i>Base</i>	<i>23.1</i>	<i>-8.0</i>	<i>.6</i>	<i>-5.0</i>

**Full-time Law Enforcement Employees**  
Employee (Officers)Rate per 1,000 Inhabitants  
By Precincts, 2006



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**Precinct Population**  
2006





**DEPARTMENT OF THE ARMY**

**A SPECIAL  
POWER POINT  
PRESENTATION  
IN RESPONSE  
TO  
SOCIOECONOMIC IMPACT  
ASSESSMENT SERVICE AGENCY  
QUESTIONS**



# JMK

## JOHN M. KNOX & ASSOCIATES, INC.

October 30, 2008

Hafa Adai Chief Paredo,

John M. Knox & Associates, Inc. ("JMK Associates") was given your name by Governor Camacho's Chief of Staff, Mr. George Bamba, as the individual we should initially contact to find out more about the Guam Fire Department and how it might be affected by the proposed military buildup on Guam.

**Background:** The Joint Guam Program Office (JGPO) and the Navy have funded a Socioeconomic Impact Assessment Study (SIAS) in an attempt to forecast the effects of the military buildup on socioeconomic infrastructures of Guam and the Commonwealth of the Northern Mariana Islands (CNMI). The purpose of the SIAS is to provide the JGPO, Navy, the Government of Guam (GovGuam), and the CNMI government with reliable estimates of population, employment and income impacts on the socioeconomic infrastructure of their respective economies due to the military buildup scheduled to occur over the next several years.

The SIAS is part of a "three tiered document" strategy in which SIAS conclusions will feed into two other important studies. The SIAS will be prepared concurrently with the Guam and CNMI Military Relocation Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). The SIAS will also provide economic data input to the forthcoming GovGuam Fiscal Impact Assessment (FIA), funded through the Department of Defense's Office of Economic Adjustment (OEA). For both the SIAS and the EIS, the prime contractor is TEC, Inc. and TEC's socioeconomic subcontractor is JMK Associates, both companies operating from Hawaii.

**Requests:** JMK Associates will be coming back to Guam for further site visits. However, due to scheduling problems, we must first ask your indulgence in helping us gather information by e-mail and phone. The attached "questionnaire" is in two basic parts –

- **Sections A-D** include basic factual information which we would hope a statistician or other line staff – with some minimal consultation with management – could easily complete. This information is critical both for understanding your agency and for calculating impacts in the various studies. **The request is for completion and return by e-mail within 10 working days.**
- **Section E** provides an advance outline of questions we would like to discuss by phone (with possible later in-person follow-up) with your agency director designee. These are more qualitative questions about agency capacity. **The request is for information (as soon as possible) about the appropriate contact and availability for telephone interview.** Due to the time difference, we would ask for various possible interview slots in mornings, Guam time. Please respond to John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)) and Amber Guillery ([amg@johnmknox.com](mailto:amg@johnmknox.com)).

Sincerely,



John M. Knox

*Socioeconomic Impact Assessment Service Agency Questions*

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Guam Fire Department

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Edward J. Cruz Firefighter I

Phone: (671) 472-3425 / (671) 483-0537

Email: ed.cruz@ghs.guam.gov

NOTE: In completing Sections B-D, please advise us if we should have asked separate questions for your fire vs. emergency rescue operations. We can revise or add to the questions if you have separate information for the two functions that we have not specifically asked about.

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: David Q. Peredo, Fire Chief

Phone: (671) 472-3311

Email: david.peredo@gfd.guam.gov

*If any questions about this form, contact Amber Gullitory (ams@johnknnox.com) or John Knox (john@johnknnox.com); phone for either is 808-523-1352.*

Socioeconomic Impact Assessment Service Agency Questions

**B. Data and Decisions About Staffing and Service Levels**

1. **Staffing:** Year 2005 data is most critical for this study, because it is considered the "baseline" year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 2008
<b>Total</b>	<input type="checkbox"/> actual auth.	<input type="checkbox"/> actual auth.	<input checked="" type="checkbox"/> actual auth.	<input checked="" type="checkbox"/> actual auth.
<b>Check if no. is actual or authorized in budget:</b>				
<b>Key Professional Categories – please list categories (and staffing), by district, if available, for just those staffing categories normally considered in determining if service levels are sufficient.**</b>				
A.			47	48
Northern District			46	47
Southern District			93	95
Total			<input checked="" type="checkbox"/> actual auth.	<input checked="" type="checkbox"/> actual auth.
<b>Please check if above numbers were actual (filled) positions, or were authorized in budget.</b>				
B.			46	47
Northern District			46	47
Southern District			92	95
Total			<input checked="" type="checkbox"/> actual auth.	<input checked="" type="checkbox"/> actual auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.  
 \*\* Example: For police, usually just the ratio of sworn police officers (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be teachers (not all employees). For the Fire Dept., trained firemen? Any other category?

Explanation of Identified Key Professional Categories, if necessary:

If any questions about this form, contact Amber Guillory (amgr@johnnknox.com) or John Knox (jknk@johnnknox.com); phone for either is 808-523-1352.

**2. Your Service Population (Properties or People Protected):**

a. Does the Guam Fire Dept. respond to fire calls from all locations outside military bases?

Yes  
 No, some places outside military bases are not in our jurisdiction (Describe below:)

b. Does the Guam Fire Dept. respond to emergency rescue calls from all locations outside military bases?

Yes  
 No, some places outside military bases are not in our jurisdiction (Describe below:)

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any "standard," whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to population of:

- Civilian residents only OR
- Including additional groups such as military, dependents, tourists, etc. (Describe below:)

The Guam Fire Department's Mandate is to provide services to the Island of Guam.

c. If Yes: Please state what that standard is (i.e., X professionals per 10,000 of eligible population), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.) Personnel per (No.) Units of Response
- Source or reference: National Fire Protection Association(NFPA): 1710
- Is this:  Locally-generated target  National target  Statistical average  
 (Other or explanation:)

d. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (check one best answer):

- All eligible people on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary residents on island, including military;
- All eligible residents, including military dependents but not active-duty military;
- All eligible residents but not active-duty military or military dependents.  
 (If other, or you wish to add clarifications, please write below:)

If any questions about this form, contact Amber Guillory (amg@johnmiknox.com) or John Knox (jmk@johnmiknox.com); phone for either is 808-523-1352.

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Northern District										
Southern District										
Total										
Numbers above are per (how many?) _____ of (pop. type?) _____										

- 5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

NFPA 1710; RESPONSE;EQUIPMENT TYPE

- 6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. Advise us if you have actual data about these, and we will follow up to get that data.

Need Clarification from Author

**C. Other Data Questions**

- 7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2008
Operating (not including new facilities)	\$	\$	\$ 22,146,501.00	\$ 22,848,779.44
Capital (new facilities, etc.)	\$ 0	\$ 0	\$ 0	\$ 0
(If above breakdown not available) Total	\$	\$	\$	\$

If any questions about this form, contact Amber Guillory (amg@johnmknox.com) or John Knox (jmk@johnmknox.com); phone for either is 698-523-1352.

**Socioeconomic Impact Assessment Service Agency Questions**

**8. Facilities Providing Public Services:** Please list the locations from which you provide fire or rescue services (exclusive of any purely administrative or E911 offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Tamuning Fire Station: Station 1 (Northern District)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sinajana Fire Station: Station 2 (Northern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Barrigada Fire Station: Station 3 (Northern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dededo Fire Station: Station 4 (Northern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yigo Fire Station: Station 10 (Northern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Astumbo Fire Station: Station 12 (Northern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rescue Base 1 (Northern)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agat Fire Station: Station 5 (Southern District)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Inarajan Fire Station: Station 6 (Southern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Piti Fire Station: Station 7 (Southern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Umatac Fire Station: Station 8 (Southern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Yona Fire Station: Station 9 (Southern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Talofof Fire Station: Station 11 (Southern)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rescue Base 2 (Southern)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Add Any Additional Fire or Rescue Locations Below:</b>					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele  
 \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people  
 \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

**9. Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you have served for fire or rescue:

	No	Yes,		Yes, Published at Following Place**
		Unpublished*		
Active-Duty Military	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:



**Socioeconomic Impact Assessment Service Agency Questions**

**10. Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
  - Yes, unpublished
  - Yes, published at:
- (If Other or have comment, write below.)*  
 Refer to Micronesian Research Center

**D. Agency Manpower Factors**

**11. Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
  - Yes, but not because of any effects from announcement of military buildup
  - Yes, and believed due to the announced buildup *(explain below:)*
- 

b. If Yes, what types of positions have been most affected?

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
  - Yes, but not because of any effects from announcement of military buildup
  - Yes, and this is believed due to the announced buildup *(explain below:)*
- 

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

*If any questions about this form, contact Amber Guillory (amg@chinaknox.com) or John Knox (jkn@chinaknox.com); phone for either is 808-523-1352.*

**E. Questions for Person-to-Person Follow-up Discussions**

There are a number of important questions about your agency's *current capacity* as well as its *future capacity* to cope with the projected construction boom or eventual increased military-related population.

The most efficient way to handle these would be to interview the Director (or his/her designated assistant), hopefully in person or by phone if necessary.

Here are all or most of the questions we would like to ask in that interview, so that some advance thought could be given to them:

**Current Capacity Issue –** By "capacity," we mean staffing, facilities, funding, modern technology, training, management skills, etc. The following questions are more oriented to identifying capacity problems, but we would of course also like to know if all is well.

1. Important evidence of strains on agency capacity that have yet to be solved (e.g., penalties levied by the federal government):
  - a. Shortage of Manpower
  - b. Shortage of Response Equipment
  - c. 70 Additional Entry Level Firefighters / Administrative Staff -5
  - d. Facilities(Rescue-2) (Hazardous Materials-1) (Firehouses-4)
  
2. Recent or imminent changes in your capacity that had nothing to do with the military buildup (perhaps things approved before the announced buildup):
  - a. Hazardous Materials Response Team (Personnel / Equipment)
  - b. Advanced Life Support-2 Additional Units Needed (Personnel / Equipment)
  
3. Recent or imminent changes in your capacity that are linked to the buildup (such as federal grants related to the military buildup):
  - a. None at this time
  
4. Solid plans or proposals that would improve your capacity but have not yet been funded or implemented. (We will ask if you can provide copies or links, if available).
  - a. Overall Upgrade to the Fire Department's response capability

*If any questions about this form, contact Amber Gulliford (amg@johnknex.com) or John Knex (jmk@johnknex.com); phone for either is 808-523-1352.*

**Socioeconomic Impact Assessment Service Agency Questions**

**Future Capacity to Cope with Impacts of Military Buildup**

1. The first part of the military buildup will see many thousands of off-island construction workers (probably mostly foreign single men) come to Guam. We would appreciate your best sense of the demands this may place on you in terms of new staffing or facilities, and how you arrived at these conclusions. In particular:
  - a. Are there special services that your agency provides to off-island workers (and/or to the construction industry) that will be impacted by the construction phase?
    1. No Special Services Rendered
  - b. Specific implications for staffing needs, including training (language, cultural, other)?
    1. Yes (Interpreters /Translators)
  - c. Specific implications for facilities needs, including infrastructure/technology?
    1. Upgrade to overall Department technology (E-911 Communications / Mobile Units
  - d. If construction-phase impacts on your agency depend on things you don't know yet, what are the most important unknowns for you, and why is that?
    1. the most important unknown would be the amount of personnel to adequately address the increase of construction plans review and inspections.
2. Following the construction phase, there will be a substantial increase in active-duty military, their dependents, and various types of new civilian workers. If not already covered above, we would appreciate your best sense of the demands this may place on you in terms of new staffing or facilities, and how you arrived at these conclusions.
  - a. Are there special services that your agency provides to either the military or to likely immigrant populations that will be impacted?
 

YES, Mutual Aid Assistance
  - b. Specific implications for staffing needs, including training (language, cultural, other)?
    1. Yes (Interpreters/Translators)
    2. Increase staffing pattern for Fire Preventions Bureau
  - c. Specific implications for facilities needs, including infrastructure/technology?
    1. Upgrading current facilities as well as additional station houses to include upgrading equipments and communications, i.e. E911.
  - d. If steady-state-phase impacts on your agency depend on things you don't know yet, what are the most important unknowns for you, and why is that?
    1. Construction sites within the civilian populations
    2. Types of building construction(single or multi dwelling)
    3. Increase in emergency responds to industrial related accidents/incidents
    4. Increase staffing pattern for Fire Prevention Bureau-Plans Review

***If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.***

**Socioeconomic Impact Assessment Service Agency Questions**

3. We would like to know how your agency calculates the need for additional facilities or other capital expenses associated with a growing population.

For example, in regard to need for more facility space, does your agency use any "standard" ratio per population served, or per staffing number? If so, we hope you can explain that standard and how it was derived.

National Fire Protection Association (NFPA) 1710

1. Section 5.2.3.1.1 (Deployment of Fire Suppression, Rescue Resources within a 4 minute response time)
2. Section 5.3.3.4.2 (Deployment of EMS with AED within a 4 minute Response Time)
3. Section 5.2.2 (Staffing Requirements based on minimal levels for emergency operations for safety effectiveness and efficiency)
4. Section 5.2.2.1.1 (Staffing Shall be a minimum of 4 on-duty personnel)
5. Section 5.3.3.3.2 (EMS Staffing requirements shall be based on the minimum levels needed to provide patient care and personnel safety)

Thank you very much for your time. We see this as a vital step in establishing communication with your agency, so that our Socioeconomic Impact Assessment Study captures the true impact of this proposed action.

*If any questions about this form, contact Amber Gullery ([amg@johnknox.com](mailto:amg@johnknox.com)) or John Knox ([jmk@johnknox.com](mailto:jmk@johnknox.com)); phone for either is 808-523-1352.*

established through written administrative regulations, standard operating procedures, and departmental orders.

## **5.2\* Fire Suppression Services.**

### **5.2.1 Fire Suppression Capability.**

**5.2.1.1** Fire suppression operations shall be organized to ensure that the fire department's fire suppression capability includes personnel, equipment, and resources to deploy the initial arriving company, the full initial alarm assignment, and additional alarm assignments.

**5.2.1.2** The fire department shall be permitted to use established automatic mutual aid and mutual aid agreements to comply with the requirements of Section 5.2.

**5.2.2\* Staffing.** On-duty fire suppression personnel shall be of the numbers necessary for fire-fighting performance relative to the expected fire-fighting conditions.

**5.2.2.1** These numbers shall be determined through task analyses that take the following factors into consideration:

- (1) Life hazard to the populace protected
- (2) Provisions of safe and effective fire-fighting performance conditions for the fire fighters
- (3) Potential property loss
- (4) Nature, configuration, hazards, and internal protection of the properties involved
- (5) Types of fireground tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene

**5.2.2.2\*** On-duty personnel assigned to fire suppression shall be organized into company units and shall have appropriate apparatus and equipment assigned to such companies.

**5.2.2.2.1\*** The fire department shall identify minimum company staffing levels as necessary to meet the deployment criteria required in 5.2.4 to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.

**5.2.2.2.2** Each company shall be led by an officer who shall be considered a part of the company.

**5.2.2.2.3\*** Supervisory chief officers shall be dispatched or notified to respond to all full alarm assignments.

**5.2.2.2.4** The supervisory chief officer shall ensure that the incident management system is established as required in Section 6.2.

**5.2.2.2.5\*** Supervisory chief officers shall have staff aides deployed to them for purposes of incident management and accountability at emergency incidents.

**5.2.3 Operating Units.** Fire company staffing requirements shall be based on minimum levels

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for emergency operations for safety, effectiveness, and efficiency.

**5.2.3.1** Fire companies whose primary functions are to pump and deliver water and perform basic fire fighting at fires, including search and rescue, shall be known as engine companies.

**5.2.3.1.1** These companies shall be staffed with a minimum of four on-duty personnel.

**5.2.3.1.2** In jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ, these companies shall be staffed with a minimum of five or six on-duty members.

**5.2.3.2** Fire companies whose primary functions are to perform the variety of services associated with truck work, such as forcible entry, ventilation, search and rescue, aerial operations for water delivery and rescue, utility control, illumination, overhaul, and salvage work, shall be known as ladder or truck companies.

**5.2.3.2.1** These companies shall be staffed with a minimum of four on-duty personnel.

**5.2.3.2.2** In jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ, these companies shall be staffed with a minimum of five or six on-duty personnel.

**5.2.3.3 Other Types of Companies.**

**5.2.3.3.1** Other types of companies equipped with specialized apparatus and equipment shall be provided to assist engine and ladder companies where deemed necessary as part of established practice.

**5.2.3.3.2** These companies shall be staffed with a minimum number of on-duty personnel as required by the tactical hazards, high-hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ.

**5.2.3.4 Fire Companies with Quint Apparatus.**

**5.2.3.4.1** Fire companies that deploy with quint apparatus, designed to operate as either an engine company or a ladder company, shall be staffed as specified in 5.2.3.

**5.2.3.4.2** If the company is expected to perform multiple roles simultaneously, additional staffing, above the levels specified in 5.2.3, shall be provided to ensure that those operations can be performed as required.

**5.2.4 Deployment.**

**5.2.4.1 Initial Arriving Company.**

**5.2.4.1.1** The fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 4-minute response time and/or the initial full alarm assignment within an 8-minute response time to 90 percent of the incidents as established in Chapter 4.

Copyright NFPA

- (2) BLS response
  - (3) ALS response
  - (4) Patient transport in an ambulance or alternative vehicle designed to provide for uninterrupted patient care at the ALS or BLS level while en route to a medical facility
  - (5) Assurance of response and medical care through a quality management program
- 5.3.3.2 The fire department shall be involved in providing any or all of the functions identified in 5.3.3.1.
- 5.3.3.3 Staffing.**
- 5.3.3.3.1 On-duty EMS units shall be staffed with the minimum personnel necessary for emergency medical care relative to the level of EMS provided by the fire department.
- 5.3.3.3.2 EMS staffing requirements shall be based on the minimum levels needed to provide patient care and member safety.
- 5.3.3.3.2.1 Units that provide emergency medical care shall be staffed at a minimum with personnel trained to the first responder/AED level.
- 5.3.3.3.2.2 Units that provide BLS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing emergency medical services licensing.
- 5.3.3.3.2.3 Units that provide ALS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing emergency medical services licensing.
- 5.3.3.4 Service Delivery Deployment.**
- 5.3.3.4.1 The fire department shall adopt service delivery objectives based on time standards for the deployment of each service component for which it is responsible.
- 5.3.3.4.2 The fire department's EMS for providing a first responder with AED shall be deployed to provide for the arrival of a first responder with AED company within a 4-minute response time to 90 percent of the incidents as established in Chapter 4.
- 5.3.3.4.3\* When provided, the fire department's EMS for providing ALS shall be deployed to provide for the arrival of an ALS company within an 8-minute response time to 90 percent of the incidents as established in Chapter 4.
- 5.3.3.4.4 Personnel deployed to ALS emergency responses shall include a minimum of two members trained at the emergency medical technician-paramedic level and two members trained at the emergency medical technician-basic level arriving on scene within the established response time.
- 5.3.4 Quality Management.**
- Copyright NFPA



**PRESENTED BY:**

**GUAM FIRE CHIEF**

**DAVID Q. PEREDO**

**SI YU'OS MA' ASE**

**(THANK YOU)**



**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency:

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title:

Phone:

Email:

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title:

Phone:

Email:

**B. Staffing and Service Levels**

1. **Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Total		*241	238	259
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input checked="" type="checkbox"/> auth.
<b>Key Professional Categories – please list categories (and staffing) for those staffing categories normally considered in determining if service levels are sufficient.**</b>				
<b>A. Custody and Security</b>	N/A	*177	173	188
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<b>B. DTSD</b>	N/A	*13	15	15
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<b>C. Admin&amp;Fiscal / Parole Division</b>	N/A	*34	31	31
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees). For Corrections, would this be probation officers? Corrections officers? Please advise.

*Explanation of identified Key Professional Categories, if necessary:*

\*Reflects FY04 and not FY2K. DTSD is the division which has our medical staff and social workers. To determine the ration, please use the Custody and Security data.

**If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.**

**2. Your “Service Population” (for Corrections, we assume this means inmates, parolees, probationers, etc.):**

a. Please provide data on the average number of individuals you have served for as many as possible of the years below, broken down by incarcerated population, probation etc. if possible. Again, 2005 data is of particular interest to us.

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Prison		335	412	400	445	457	505	436	447	447
Jail		424	206	245	367	321	339	351	369	370
Parolees		388	443	458	396	419	294	286	205	207
Probationers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>If we have missed any “service populations” for which you have data, please enter below:</i>										
Overnighters		N/A	N/A	N/A	2363	1671	1744	1938	1878	1697
Federal/ICE		335	277	196	172	177	278	176	214	218
Total		1482	1338	1299	3743	3045	3160	3187	3113	2939

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

General population not in the justice system OR

Population in the justice system, such as prison inmates (*Describe below:*)

The Guam DOC manages two separate facilities, the Adult Correctional Facility and the Hagatna Detention Facility.

c. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.) 1 of Corrections Officer per (No.) 12 / 19 of inmates / detainees

- Source or reference: departmental policy and per housing population

- Is this:  Locally-generated target  National target  Statistical average

*(Other or explanation:)* DOC is not a typical prison, as we manage two separate facilities; thereby our ratios vary radically on any given occasion.

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per (how many?)				of (pop. type:)					

- 5. Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

the authorized full-time-employees, per Bureau of Budget Management and Research.

- 6. Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

Non-staffing is tended to on an as-needed basis.

**C. Other Data Questions**

- 7. Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Operating (not including new facilities)	\$	\$ 11,312,437.63	\$ 14,274,178.07	\$ 16,292,682.80
Capital (new facilities, etc.)	\$	\$ unknown	\$ 300,000	\$ 500,000
<i>(if above breakdown not available) Total</i>	\$	\$ 11,312,437.63	\$ 14,574,178.07	\$ 16,790,682.80

***If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.***

8. **Facilities Providing Public Services:** Please list the locations where you provide “services to the public” (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth. Indicate if this is a prison, a jail, probation offices, etc.

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Director's Officers / Parole Services Division	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adult Correctional Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hagatna Detention Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOJ - SCAAP
Other Ethnic Breakdowns	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOJ - SCAAP

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

DOJ (Department of Justice ) website - SCAAP (State Criminal Alien Assistance Program)

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether there was a spike in inmates or other “service population” during that time period?

- No
- Yes, unpublished
- Yes, published at:

(If Other or have comment, write below:)

**If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.**

[ ]

**D. Agency Manpower Factors**

**11. Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

[ ]

b. If Yes, what types of positions have been most affected?

[ ]

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

due to non-attractive pay scale of an entry level Corrections Officer and the adverse pay parity amongst local law enforcement agencies.

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

The competition with other law enforcement agencies for entry level Corrections Officer. No strategies have been adopted

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Department of Youth Affairs

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Grace R. Taitano/Youth Development Administrator

Phone: (671) 735-5010

Email: gtaitano@hotmail.com

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Christopher M. Duenas/Director

Phone: (671) 735-5001

Email: dyadirector@hotmail.com

**B. Staffing and Service Levels**

- Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*	FY 1990	FY 2000	FY 2005	(Most current available) FY 200
Total	not avail	87	71	79
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
<b>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</b>				
A.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
B.				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: Corrections officers or counselors etc. For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees).

Explanation of identified Key Professional Categories, if necessary:

If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone (no eligibility criteria) OR
- Only certain age, income, or other demographic groups. (We assume you will click this box, but how do you define "youth" and are there any other eligibility criteria? (Describe here:) )

b. Of those eligible for your service, does your agency provide services to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
  - All eligible permanent or temporary *residents* on island, including military;
  - All eligible *residents*, including military dependents but not active-duty military;
  - All eligible *residents* but not active-duty military or military dependents.
- (If other, or you wish to add clarifications, please describe below:)

c. Are there are any restrictions on providing services to children of "H2B workers" on temporary work visas from foreign countries?  Yes  No  
(If Yes, explain below, or use space for any other explanation:)

d. Please provide data on the number of individuals you have served for as many as possible of the years below. Again, 2005 data is of particular interest to us.

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Youth Development	not avail	12351	13385	14207	14359	15552	18508	19966	28477	18674
Youth Corrections	not avail	428	428	430	506	617	597	947	746	550
Rehabilitation and Support	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total	not avail	12959	13813	14637	15865	16169	19105	20913	29223	19224

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any "standard," whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone (no eligibility criteria) OR
- Only certain income, age, or other demographic groups (*Describe below:*)  

Under the Division of Special Services, the ratio of staffing to clientele of the Youth Correctional Facility (YCF) and Cottage Homes (juvenile offenders, status-offenders, non-offenders and continuing jurisdiction of the court) is 1:4.

***If any questions about this form, contact Amber Gullory ([amg@johnmknnox.com](mailto:amg@johnmknnox.com)) or John Knox ([jmk@johnmknnox.com](mailto:jmk@johnmknnox.com)); phone for either is 808-523-1352.***



c. **If Yes:** Please state what that standard is (*i.e.*, *X professionals per 10,000 of eligible population or per 1,000 youth served etc.*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.)  of  per (No. )  of
- Source or reference:
- Is this:  Locally-generated target  National target  Statistical average  
*(Other or explanation:)*

d. **If Yes:** Do you believe that standards on Guam should properly be based on the ratio of key professional staff to (*check one best answer*):

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.  
*(If other, or you wish to add clarifications, please write below:)*

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?  Yes  No
- b. **If Yes:** Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
	428	428	430	506	617	597	947	746	550
Numbers above are per ( <i>how many?</i> ) <input type="text"/> of ( <i>pop. type:</i> ) juvenile clientele.									

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

New referrals, program admissions and the anticipated increase of overall program participants relating to the military buildup.

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2009
Operating (not including new facilities)	\$	\$	\$	\$
Capital (new facilities, etc.)	\$	\$	\$	\$
<i>(if above breakdown not available) Total</i>	\$ 4631800	\$ 4430009	\$ 6517862	\$ 5529610

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

Location	Check if Space Is:		Check Adequacy of Space		
	Owned	Leased	1*	2*	3*
Mangilao	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Talofofo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dededo	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mongmong-Toto-Maite	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Agat (Haya)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agat (Pagachao)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 1 = Current space can accommodate more employees and/or clientele  
 \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people  
 \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

***If any questions about this form, contact Amber Guillory (amg@johnmknox.com) or John Knox (jmk@johnmknox.com); phone for either is 808-523-1352.***

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

Youth Related to ..	No	Yes, Unpublished*	Yes, Published at Following Place**
Military Population	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

No

Yes, unpublished

Yes, published at:

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

Youth Service Workers, clerical and program personnel.

If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.

12. Labor Availability:

- a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Youth Service Workers, Program Coordinators, Clerical and professional (Social Workers and Clinical) positions. We have transferred several YSWs from our community-based Resouce Centers into the Cottage Homes and Youth Correctional Facility to assist with personnel shortage and personnel from other Divisions assist with clerical, program and maintenance needs while clinical services are outsourced to licensed professionals.

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***If any questions about this form, contact Amber Guillory ([amg@johnmknox.com](mailto:amg@johnmknox.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone for either is 808-523-1352.***



Felix P. Camacho  
Governor

Michael W. Cruz, M.D.  
Lieutenant Governor

## Department of Youth Affairs

Dipåtamenton Asunton Manhoben

Government of Guam

P.O. Box 23672 GMF

Barrigada, Guam 96921

Tel: (671)735-5010 Fax: (671)734-7536



Christopher M. Duenas  
Director

December 16, 2008

Ms. Amber Guillory  
Research Associate  
John M. Knox & Associates, Inc.  
1101 Bishop St., ASB #1542  
Honolulu, HI 96813

Subject: Requested Information  
Ref: Socioeconomic Impact Assessment

Dear Ms. Guillory:

*Hafa Adai!* As requested in your email correspondence dated December 9, 2008, I am providing the following information in reference to the Socioeconomic Impact Assessment:

- The standard ratio of staffing to clientele in the Youth Correctional Facility (YCF) and Cottage Homes as 1:4 is in reference to the Youth Service Worker positions. The total number of Youth Service Workers including the Superintendent and Youth Service Supervisors is 45. A breakdown of the number of employees and position titles is as follows:

1 – Superintendent  
4 – Youth Service Supervisors  
5 – Youth Service Worker II  
23 – Youth Service Worker I  
12 – Youth Service Worker Assistant

The ratio of 1:4 is the standard set by the Director and may be manipulated based on the clientele population and other circumstances. This practice is not reflected in the Manual of Operations as previously reported. Furthermore, the juvenile clientele serviced through the YCF and Cottage Homes are captured in the "Youth Corrections" numbers provided in the Assessment.

- The Department's unpublished statistics from the 1990's to present are enclosed for your review and information.
- We are able to delineate which facilities and community-based Resource Centers are used to provide services to the clientele of YCF and Cottage Homes based on referrals, Monthly Reports and the Annual Compact of Free Association Client Reports.



DYA: "It's all about youth helping youth!"

Letter - Requested Information Ref: Socioeconomic Impact Assessment  
Page 2


Through Case Review recommendations and court orders, our clients may be placed in the Jumpstart (family reunification) and/or Aftercare (community reintegration) Programs that are administered by the Resource Centers in Dededo, Mongmong-Toto-Maite and Agat.

Additionally, the Department has several Memorandums of Understanding with the Guam Housing and Urban Renewal Agency for the use of its community-based facilities therefore the Mongmong-Toto-Maite and Agat (Pagachao) Resource Centers do not have plans to further expand at this time.

Should you have any questions or need additional information, please contact me at (671) 735-5001 or Youth Development Administrator Grace R. Taitano at (671) 735-5002.

*Si Yu'os Ma'ase (thank you).*

Sincerely,

  
Christopher M. Duenas  
Director

Enclosures

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

Name of Agency: **Guam Department of Parks and Recreation**

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: **Joseph W. Duenas/ Director**

Phone: **671 475-6296/ 7**

Email: **joseph.duenas@mail.gov.gu**

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: **Joseph W. Duenas**

Phone: **(671) 475-6296/7**

Email: **tashilama@guam.net**

**B. Data and Decisions About Staffing**

- Staff:** Please write in the title of the key staff\* types that are essential to your work and provide us with current and historical staffing numbers. Year 2005 data is most critical for this study because it is considered the “baseline” year when any effects of the announced military buildup were not yet felt. Information from years 1990 and 2000 will help us determine trends.

<b>Staff (FTE**)</b>	<b>FY 1990</b>	<b>FY 2000</b>	<b>FY 2005</b>	<b>(Most current available) FY 2008</b>
Total Staff	160	100	85	80
Check if no. is <u>actual</u> or <u>authorized</u> in budget:	x actual <input type="checkbox"/> auth.	X actual <input type="checkbox"/> auth.	X actual <input type="checkbox"/> auth.	X actual <input type="checkbox"/> auth.
<b>Key Staff*</b>				
A.				
Please check if above numbers were <u>actual</u> filled positions or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
B.				
Please check if above numbers were <u>actual</u> filled positions or were <u>authorized</u> in budget.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.

\* Examples: For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For Parks and Recreation, depending on the division, key staff might include Recreation Coordinators or Leaders, Lifeguards, or Park Patrol Officers etc.).

\*\*Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

*Explanation of identified Key Staffing Categories, if necessary:*

**2. Staffing Targets:**

- In regard to the ratio of number of staff to population or total users of your facilities – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

b. Please state what some of the most important standards or targets are (*i.e.*, *X park rangers per 10,000 population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam). When filling in these standards, please consider the staff types you listed in response to question B1.

- What is standard? (#)  of  per (#)  of 
  - Source or reference:
  - Is this a:  Locally-generated target  National target  Statistical average  
(*Other or explanation:*)
  
- What is standard? (#)  of  per (#)  of 
  - Source or reference:
  - Is this a:  Locally-generated target  National target  Statistical average  
(*Other or explanation:*)
  
- What is standard? (#)  of  per (#)  of 
  - Source or reference:
  - Is this a:  Locally-generated target  National target  Statistical average  
(*Other or explanation:*)

*Additional information or targets:*

c. Other than the staffing ratios above, what things determine your agency's sense of need for new staffing, and/or your decisions about how to allocate staff among different sites or facilities? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

**3. Staff Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?  
 No  
 Yes, but not because of any effects from announcement of military buildup (*explain what you think caused it below:*)

Yes, and believed due to the announced buildup (*explain why you think so below:*)

b. If Yes, what types of positions has been most affected and what sorts of strategies have you adopted to cope with these difficulties?

**4. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?  
 No  
 Yes, but not because of any effects from announcement of military buildup (*explain what you think caused it below:*)



**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

X Yes, and believed due to the announced buildup (*explain why you think so below:*)

It has and will become difficult in filling technical areas such as administrators, archaeologists, etc because the local pay scales and benefits are not at the levels of our federal counterparts

b. If Yes, what types of positions has been most affected and what sorts of strategies have you adopted to cope with these difficulties?

Park Patrol Officers- We have had difficulty recruiting Park Patrol Officers. The job requirements of basic law enforcement training, and the pay for the position has made this position difficult to recruit. In order to accommodate this, we will be suspending the requirement of basic law enforcement training for one year.

Archaeologist- A few years ago, we almost lost our Territorial Archaeologist as a result of “better opportunities “ in the private sector and federal sectors. While he has agreed to stay, this position will be difficult to recruit once he vacates his post, as the pay scale for the local government is not attractive for this post.

**C. Recreational Sites/Facilities and Users**

1. **Sites Open to Public Use:** Please describe the key types of recreational sites and facilities administrated by your division and open for public use. For example, beach parks, playing fields, neighborhood facilities, pools etc.

The department administers approximately 70 public parks and recreational facilities to include beach parks, community parks, historic parks, baseball fields, baseball stadium, a sports complex, tennis courts, the public pool, etc.

2. Looking at the key sites you have identified above, please list the ones that you feel are most likely to be impacted by the military buildup, rating whether each is generally adequate for current level of demand.

Location	Check Adequacy of Site			If “Poor,” please briefly note the reasons for this rating (e.g., restrooms deteriorated, beach not clean, playing fields torn up, etc.)
	Good	Fair	Poor	
Beach Parks			X	As a result of Guam's economy the past decade and the impact this has had on government funding, the department has seen it's budget and manpower reduced by approximately 50% over the past 10 + years. This has led to deferred maintenance over the years.
Historic Parks		<input type="checkbox"/>	X	Same as above
Recreation Facilities		<input type="checkbox"/>	x	Same as Above
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. **Statistics About Site Users/Visitors:**

a. Does your agency maintain estimates of your annual number of visitors for these key sites?  
 Yes    x No

b. If Yes: Please provide the number of visitors to these key sites for as many as possible of the years below. Again, 2005 data is of particular interest to us.

<b>Site:</b>	<b>1990</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
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**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

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4. **Statistics About Types of Persons Served:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people that utilize the services and facilities you provide:

	No	Yes, Unpublished*	Yes, Published at Following Place**		
Active-Duty Military	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Dependents/Families	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2B Foreign Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FAS Compact State Immigrants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Ethnic Breakdowns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.

\*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

**D. Other Data Questions**

1. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

Budget	FY 1990	FY 2000	FY 2005	(Most current available:) FY 2007
Operating (not including facilities)	\$	\$		
Capital (for new facilities, etc.)	\$	\$	\$	\$
<i>(if above breakdown not available) Total</i>	\$	\$	\$ 3.7M	\$ 3.7M

2. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency locations saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at:

*(If Other or have comment, write below:)*

It is evident from the previous budget and staffing patterns of DPR that this was a time when the department had twice the amount of staffing at approximately 160 personnel as opposed to staffing levels of 80 personnel today.

**E. Open-Ended Questions** (For Director/executive to fill in if possible ... OR please advise if a telephone discussion would be easier for you!)

We also have a number of important questions about your agency's current capacity as well as its future capacity to cope with the projected construction boom or eventual increased military-related population

**Current Capacity Issues** – By “capacity,” we mean staffing, facilities, funding, modern technology, training, management skills, etc. The following questions are more oriented to identifying capacity problems, but we would of course also like to know if all is well.

## Socioeconomic Impact Assessment Guam Public Service Agency Questions

1. Important evidence of strains on agency capacity that have yet to be solved (e.g., compliance issues, penalties etc.) Current capacity issues include low levels of funding have not allowed the department to provide the levels of service that is expected in all areas from facility maintenance to recreation programs to enforcement
2. Recent or imminent changes in your capacity that had nothing to do with the military buildup (perhaps things approved before the announced buildup) Over the years the department has become more efficient with the current levels of funding by adopting initiatives such as outsourcing and privatization.
3. Recent or imminent changes in your capacity that are linked to the buildup (such as federal grants related to the military buildup) Our Historic Preservation Office which conducts federal section 106 reviews has seen an increased workload in permitting. This area must eventually be increased in staffing and funding, or it will become a "bottleneck" for military construction projects as reviews will slow due to the staffing levels.
4. Solid plans or proposals that would improve your capacity but have not yet been funded or implemented. (We will ask if you can provide copies or links, if available) The complete outsourcing of all parks maintenance would reduce the requirement for manpower and allow the department to become more efficient in overseeing contracts. Additionally the department must see more staffing in the area of the Historic Preservation Office to deal with the growing workload of construction that has been attributed to the military build-up.

### Future Capacity to Cope with Impacts of Military Buildup

1. The first part of the military buildup will see many thousands of *off-island construction workers (probably mostly foreign single men)* come to Guam. We would appreciate your best sense of the demands this may place on you in terms of new staffing or facilities, and how you arrived at these conclusions. In particular:
  - a. Are there particular sites, facilities, or services that your agency believes will be impacted by the construction phase? Why? The construction work force will most definitely increase the levels of staffing required at our parks and recreation facilities. In the 90's many of the construction workforce related to the tourism boom made their way down to the public parks and beaches in the off hours. This created more trash, more public safety concerns, etc. In addition to this, much of this workforce will look to the affordable recreation facilities such as basketball courts, baseball fields, gymnasiums for exercise and entertainment, this will increase the department's need for staff and maintenance workers all around as the existing staffing levels are barely adequate for our existing customer base, much more thousands of construction workers.
  - b. Specific implications for staffing needs, including training (language, cultural, other)? We will need more staff in parks maintenance, park patrol, recreation maintenance, recreation programs, as all of these areas will see a growing customer base as a result of the population explosion.
  - c. Specific implications for facilities needs, including infrastructure/technology? Wear and tear will increase, maintenance at the public parks, beaches, and recreation facilities will need to be increased to proportionately grow with this growing "customer base."
  - d. If construction-phase impacts on your agency depend on things you don't know yet, what are the most important unknowns for you, and why is that? The most important unknowns are how much finance will the military contribute to the impacts outside the military fence line. If the military and federal

## Socioeconomic Impact Assessment Guam Public Service Agency Questions

government take responsibility for the significant impact that is inevitable outside the military bases, then I'm confident these unknowns will be addressed. If they do not, then service and quality of life for the local people will suffer further as a result of a dramatically increased population with insufficient service.

2. Following the construction phase, there will be a substantial increase in active-duty United States Military personnel, their dependents, and various types of new civilian workers. We would appreciate your best sense of the demands this may place on your agency and your site in terms of new staffing or facilities, and how you arrived at these conclusions.
  - a. Are there particular sites, facilities, or services that your agency believes will be impacted by the imminent population changes on Guam? Why? Yes. The public beaches, parks, recreation facilities. Many military personnel will spend a significant amount of their time outside the bases. Currently there are military youth teams (soccer) joining local leagues and sharing local recreation facilities as a result. This will only increase as the population grows. This includes frequenting Guam's beaches, public parks, recreation facilities, etc.
  - b. What are the specific implications for your staff, including but not limited to language training and hiring new staff? More work, and additional need for manpower to accommodate this growth.
  - c. What are the specific implications for facilities needs, including but not limited to user facilities and office buildings? More funds needed for maintenance. More funds needed for enforcement.
  - d. If impacts on your agency depend on things you do not know yet, what are the most important unknowns for you, and why is that? The military commitment to assisting with the significant impacts that will occur outside the fenceline.
3. Is there any additional information you feel we should know?

Guam is America. The residents who live here are American. Per capita there have been more men and women who have served the U.S. Armed Forces and are veterans' of war, than most states in the U.S. Guam soliders have laid down their life for the U.S. flag. I hope these points will be stressed to those involved in the decision making process for the buildup, and will treat the Guam buildup no different from any other buildup on U.S. soil.

Socioeconomic Impact Assessment Guam Public Service Agency Questions

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**

Name of Agency: Guam Public Library System

**A. Contact Information**

**Staff Level – For Questions on Statistical Data (Sections B-D)**

Contact Person/Title: Sandra M. Stanley, Administrative Officer

Phone: 671-4754765

Email: sandra.stanley@gpls.guam.gov

**Executive Level – For Follow-Up Questions on Agency Capacity (Section E)**

Contact Person/Title: Teresita L. G. Kennimer, Acting Territorial Librarian/Director

Phone: 671-4754753

Email: teresita.kennimer@gpls.guam.gov

**B. Staffing and Service Levels**

1. **Staffing:** Year 2005 data is most critical for this study, because it is considered the “baseline” year, when any effects of the announced military buildup were not yet felt. Information from 2000 or 1990 would help us calculate ratios of staffing to known population in those census years.

Staffing (FTE if possible)*		FY 1990	FY 2000	FY 2005	(Most current available) FY 2008
Total					
Check if no. is <u>actual</u> or <u>authorized</u> in budget:		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input type="checkbox"/> auth.
<i>Key Professional Categories – please list categories (and staffing) for just those staffing categories normally considered in determining if service levels are sufficient.**</i>					
A.	Agat Branch				1
	Barrigada				2
	Dededo				4
	Merizo				2
	Yona				1
	Hagatna		24	22	18
	Bookmobile				
Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.		<input type="checkbox"/> actual <input type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input type="checkbox"/> actual <input checked="" type="checkbox"/> auth.	<input checked="" type="checkbox"/> actual <input type="checkbox"/> auth.
B.	Agat Branch				2
	Barrigada				3
	Dededo				9
	Merizo				3
	Yona				2
	Hagatna			21	18
	Bookmobile			0	1

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

Please check if above numbers were <u>actual</u> (filled) positions, or were <u>authorized</u> in budget.	<input type="checkbox"/> actual	<input type="checkbox"/> actual	<input checked="" type="checkbox"/> actual	<input type="checkbox"/> actual
	<input type="checkbox"/> auth.	<input type="checkbox"/> auth.	<input type="checkbox"/> auth.	<input checked="" type="checkbox"/> auth.

\* Because we want to calculate the ratio of staff to service population, it would help to have the staffing in terms of FTE (full-time-equivalent) rather than a mix of full-time and part-time jobs. But at any rate, please be clear whether you are providing FTE counts or something else.

\*\* Example: For police, usually just the ratio of *sworn police officers* (not all employees) to population is considered in determining if levels of service are sufficient. For schools, it may be *teachers* (not all employees). A few agencies might have more than one such category, but most will have just one.

**2. Your Service Population:**

a. Please tell us if your agency provides services to:

- Everyone on island (no eligibility criteria) OR
- Some restrictions in regard to residency, military status, etc. (*Describe below:*)

b. Are there are any restrictions on providing services to “H2B workers” on temporary work visas from foreign countries, such as those who might be working on military construction projects?  Yes  
 No

(*If Yes, explain below, or use space for any other explanation:*)

Applying for a library card is free to all residents who live on Guam. Guam Public Library System library policy requires a valid Guam Public Library System card in order to check out materials, request for Reference/Guam Materials, and access the computer/internet workstations. To obtain a library card, everyone (age six and above) must fill out an application form in person. All information on the application must be filled or it will not be processed. Identification (ID) must be presented at the time of application. Please sign your name in front of a library staff. ADULTS: Must show identification (ID) or combination IDs that include all of the following items: 1) current picture, 2) current address. ACCEPTABLE Identification(s) include: Valid Driver's license, Government of Guam ID, Military ID, Passport, Visa, MCB card, Automobile registration, Bank statement, Personal Mail with current postmark.

**3. Staffing Standards or Targets Reflecting Service Levels:**

a. In regard to the ratio of staffing to service population – does your agency know of or target any “standard,” whether or not you are achieving it?  Yes  No

b. If Yes: Is that standard based on the ratio of key professional staff to:

- Everyone on island (no eligibility criteria) OR
- Some restrictions in regard to residency, military status, etc. (*Describe below:*)

c. If Yes: Do you believe that standards on Guam should properly be based on the ratio of key professional staff to:

- All eligible *people* on island, including non-residents (e.g., tourists)
- All eligible permanent or temporary *residents* on island, including military;
- All eligible *residents*, including military dependents but not active-duty military;
- All eligible *residents* but not active-duty military or military dependents.

(*If other, or you wish to add clarifications, please write below:*)

d. If Yes: Please state what that standard is (*i.e., X professionals per 10,000 of eligible population*), its source, and whether it is a locally-adopted target for desirable service levels, a national target, or a statistical average for the country (or parts of the country considered similar to Guam).

- What is standard? (No.)  per (No.)  of

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

- Source or reference: Library Services and Technology Act: GPLS Five-Year Plan 2008-2012 (Attachment #1); Library Services and Technology Act: Guam Public Library System Five-Year Long Range Plan, 2003-2007 (Attachment #2); International Federation of Library Associations and Institutions, 65<sup>th</sup> IFLA Council and General Conference, August 20 - August 28, 1999 (Attachment #3); and Population and Housing Profile, 2000 Census of Population and Housing, Guam - Issued February 2002 by the U. S. Census Bureau (Attachment #4).
- Is this:  Locally-generated target    National target    Statistical average  
(Other or explanation:)

**4. Actual Staffing/Service Level Statistics:**

- a. Does your agency maintain estimates of your service level in terms of the ratio of staffing to service population?    Yes    No
- b. If Yes: Please provide those numbers for as many as possible of the years below. Again, 2005 data is of particular interest to us.

1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Numbers above are per ( <i>how many?</i> )					of ( <i>pop. type:</i> )				

5. **Other Criteria Affecting Decisions about Staffing or Distribution of Staffing:** Other than the service population factors above, what things determine your agency’s sense of need for new staffing, and/or your decisions about how to allocate staff among different parts of the island? Please particularly note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population:

The needs identified are as follow: 1) The absence of enough professional librarians. There is no Master's degree program in Library and Information Science offered on Guam. All professional librarians must be recruited from off-island. According to the Criteria for determining adequacy of Public Library Services set down by the Guam Public Library System (GPLS) Board, GPLS lacks at least ten professional librarians. 2) Due to the absence of professional librarians in the branch libraries, Library Technicians assigned to branches, are responsible for the daily operations of their assigned libraries. Library technicians aside from their desk duties are assigned to other tasks such as, Cataloging and Technical Processing of materials, process Federal Depository Library Programs (Federal Government Documents, and U.S. Department Environmental Impact Statements received by the Department of Navy and Department of Air Force), Serials/Periodicals, Acquisitions, processed the National Library Service for the Blind and Physically Handicapped (Talking Book Tapes and Braille Books), and assist GPLS Literacy Programs under the general supervision of a Library Technician Supervisor and/or Territorial Librarian/Director of the Guam Public Library System. 3) GPLS Administrative Support Unit under the supervision of an Administrative Officer is responsible for the daily operations of the Administration Division and the Building and Maintenance Division: preparing and reporting all financial reports (local and federal allotments), preparing the libraries' budget (approved by the GPLS Board) Human Resources Division, reports all physical conditions of the libraries/Bookmobile to the Territorial Librarian/Director. Administrative employees are assigned to other tasks in their division to meet the needs of the Library Services. 4) A hiring freeze adds another hurdle to the long and rigid path for us to achieve our goals.

Decisions about how staff are assigned among different branch libraries: GPLS has historically had issues with staffing branches in cases of illness and other absences. Four branch libraries are opened twice a week at a minimum of 20 hours per week; one branch library located at the northern part of the island, the Dededo Branch Library is the busiest due to increase of usage is opened five days a week with a total of 41 hours. The Hagatna Main Branch opened six days a week with a total of 58 hours, the Bookmobile servicing the remote areas around the island with a total of 36 hours. Library Technicians are rotated among the branch libraries and Bookmobile for coverage. The Hagatna Main Branch library technicians are also tapped for coverage at a short moment's notice. GPLS has one Program Coordinator (federally funded) who handles

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

all community-related programs to handle new and innovative programs targeting underserved individuals, diverse families, individuals with disabilities, and the elderly. Public and private partnerships with other agencies and community-based organizations targeting library services to individuals of diverse geographic, cultural, and socioeconomic backgrounds to individuals with disabilities, and to individuals with limited functional literacy or information skills; and targeting library and information services to persons having difficulty using a library and to underserved and rural communities. Examples of programs implemented are free computer training, reading programs, and community-wide reading events.

Please note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population: Convenient access to library facilities is a key customer value. Having libraries open additional hours with more staffing coverage is "very" important to the users. With additional staff, to include a Territorial Librarian, Librarians for Branch Libraries, Media, Cataloging, and Reference Library Technicians, Data Control Clerks, Computer Programmers, Clerk Typists, Program Coordinators, Clerks, Custodians, and Archivists, libraries will be available to users on evenings and weekends. Territorial Librarian - higher salary would entice applicants. The rest of the positions are current funding issues.

6. **Non-Staffing Criteria Affecting Evaluation of Whether Service Levels Are Adequate:** Please note any non-staffing criteria or indicators of whether your agency is providing adequate service to the existing Guam population. *Advise us if you have actual data about these, and we will follow up to get that data.*

The GPLS partners with the Guam Community College, Department of Public Health and Social Services, Guam Housing and Urban Renewal Authority, Guam Public School System, and the University of Guam to provide community and credit service volunteering. Volunteer hours are limited, base on their requirements or number of hours they are allowed for example: Guam Community College "Service Learning Programs" two to three hours per day; Department of Public Health and Social Services twenty-four to thirty-two hours per week, and the Guam Housing and Urban Renewal Authority, eight hours per month; University of Guam "Early Childhood Education Program" two hours every Saturday for GPLS "Saturday Story Hour Programs" for two or three months.

Data collected: Volunteer Hours per non-staff.

**C. Other Data Questions**

7. **Budget:** Your operating budget is of particular interest to us, especially year 2005:

<b>Budget</b>	<b>FY 1990</b>	<b>FY 2000</b>	<b>FY 2005</b>	<b>(Most current available:) FY 2008</b>
Operating (not including new facilities)	\$ 1,444,495	\$ 1,220,862	\$ 1,013,262	\$ 1,487,315
Capital (new facilities, etc.)	\$ 0	\$ 0	\$ 0	\$ 0
<i>(if above breakdown not available) Total</i>	\$ 1,444,495	\$ 1,220,862	\$ 1,013,262	\$ 1,487,315

8. **Facilities Providing Public Services:** Please list the locations where you provide services to the public (exclusive of any purely administrative offices); whether each is GovGuam-owned or leased; and whether it can handle additional growth:

<b>Location</b>	<b>Check if Space Is:</b>		<b>Check Adequacy of Space</b>		
	<i>Owned</i>	<i>Leased</i>	<i>1*</i>	<i>2*</i>	<i>3*</i>
Agat Branch	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Barrigada	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dededo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Merizo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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Yona	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hagatna	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bookmobile	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Please add any locations/facilities we failed to list above:</b>					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- \* 1 = Current space can accommodate more employees and/or clientele
- \* 2 = Current space at or above max, but could be expanded or renovated to accommodate more people
- \* 3 = Current space at or above max; cannot be expanded or renovated to accommodate more people

9. **Statistics About Types of Persons Served or Processed:** Please check whether you keep statistics that would allow us to estimate whether any of the following groups comprise disproportionate numbers among people you serve or process:

	No	Yes, Unpublished*	Yes, Published at Following Place**	
Active-Duty Military	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Military Dependents/Families	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H2B Foreign Workers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAS Compact State Immigrants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other Ethnic Breakdowns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

- \* If unpublished, we will follow up with you to acquire or determine feasibility of analysis.
- \*\* If available online, please note URL or other info so that we can find them ourselves.

Add notes or explanations below:

GPLS Library Applications are automated into the library data system called the "Horizon-SirsiDynix". We have just hired a Computer Systems Analyst for our department and are in communications with our vendor from Australia on how he could generate data as requested.

10. **Availability of Historical Data from Early 1990s:** The early 1990s saw a hotel-related construction boom on Guam. Do you have any readily available historical data that would allow us to make reasonable inferences about whether your agency saw any spike in activity during that time period?

- No
- Yes, unpublished
- Yes, published at: (See Attachment #5)

(If Other or have comment, write below:)

**D. Agency Manpower Factors**

11. **Turnover:**

a. Has your agency experienced any recent increase in turnover (above and beyond the usual), particularly in skilled personnel?

- No
- Yes, but *not* because of any effects from announcement of military buildup
- Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

Territorial Librarian, Librarians for Branch Libraries, Media, Cataloging, and Reference Library Technicians, Data Control Clerks, Computer Programmers, Clerk Typists, Program Coordinators, Clerks, Custodians, and Archivists. Territorial Librarian - higher salary would entice applicants. The rest of the positions are current funding issues.

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

**12. Labor Availability:**

a. Has your agency experienced any difficulty in filling vacant positions, particularly for skilled personnel?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Territorial Librarian, Librarians for Branch Libraries, Media, Cataloging, and Reference Library Technicians, Data Control Clerks, Computer Programmers, Clerk Typists, Program Coordinators, Clerks, Custodians, and Archivists. Territorial Librarian - higher salary would entice applicants. The rest of the positions are current funding issues.

The needs identified are as follow: 1) The absence of enough professional librarians. There is no Master's degree program in Library and Information Science offered on Guam. All professional librarians must be recruited from off-island. According to the Criterial for determining adequacy of Public Library Services set down by the Guam Public Library System (GPLS) Board, GPLS lacks at least ten professional librarians. 2) Due to the absence of professional librarians in the branch libraries, Library Technicians assigned to branches, are responsible for the daily operations of their assigned libraries. Library technicians aside from their desk duties are assigned to other tasks such as, Cataloging and Technical Processing of materials, process Federal Depository Library Programs (Federal Government Documents, and U.S. Department Environmental Impact Statements received by the Department of Navy and Department of Air Force), Serials/Periodicals, Acquisitions, processed the National Library Service for the Blind and Physically Handicapped (Talking Book Tapes and Braille Books), and assist GPLS Literacy Programs under the general supervision of a Library Technician Supervisor and/or Territorial Librarian/Director of the Guam Public Library System. 3) GPLS Administrative Support Unit under the supervision of a Administrative Officer is responsible for the daily operations of the Administration Division and the Building and Maintenance Division: preparing and reporting all financial reports (local and federal allotments), preparing the libraries' budget (approved by the GPLS Board), Human Resources Division, reports all physical conditions of the libraries/Bookmobile to the Territorial Librarian/Director. Administrative employees are assigned to other tasks in their division to meet the needs of the Library Services. 4) A hiring freeze adds another hurdle to the long and rigid path for us to achieve our goals.

Decisions about how staff are assigned among different branch libraries: GPLS has historically had issues with staffing branches in cases of illness and other absences. Four branch libraries are opened twice a week at a minimum of 20 hours per week; one branch library located at the northern part of the island, the Dededo Branch Library is the busiest due to increase of usage is opened five days a week with a total of 41 hours. The Hagatna Main Branch opened six days a week with a total of 58 hours, the Bookmobile servicing the remote areas around the island with a total of 36 hours. Library Technicians are rotated among the branch libraries and Bookmobile for coverage. The Hagatna Main Branch library technicians are also tapped for coverage at a short moment's notice. GPLS has one Program Coordinator (federally funded) who handles all community-related programs to handle new and innovative programs targeting underserved individuals, diverse families, individuals with disabilities, and the elderly. Public and private partnerships with other agencies and community-based organizations targeting library services to individuals of diverse geographic, cultural, and socioeconomic backgrounds to individuals with disabilities, and to individuals with limited functional literacy or information skills; and targeting library and information services to persons having difficulty using a library and to

**Socioeconomic Impact Assessment Guam Public Service Agency Questions**

underserved and rural communities. Examples of programs implemented are free computer training, reading programs, and community-wide reading events.

Please note things that may be affected by the presence of thousands of temporary construction workers or of new military-related and federal civilian population: Convenient access to library facilities is a key customer value. Having libraries open additional hours with more staffing coverage is "very" important to the users. With additional staff, to include a Territorial Librarian, Librarians for Branch Libraries, Media, Cataloging, and Reference Library Technicians, Data Control Clerks, Computer Programmers, Clerk Typists, Program Coordinators, Clerks, Custodians, and Archivists, libraries will be available to users on evenings and weekends. Territorial Librarian - higher salary would entice applicants. The rest of the positions are current funding issues.

**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS  
For Government Units with Involvement in Permitting, Permit Review, and  
Monitoring/Enforcement**

Name of Agency:

**Contact Information**

Contact Person/Title:  Phone:

Email:

Information for Fiscal Year: <input checked="" type="checkbox"/> FY 2005 (preferred) OR <input checked="" type="checkbox"/> FY <input type="text"/>		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <input type="text" value="1013000"/>
	<b>B. Actual Expenditures</b>	\$ <input type="text" value="1013000"/>
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <input type="text" value="588444"/>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <input type="text" value="9"/>
	<b>B. Total FTE Approved, Not Filled</b>	# <input type="text" value="2"/>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<input type="text" value="35"/> %
	(2) Monitoring/Enforcement	<input type="text" value="10"/> %
	(3) Policy/Planning	<input type="text" value="35"/> %
	(4) Administrative	<input type="text" value="15"/> %
	(5) Other - special purpose (describe) <input type="text"/>	<input type="text" value="5"/> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <input type="text" value="252"/>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <input type="text" value="252"/>
	(2) Referrals for review <i>from DPW</i>	# <input type="text" value="n/a"/>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <input type="text" value="252"/> - includes <input type="text" value="all federal"/> <input type="text" value="consistency and"/> <input type="text" value="all private"/> <input type="text" value="development"/>

**Note:** You did provide us with historical permit data, which are much appreciated. In our meeting in February, you also noted that you now have 11 FTE staff, and 3 authorized but unfilled positions—this status reflecting what we understand to be an already strained situation (between military buildup speculation and budget cuts). We would like a consistent full-year set of the data above, hopefully for FY05 because that year did not yet have the stress from the military buildup, etc. – it was presumably a more “normal” year.

**Socioeconomic Impact Assessment Permitting Agency Questions**

**ADDITIONAL QUESTIONS ON STAFFING**

**1. Turnover:**

a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

**2. Labor Availability:**

a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and this is believed due to the announced buildup (*explain below:*)

Skilled professionals are being paid more that government of Guam

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

biologist, GIS specialist, planners

**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**  
**For Government Units with Involvement in Permitting, Permit Review, and Monitoring/Enforcement**

Name of Agency:   
 Department/Group:

**Contact Information**

Contact Person/Title:  Phone:   
 Email:

Information for Fiscal Year: <input checked="" type="checkbox"/> FY 2005 (preferred) OR <input type="checkbox"/> FY <input type="text"/>		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <input type="text" value="793,777.00"/>
	<b>B. Actual Expenditures</b>	\$ See Note
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <input type="text" value="793,777.00"/>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <input type="text" value="9"/>
	<b>B. Total FTE Approved, Not Filled</b>	# <input type="text" value="15"/>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<input type="text" value="33"/> %
	(2) Monitoring/Enforcement	<input type="text" value="11"/> %
	(3) Policy/Planning	<input type="text" value="22"/> %
	(4) Administrative	<input type="text" value="11"/> %
	(5) Other - special purpose (describe) <input type="text" value="2"/>	<input type="text" value="22"/> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <input type="text" value="3972"/>
(We enter the '05 numbers you gave us – pls. confirm.)	(1) Referrals submitted <i>directly to YOUR agency</i>	# <input type="text" value="688"/>
	(2) Referrals for review <i>from DPW</i>	# <input type="text" value="3972"/>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <input type="text" value="688"/>

**Note:** You did provide us with historical permit data, which are much appreciated. In our meeting in February, you also noted that you now have 10 staff, 6 of whom are planners, out of 24 authorized positions, and sent us data showing 6,330 projected clearance permits for FY09—this status reflecting what we understand to be an already strained situation (between military buildup speculation and budget cuts). We would like a consistent full-year set of the data above, hopefully for FY05 because that year did not yet have the stress from the military buildup, etc. – it was presumably a more “normal” year.

*One further question pertaining to the current status is “how many vacant lots (and their housing unit capacity) are permitted for development, but yet vacant?” This will give us a partial handle on capacity that may be available.*

## **Socioeconomic Impact Assessment Permitting Agency Questions**

March 31, 2009

John, I hope this is the data you are looking for. The % are based on the actual 9-personnel in the Division at the time (2005).

There were no data entered in the Permit section of the form for me to confirm-please send the data and I'll look over it. I have a meeting this morning at about 7:30 for about an hour- then another one with the Commission Chairman (land Use) at 9:45.

Let me know.

Carl

2<sup>nd</sup> Follow-up response:

Note ref: "Actual Expenses: The Division did not incur any other cost such as "personnel overtime- not budgeted and most of staff are under an "exempt" type status. Operational costs such as utilities, capital outlay, contractual services, travel, supplies, equipment, etc. were allocated under the "Department" umbrella, meaning that all of these extra monies in the different categories were taken from the "Department" whole as we require. Some costs not applicable was that at the time (2005) we were not renting space since we were in a Government of Guam building. Utilities were not broken down but rather treated as a "master" meter concept.

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS  
For Government Units with Involvement in Permitting, Permit Review, and  
Monitoring/Enforcement**

Name of Agency:   
 Division/Group:

**Contact Information**

Contact Person/Title:   
 Phone:   
 Email:

Information for Fiscal Year: <input type="checkbox"/> FY 2005 (preferred) OR <input checked="" type="checkbox"/> FY 2008		
<b>Budget/Costs</b>	A. Total Budget	\$ <input type="text" value="1.85 M"/>
	B. Actual Expenditures	\$ <input type="text"/>
	C. Wages, salaries, Benefits Paid	\$ <input type="text" value="1.70 M"/>
<b>Staffing</b>	A. Total Working Staff (FTE Positions Filled)	# <input type="text" value="25"/>
	B. Total FTE Approved, Not Filled	# <input type="text" value="12"/>
	C. <u>Estimated</u> Percent of Staff Time On:	
	(1) Permitting Review/Approval	<input type="text" value="15"/> %
	(2) Monitoring/Enforcement	<input type="text" value="27"/> %
	(3) Policy/Planning	<input type="text" value="3"/> %
	(4) Administrative	<input type="text" value="8"/> %
	(5) Other - special purpose (describe)	<input type="text" value="47"/> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	A. Total Number Permits Reviewed	# <input type="text" value="487"/>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <input type="text" value="487"/>
	(2) Referrals for review <i>from DPW</i>	# <input type="text" value="N/A"/>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <input type="text" value="0"/>

***If any questions about this form, contact David Clark ([ecoplanres@aol.com](mailto:ecoplanres@aol.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone 808-523-1352.***



**ADDITIONAL QUESTIONS ON STAFFING**

**1. Turnover:**

- a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

See comments at #2 below.

- b. If Yes, what types of positions have been most affected?

N/A

**2. Labor Availability:**

- a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

We have made a significant effort over the last several years to recruit certified technical professionals including a revision to our compensation structure. The revision made us temporarily competitive with the private sector. However, about the time that our revised compensation structure was approved, DoD announced plans for the buildup. Many new engineering firms came to Guam as a result, increasing the demand and competition for technical professionals. (The Guam PEALS Board should have actual numbers for new firms registered on Guam in this period.)

Please note also that increased permitting review ultimately results in more construction. More construction requires additional inspectors to ensure quality control although they are not directly involved in permit reviews.

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Technical positions have been most affected (engineers, technicians, inspectors, etc.) We have been relatively successful at filling positions but only after a long effort. Some of the senior engineering positions have taken 3 years to fill. We have been unable to fill an assistant-chief engineer position over that same period.

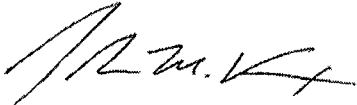
***If any questions about this form, contact David Clark ([ecoplanres@aol.com](mailto:ecoplanres@aol.com)) or John Knox ([jmk@johnmknnox.com](mailto:jmk@johnmknnox.com)); phone 808-523-1352.***

As previously noted, we have revised our compensation to package to be more competitive with the private sector. We have had to go to the very high end of new ranges to attract registered professionals with needed skill sets. We have also created a scholarship program in order to attract and establish commitments from engineers in training.

The net result is that our engineering department has not been able to provide the level of technical support to our operations units that is needed nor dedicate time to improvement initiatives that should otherwise be priority due to the additional workload driven by proposed military growth.

We greatly appreciate the time you have spent assisting us on this important project. Thank you for your cooperation.

Sincerely,



John M. Knox  
And David C. Clark

***If any questions about this form, contact David Clark ([ecoplanres@aol.com](mailto:ecoplanres@aol.com)) or John Knox ([jmk@johnmknox.com](mailto:jmk@johnmknox.com)); phone 808-523-1352.***

**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**  
**For Government Units with Involvement in Permitting, Permit Review, and**  
**Monitoring/Enforcement**

Name of Agency: **Department of Parks & Recreation**

Division/Group: Historic Preservation Division (State Historic Preservation Office)

**Contact Information**

Contact Person/Title: Joseph W. Duenas

Phone: 671-475-6295/ 6288

Email: joe.duenas@dpr.guam.gov

Information for Fiscal Year: <input checked="" type="checkbox"/> FY 2005 (preferred) OR <input checked="" type="checkbox"/> FY 2009		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <u>217,875.28</u>
	<b>B. Actual Expenditures</b>	\$ <u>197,692.14</u>
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <u>108,594.64</u>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <u>7</u>
	<b>B. Total FTE Approved, Not Filled</b>	# <u>4</u>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<u>45</u> %
	(2) Monitoring/Enforcement	<u>25</u> %
	(3) Policy/Planning	<u>5</u> %
	(4) Administrative	<u>10</u> %
	(5) Other - special purpose (describe)	<u>15</u> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <u>612</u>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <u>104</u>
	(2) Referrals for review <i>from DPW</i>	# <u>381</u>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <u>127</u>

**Socioeconomic Impact Assessment Permitting Agency Questions**

**ADDITIONAL QUESTIONS ON STAFFING**

**5. Turnover:**

- a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

We have had skilled employees (i.e. State Archaeologist) offered higher paying position in other sectors outside of Government of Guam, allowing for higher compensation.

- b. If Yes, what types of positions have been most affected?

Technical and professional positions (archaeologists, historic preservation specialists, and support staff, etc)

**6. Labor Availability:**

- a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

Archeologists, Historic Preservation Specialists- We have adapted by increasing the current workload on these types of positions, however, there is concern that this will create an eventual "bottle-neck" in the permitting process.

**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**  
**For Government Units with Involvement in Permitting, Permit Review, and**  
**Monitoring/Enforcement**

Name of Agency: **Department of Public Health & Social Services**  
 Division/Group: **DEH**

**Contact Information**

Contact Person/Title: **M. Thomas Nadeau, Environmental Health Specialist Administrator**  
 Phone: **(671) 735-7221**  
 Email: **masatomo.nadeau@dphss.guam.gov**

Information for Fiscal Year: <input checked="" type="checkbox"/> FY 2005 (preferred) OR <input type="checkbox"/> FY <input type="text"/>		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <b>1,587,867</b>
	<b>B. Actual Expenditures</b>	\$ <b>1,071,445.30</b>
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <b>600,128.50</b>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <b>18</b>
	<b>B. Total FTE Approved, Not Filled</b>	# <b>21</b>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<b>11.39</b> %
	(2) Monitoring/Enforcement	<b>55.28</b> %
	(3) Policy/Planning	<b>2.78</b> %
	(4) Administrative	<b>30.56</b> %
	(5) Other - special purpose (describe)	<b>0</b> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <b>2848</b>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <b>2805</b>
	(2) Referrals for review <i>from DPW</i>	# <b>43</b>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <b>0</b>

**Socioeconomic Impact Assessment Permitting Agency Questions**

**ADDITIONAL QUESTIONS ON STAFFING**

**3. Turnover:**

a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected?

Engineer

**4. Labor Availability:**

a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

No

Yes, but *not* because of any effects from announcement of military buildup

Yes, and this is believed due to the announced buildup (*explain below:*)

b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**  
**For Government Units with Involvement in Permitting, Permit Review, and**  
**Monitoring/Enforcement**

Name of Agency: **Guam Fire Department**  
 Division/Group: **Fire Prevention Bureau**

**Contact Information**

Contact Person/Title: **Fire Captain Joey M. Muna**  
 Phone: **(671) 472-3311**  
 Email: **joey.muna@gfd.guam.gov**

Information for Fiscal Year: <input type="checkbox"/> FY 2005 (preferred) OR <input checked="" type="checkbox"/> FY 2007		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <b>717,695.40</b>
	<b>B. Actual Expenditures</b>	\$ <b>1,200.00</b>
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <b>716,495.40</b>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <b>13</b>
	<b>B. Total FTE Approved, Not Filled</b>	# <b>0</b>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<b>31</b> %
	(2) Monitoring/Enforcement	<b>31</b> %
	(3) Policy/Planning	<b>7.6</b> %
	(4) Administrative	<b>7.6</b> %
	(5) Other - special purpose (describe)	<b>23</b> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <b>184</b>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <b>0</b>
	(2) Referrals for review <i>from DPW</i>	# <b>184</b>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <b>0</b>

**Socioeconomic Impact Assessment Permitting Agency Questions**

**ADDITIONAL QUESTIONS ON STAFFING**

**1. Turnover:**

- a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected?

The Plans Review, Code Enforcement, and Fire Investigation Section are staffed with Fire Captains only. All positions below Fire Captain have been eliminated due to a compensation issue.

**2. Labor Availability:**

- a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

The Plans Review, Code Enforcement, and Fire Investigations Sections has been most affected due to the shortage of personnel who possess the required knowledge and training needed. Currently, personnel assigned, who lack the required knowledge have been undergoing "on the job training" by persons who do possess the knowledge and training. Also, all persons assigned to the Prevention Bureau have the opportunity of attending the National Fire Academy for formal training associated with the prevention Bureau.



**Socioeconomic Impact Assessment Permitting Agency Questions**

**GOV GUAM AGENCY SOCIOECONOMIC IMPACT ASSESSMENT QUESTIONS**  
**For Government Units with Involvement in Permitting, Permit Review, and**  
**Monitoring/Enforcement**

Name of Agency: **Guam Power Authority**  
 Division/Group: **Office of the General Manager of Consolidated Utilities Services**

**Contact Information**

Contact Person/Title: Joaquin C. Flores, P.E., GPA General Manager  
 Phone: 648-3225/3205  
 Email: jflores@gpagwa.com

Information for Fiscal Year: <input type="checkbox"/> FY 2005 (preferred) OR <input checked="" type="checkbox"/> FY 2009		
<b>Budget/Costs</b>	<b>A. Total Budget</b>	\$ <u>463,936,000</u>
	<b>B. Actual Expenditures</b>	\$ <u>431,279,000</u>
	<b>C. Wages, salaries, Benefits Paid</b>	\$ <u>37,871,000</u>
<b>Staffing</b>	<b>A. Total Working Staff (FTE Positions Filled)</b>	# <u>592</u>
	<b>B. Total FTE Approved, Not Filled</b>	# <u>75</u>
	<b>C. <u>Estimated</u> Percent of Staff Time On:</b>	
	(1) Permitting Review/Approval	<u>30</u> %
	(2) Monitoring/Enforcement	<u>25</u> %
	(3) Policy/Planning	<u>10</u> %
	(4) Administrative	<u>10</u> %
	(5) Other - special purpose (describe)	Other Engineering Duties as Required <u>25</u> %
	<b>Total</b>	<b>should add to 100%</b>
<b>Permits</b>	<b>A. Total Number Permits Reviewed</b>	# <u>FY 08: 908</u>
	(1) Referrals submitted <i>directly to YOUR agency</i>	# <u>265</u>
	(2) Referrals for review <i>from DPW</i>	# <u>618</u>
	(3) Referrals for Review from <i>Agencies Other than DPW</i>	# <u>15</u>

**Socioeconomic Impact Assessment Permitting Agency Questions**

**ADDITIONAL QUESTIONS ON STAFFING**

**1. Turnover:**

- a. Has your division/unit experienced any recent increase in turnover (above and beyond the usual) in skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and believed due to the announced buildup (*explain below:*)

Recently, GPA's Surveyor Supervisor left GPA's employ to work with a private Engineering firm in anticipation of military projects.

- b. If Yes, what types of positions have been most affected?

**2. Labor Availability:**

- a. Has your division/unit experienced any difficulty in filling vacant positions for skilled personnel related to permitting reviews?

- No  
 Yes, but *not* because of any effects from announcement of military buildup  
 Yes, and this is believed due to the announced buildup (*explain below:*)

- b. If Yes, what types of positions have been most affected, and what sorts of strategies have you adopted to cope with these difficulties?

GPA has encountered difficulties in recruiting Engineering personnel who play a crucial role in plan review and the permitting process. Recently, GPA has implemented the Certified Technical and Professional Pay Adjustment Scale to compete with US mainland to retain its existing Engineering and Technical staff and to bolster its recruiting efforts. GPA has also expanded its job posting announcements to include the Internet, Government of Guam inter-agencies, local and US newspaper publications. Additionally, multiple engineers are tasked to handle the permitting process to provide flexibility in attending to customers' needs.

## Appendix D

February 2009 Guam Interviews

**Guam and CNMI Military Relocation EIS/OEIS  
Socioeconomic Impact Assessment Study**

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**Bank of Guam**

February 4, 2009, 1300 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Matt Cruz	Assistant VP Business Development Manager
Caroleen Toyama	Community Planner, NAVFAC Pac

**Meeting Summary/Topics Discussed:**

## 1. Housing Market

- Can provide data on annual median prices.
- 264 homes on the market for sale and 190 condos vacant. Can get that data.
- Emerald ocean view 268 units. High end.
- Tala Verde Estates around 200 units \$800k-2M
- All developments are on the pricey end.
- Market cannot absorb recent high end developments. Developers come with no financing and enough to break ground but end up leaving.
- Ironwood is affordable in that the rent is federally subsidized. Offer for \$746 MO. Fed kicks in the rest then after 15 years reverts to developer.
- 2500 planned/permitted housing units but there will be no local development in housing if military buildup happens. The military construction will swallow it all up. Possible lottery's for concrete due to shortages.
- Companies are hoarding materials supply's –rebar and cement, waiting for higher prices.
- Reduction in home/condo sales of about 47% but prices not moving. Prices will drop after some time.
- Ideally, market develop to meet all incomes for home ownership along with increase in median income BUT Not seeing that, seeing property increase without income increase.
- Current Housing stock, and vacancy (livable units) –
- Not enough units if relocation happens but there are too many now!
- Guamanians build-out (extend or build onto current units) so there are rarely new homes coming on the market at the lower end for new population.
- Price would spike with buildup. Increase in crowding – move in with family.
- Future conditions growth in stock vs. Growth in population and prices

2. Growth Model

- Explain how the credit crunch has affected lending to small business and individuals
- Homes priced to high for incomes. No home loans.
- Lots of vacant high-end homes. Probably will continue to be. Selling 5 at a time at greatly reduced prices.
- People are suffering from the speculative bubble brought on by announcement of relocation.

**University of Guam**

February 6, 2009, 0930 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Robert Underwood (primary interviewee)	President, UoG
David Okada	University of Guam

**Meeting Summary/Topics Discussed:**

1. **Q: Capacity challenges if no buildup?** Finding right mix of programs for sustainable economy. Meeting challenges of solid waste, energy, etc. Our capacity to meet to do that is constrained by levels of current funding. To sustain a local bureaucracy or youth interest in working in Guam, must provide high-quality training and keep them here. Gov't bureaucracy in poor shape because the whole experience core of govt. service is gone – retired, out-migrated – and nobody to replace them. No local talent pool, no clear plan to recruit or develop that cadre of people. Uof G provides core of professional services for 15-20 years, but there are resource challenges. Ongoing economic changes regardless of whether military coming: What are we doing with energy, how develop robust tourism industry, which is university's role as generator of economy. We've met challenges with reasonable success for last 15-20 years, given basic limitations of \$3B economy and 165,000 population. Not facility-challenged with current enrollment, but 8% increase last fall and now almost at capacity. Now we'll have to determine how to squeeze more people into space, get faculty to teach more days and hours.
2. **Q: Plans or proposals that would improve your capacity but have not yet been funded or implemented?** Facilities Master Plan is critical one. Issue for us is we have no clear model to tell us how many nurses or other professional job needs. We've asked for a GAO Study for needs that would be served by baccalaureate education. We're estimating need for 60 nurses/yr for next 5 yrs, while we currently produce 30. But we don't know how many engineers or envtl scientists will be needed by federal government. Core of middle class, want them to come from island. If we don't enter that window of opportunity maybe it won't be there anymore.
3. **Q: Special services that UOG provides to either the military or to likely build-up related immigrant populations?** Lots of challenges from in-migrant populations. If offer to FAS, why would a community college there be jazzed to train people for Guam? And FAS, unlike H2s, are not guaranteed prevailing wages and services (unless somebody decides to do that now.) I'd rather bring in 2,000 rambunctious Oklahomans who will raise our wages and benefit everybody!
4. **Q: Most federal funding, like Worker Dislocation money, is tied to construction worker training – why don't you open that up for professional training?** Have put it out as a thought piece to lots of different folks – testimony to Congress is best reference for thoughts on that.
5. **Q: Where will labor come from for long term?** Hope that most will come from here, and returning, and from within the region. Really key to assure Micronesians get prevailing wages



and health benefits. That means Micronesians won't come and stay, and bring families and be a burden on local economy.

6. **Q: Could Guam ever accept significant growth in other Micronesian population, becoming a multi-ethnic "capital of Micronesia" with first place for Chamorros?** Micronesians now an out group. But they're increasing like mad anyway. Need some sort of "official line" if ever adapt Hawaiian model of celebrating multi-culturalism with deference to first culture.

**Center for Micronesian Empowerment**

February 7, 2009, 1200 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Jay Merrill	Board of Directors, Center for Micronesian Empowerment (CME) (Mr. Merrill is president of Market Research & Development, Inc.)
April Aranda	Research Asst. to Mr. Merrill

**Meeting Summary/Topics Discussed:**

1. ME is aimed at improving the acculturation (CME term is “adaptation and assimilation”) and employability of Micronesians already on Guam. It is in the early stages, having received enough seed money (\$17.5K) from local construction companies and other private-sector donors to hire an Executive Director, charged with raising \$250K by June and opening an actual Center by September. Fundraising focus will be private sector and federal grants, not GovGuam. Private sector appreciates Micronesians because of lower wages, while GovGuam gets Compact Impact funding based on Micronesians being a drag on government rather than an asset. CME has links with Guam Contractors Assn. and its training program – James Martinez and Bert Johnston are on CME Board.
2. Three main purposes: **(A)** Provide acculturation through ESL training; social services referral and counseling, career planning; **(B)** Provide full gamut of workforce training (basic skills, technical, career); **(C)** Provide guaranteed employment for successful graduates of training program in five high-demand areas covered by companies on board of directors – construction, retail, hospitality, security, and maintenance.
3. A Strategic Plan anticipates a process beginning with intake counseling and assessment, then assignment as appropriate to various referral and training programs leading up to job placement. The target is 100 graduates within first 12 months of operation and 200 individuals a year assisted by social assistance program. This will require a substantial staff – the intended organizational chart lists at least 8 positions under the ED, and some logically would need multiple workers representing various cultural and language groups within the Micronesian community.
4. Between now and June, CME will **(A)** seek additional bridge money of about \$35K – a Hawai‘i-based nonprofit has indicated interest; **(B)** conduct a qualitative needs assessment of the Micronesian community – Dr. Ansito Walter of the University of Guam Sociology Dept. will send grad students to interview church and other community leaders to determine nature and magnitude of issues linked to assimilation and employment; **(C)** present findings at a community forum intended to stimulate interest in the project; and **(D)** raise the \$250K needed to operate the program for an initial 1-year period. Expressing interest at present are Matson, Citibank, and the Dept. of Interior. Nick Pua of DOI has told CME that DOI’s matching funds would in part depend on proof that jobs will be of private-sector nature.
5. While CME is focused on Micronesians already on Guam, they have been contacted about possible linkages with a vocational training program at the College of Micronesia’s Majuro (RMI) campus, funded in part by the Asian Development Bank (ADB) to encourage export labor to Guam and other parts of the U.S. CME is considering the linkage, though it may raise political

issues because of resistance in some quarters to apparent encouragement of more Micronesian immigration.

**Other comments:**

- Mr. Merrill noted the current Census of Micronesians will be the first attempt to do a complete enumeration rather than sampling, and will consist of only 5-6 questions. However, it is difficult to obtain reliable information, because Micronesians often fear to report their status in case it has an impact on themselves and their family's efforts to obtain housing assistance and other local government social services.
- Micronesians accept crowding for economic reasons, not because it is cultural norm – the sort of household density often found on Guam or Hawai'i is not found in their home islands.
- ADB has identified "export labor" as key strategy for creating foreign exchange and increases to national income accounts. – i.e., funds sent home, just as Philippine economy benefits from overseas workers.
- Guam Chamber of Commerce provides receptions for every Naval ship that has its first port visit on Guam within a 2 year period. The Navy publicly recognizes the hospitality offered by the Guam Chamber of Commerce as generous if not the most generous they obtain from any other U.S. community.

**Domestic Dependent Elementary and Secondary Schools (DDESS)**

February 4, 0900 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc.
Caroleen Toyama	Community Planner, NAVFAC Pac
Dr. Gayle Vaughn-Wiles	Superintendent
Dr. Susan E. Burdick	Assistant Superintendent

**Meeting Summary/Topics Discussed:**

1. Structure:
  - a. DODEA – umbrella organization and overseas locations
  - b. DODS – dependent schools – overseas locations (Europe and pacific)
  - c. DDESS – territorial – Guam, Puerto Rico ...
  - d. In Guam DEDESS was just created, so everyone refers to DODEA
2. Locations:
  - a. McCool Elementary and Middle Schools – currently 41 students over capacity
  - b. Andersen Elementary and Middle Schools – just at capacity - Andersen Elementary currently has 100 slots available and the Middle School has 10-15 slots available
  - c. Guam High School – just at capacity – currently has 50 slots available
3. Projected Growth:
  - a. Supposed to get 6 new units into existing schools – projecting an overage with the increase just this year
  - b. Supposed to be building six schools in the main cantonment area – Amber can follow up with Julie Hong or Robert Leong at the Air Force
  - c. We need to look at where we need to put these kids – there will have to be a pecking order – what is required vs. temporary
  - d. Will be at capacity by next year. If at capacity – will come out with alternate plans – portables, alternative locations.
4. Eligibility:
  - a. Active Duty with orders to Guam
  - b. People hired from off-island will be eligible to send their dependents schools:
    - i. Transferable Positions – eligible for schools even though living off-base
    - ii. Off-island hires (CONUS) – transportation agreement

- iii. Gs11 level and above
    - c. Dependents of retired not eligible, unless they are employed in a transferrable position
    - d. Dependents of contractors are not eligible for education services
    - e. Overseas DODs are
    - f. Coast Guard treated as active duty
    - g. Verification of eligibility: Have to have it certified by HR, including letters of employment and orders. Also a part of the DEERS system – eligible for health and commissary.
    - h. Federal Civilians (such as customs workers) don't directly pay tuition but their agency pays tuition. With invasive species plan – expecting a lot more these types of people – these people will be on PCS orders, and those agencies will pay. BUT if they are hired locally at the GS13 level, it is the agency's call if they are going to certify. DDESS on Guam gets almost a \$ million in federal tuition (Fish and Wildlife and Homeland Security). Trying to keep educational services down to two kids per family max – it costs \$20k per high school student and \$14-\$15 for lower schools.
    - i. Many people on Guam are part of the National Guard – once you get full-time orders for a full year, you are eligible to send your kids to the schools. Sometimes people have follow-on assignments, and many choose to do this so that their kids can remain in school. Once you start in a school, you are grandfathered in for that entire year.
    - j. Teacher's kids are allowed to attend tuition-free on a space-available basis – only on Guam – not intending the take these children out of the school system.
- 5. Interaction with Other Educational Institutions: No agreements with private schools or GPSS – no one wants to go to these schools. Will have a small number of military families that want to go to a Christian school – Harvest Baptist (v popular), St. Johns (v expensive), lot of catholic schools. Don't have statistics on military use of those schools. Donate used furniture, busses, computers – processed through DERMO – they have information for that – military system for overages – people can come in and ask for desks and if they get the desk.
- 6. Student Interaction: Primarily through sports – part of the local sports athletic league – pay into that – students compete with other schools. High school has a good interaction with a Japanese school.
- 7. Teacher Interaction: Teachers belong to international reading association and phi delta kappa – they will interact in that way with local teachers – educator day – professional development institute – plan and have large general assembly of all teachers in one location and invite other schools to come a participate – curricular events related to music, art, etc. best practice strategies are discussed and explained. Superintendent gets together with Nerissa from GPSS.
- 8. Special Education program: eligible special needs kids can come to school – right now only 2600 kids in the school and don't have a full-fledged special ed program. It only has CAT1 students that can be mainstreamed into the classroom. There are CAT levels 1-4, with 4 being the most severe (can't walk, speak etc.) Do not have the staffing for those programs.
- 9. Staffing: Currently, pretty much even board – had an influx of students in the fall and got additional staffing at Andersen. Able to move people around to meet numbers. At this time, have sufficient staffing. However, expecting more students next year and will have to make adjustments.

- a. Staffing ratio - Elementary – 1 to 18 students; Intermediate/Middle/High – 1 to 25 students. Looks at student enrollment regularly and have all the data – for every district – then they have a new way of making projections for the next year – these projections are verified locally and then those numbers are placed into the formula (student/teacher ratios) – All boils down to about 1 teacher to 25 students.
  - b. Teacher assistants – kindergarten and special-ed teachers always have an assistant.
  - c. Also, individuals students might require an aid through their individual plan.
  - d. PAC office in Okinawa - given a number of hours to accommodate special-ed students.
  - e. Clerical staff – adjusted due to number of people in school. Everyone given a secretary, registrar, supply man, and then increase those numbers depending on size of school. Also allocated from DODEA and PAC.
10. Contracted Services:
- a. Food supply – contracted here – work with USDA (Ike Santos) in Guam and procurement office
  - b. Transportation
  - c. Grounds maintenance and cleaning
  - d. Everything is expensive, but they do a really good job
11. Plans for Buildup: Would be hiring certified teachers. Many hopefully from the US. Expect some transfers from Okinawa. Think that transfer system during that time frame will accommodate. Years ago they had a draw-down in Europe – educators were placed in a transfer system and had a top priority in the transfer system. Most of the teachers in Okinawa American – in overseas locations, don't have a great influx of local people working as teachers – usually about 95% are on transportation agreements. In Guam however, there are a limited number of people on a transportation agreement, instead, most are local. Must be a US citizen to teach, and there is priority in hiring military spouses. Biggest concern – pre-deployment creep of people coming in – marines dribbling in right now – people representing mar4 pac – not here before – how much are they going to come in – we need a heads up – don't have capacity. We haven't done one thing on the schools yet – very complicated. The way that marines want to implement their housing – higher, middle, low – can't divide schools by class – if that is going to happen – will drive our decisions on how to tool our schools – that is a quality of life issue.
12. Okinawa has 13 schools right now. Military school demographics are essentially the same – diverse population no matter where you go. Marines are more white – younger folks have the larger group of kids – marines typically get married earlier. Depends on the rank structure that come – if get high-ranking people, will flatten out the curve. Also more people will bring their kids to Guam vs Okinawa. Marine – one year tour if unaccompanied. Army and Other – longer tours of duty. Some guys willing to sacrifice one year. Navy has a lot of Asian American pacific Islander. Army has more African American (1/3 of army troops). All lends to diversity.
13. Documents Provided: DDESS Briefing in Powerpoint

**Fuetsan Famalao'an**

February 9, 2009, 1600 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Caroleen Toyama	Community Planner, NAVFAC Pac
Nicole Santos	Co-Chair
Sarah M. Thomas-Nededog	Exec. Director, Sanctuary, Inc.
Lourdes (Lou) Leon Guerrero	President and Chair of the Board, Bank of Guam
Dr. Vivian Dames	Assoc. Prof. Social Work and Women & Gender Studies

*Note:* Although she was not there, Lisa Cipollone was named as POC for verification of notes: [cipo@guam.net](mailto:cipo@guam.net)

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**Meeting Summary/Topics Discussed:**

1. Dr. Dames and Ms. Thomas-Nededog: Fuetsan Famalao'an was organized year and half ago as nonpartisan advocacy group concerned with bringing concerns of girls and women into local and federal plans for the military buildup. Key purposes; (1) Seek information about how planning would be conducted, how people would participate. (2) Educating women through forums to gauge women concerns, as well as focused workshops on issues like child welfare and protection and human rights. The group's concerns include fears the military buildup will exacerbate existing inequalities on island (many attributed to past military/colonial history) and/or will result in equitable distribution of social and economic benefits, including share of business going to women-owned firms; also, that the military buildup may forestall the US federal government addressing reparative injustices, CHamoru self-deyermination.
2. The great majority of the meeting was devoted to Q&A between Fuetsan Famalao'an and Ms. Toyama about the EIS process. Topics included:
  - Frustration over lack of planning assumptions and information from military. There is a feeling of mistrust, in part because JGPO never seems to volunteer information. Ms. Toyama: This is standard military approach, followed on Mainland, too. Dr. Dames: But Guam unique, not state or foreign nation.
  - Importance of written questions on Draft EIS as way to surface issues or dissatisfaction with initial level of analysis. Given the aggressive EIS schedule, this may be the most practical way for the group to assist in identifying EIS data that should (and can) include additional attention to equity issues.
  - Discussion of scoping procedures and requirements associated with obtaining legal standing.

- Discussion of military outreach efforts and other actions to educate businesses (including women-owned businesses) on ways to maximize chances to obtain contracts.
  - Explanation of probable EIS volume outline, although this can change.
  - Discussion of “reparative justice” – Ms. Toyama: Under NEPA, mitigations are warranted only if action itself causes or exacerbates inequities. Categories of mitigation (in order of priority): Avoidance, minimization, compensation
  - Many of the group’s concerns may fall under the Environmental Justice chapter being prepared by overall EIS contractor TEC Inc.
3. Ms. Thomas-Nededog asked if EIS can include information about USMC impacts on Okinawa. Dr. Dames said under the current [policy framework, the sex and adult entertainment industries are likely to increase; as well as problems associated with human trafficking; child abuse and neglect, and sexually transmitted diseases will increase. Ms. Toyama said all these topics can be addressed only if data exist, and USMC said it lacks information on topics like military crime on Okinawa. Ms. Nededog-Thomas said the group obtained crime information from Japanese government.
  4. By the time Ms. Toyama left, the meeting had exceeded its allotted time. The group asked Dr. Knox, “How can we help?” and he replied that good data on social issues has been difficult to find on Guam. Members said Ms. Nededog-Thomas would send their crime information to Dr. Knox and would seek other relevant data sources and reliable studies not easily found on government websites.



**Guam Environmental Protection Agency (GEPA)**

February 5 2009, 14:00 hrs

Attendees:

Attendee Name	Title/Organization
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Mike Gawel	Chief Planner, GEPA

**Meeting Summary/Topics Discussed:**

1. For EIS purposes, we have asked for single best workload indicators for each of the 5 divisions since 2005. Because of lack of administrative support, Mike has been working on this himself in spare time (says he appreciates the value of this information and wants to assist despite having to search through old records). His handwritten notes to date indicated that he was jotting down a number of indicators, and we urged him to narrow down to a single good indicator per division.
2. Needs to find another office facility because now on airport land and will be evicted next year. Planning money for this has been frozen because of landfill situation. Seeking \$2.5M construction money from Dept. of Interior and/or Dept. of Defense. GovGuam lands available. This need for new facility is independent of buildup.
3. However, buildup definitely putting severe pressure on need for staffing. People with expertise very difficult to hire at current GovGuam salaries and much of the need will be temporary during construction period, so planning to outsource to contractors, including off-island via electronic communications. However, will then be in-house need for contract management specialist.
4. **Q: Greatest new workload demands during construction period?** Processing construction permits – nature of review varies by GEPA division. GEPA acts as on-island agent for national EPA, which has no on-island personnel. Hopes EPA might send someone out over next several years; highest immediate need is for someone with technical expertise in EIS review for 2-3 years. Also need to import expertise in testing for radioactive submarine leaks.
5. **Q: Greatest new workload demands during operational period?** Verification of permit conditions and monitoring provision of promised mitigations – e.g., Navy to spend more than \$100M for mitigation of dredging harbor for aircraft carrier – must contract people for monitoring of that. Example – Kilo Wharf revegetation; military has commitment, but GovGuam has limited capacity to monitor and make sure commitment is met over the years.
6. Also in operational period, will need staff to react to complaints (since highly unlikely to ever get enough staff to be proactive and needs help just being reactive to public complaints). With bigger developments, more people calling in complaints if impacts not fully addressed thru construction permitting process. This ties back to monitoring issue. Would like to get part of military mitigation funding to beef up monitoring. Hopes to think of more specific details so that any EIS mitigation recommendation can be specific in nature.

**Global Facilities Services**

February 5, 2009, 1400 hrs

Attendees:

Attendee Name	Title/Organization
Paul Sage	Principal, TEC Inc.
David Alcorn	Director business development
Clifford Guzman	VP technical Operations
Lucy Alcorn	President/CEO

**Meeting Summary/Topics Discussed:**

1. Current operations: Quality of life services - manage family and bachelor quarters. Moral/recreation – gyms, pools libraries etc. Manage family housing. Mini-BOS contractor. Provide DODEA food. 8A firm – minority owned. 350 employees, all live here. Been in business for 5 years. Mostly navy contracts. Some recent off-island activity in Antarctica (on spec so far). On program management team for buildup – communications.
2. Constraint that could slow down the buildup is getting contracting done quickly enough.
3. Imports %?: 100% of products are imports redistributed through local wholesalers.
4. Expected Future Operations: Hope to grow. And enter program management support.  
New opportunities in retail food, own more brands inside/on base (currently own a Dominoes, Subway and others).
5. Business opportunities: Work with large developers now, have talked to them about taking part in new Marine activities. With Japan US funding... goes into Treasury there is concern about whether Japan money will go to US/Guam companies. Some large companies want to work with local firms, others want to provide services for H2 housing. Have spoken with large US developers.  
  
Actus – SPE concept may work like this: money from Japanese to be repatriated somehow. Local housing market will be affected by foreign operations.  
  
Makes sense for marines to house themselves outside the base.  
  
Re: having enough housing to accommodate new population: Anything's possible, could get housing done. Mil will compete with non-mil. May be a little rough with supply problems. Construction prices went up in 90's, cement price went up 300%. All prices went up – expect prices to go up lots.  
  
Workforce will be better this time because of H2.  
  
Business opportunity under the heavy constraints – opportunities in facilities services for private contractor bringing in workers. Feed and manage H2 camps.  
  
Buildup is the only thing Guam has going for it. Tourism is down.  
  
Not sure military can coexist with tourism, may supplant tourism.

6. Cultural issues: Local people know what it's like when the Island is overpopulated and, and what's going to happen on Guam when the Marines who are getting kicked off Okinawa for rape come to Guam?

Would be a good idea to have troops go through orientation before the come to Guam.

Major concern about where culture is going? Are Chamorro becoming a minority in their own territory?...now 1,500 homeless on Guam. Fear of losing language and cultural tradition or that tradition will be packaged and sold.

Not like the 1968-1970 because there are way more residents now – this will be a bigger problem culturally.

There are high expectations for cultural analysis in EIS.

7. What's the difference between a local company getting a contract and a mainland company?

- Profits stay in community and are reinvested.
- Effort going in to getting GRT paid to Gov. Guam.
- Anxiety about deals getting cut in DC.

**Other comments:**

There is restlessness about Alaskan preference firms getting lots of contracts. Sense they're trying to take rice bowls away.

**Guam Chamber of Commerce**

February 10, 2009, 1500 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Frank Campillo	Chairman of the Board, Guam Chamber of Commerce (GCC)
Reina Liddy	President, GCC
Charlene Goo	Tourism Committee member and VP Pacific Operations, Outrigger Resorts
Carl Peterson	Tourism Committee member and President, Money Resources, Inc.
Joey Crisostomo	Tourism Committee member and President, Cars Plus

**Meeting Summary/Topics Discussed:**

1. Vertical integration of tourism industry that reduces multiplier effects for local economy: Somewhat reduced from period of initial Japanese development due to factors such as more FIT travel. But still substantial amount of this. Wholesalers still drive lots of the travel, foreign owners still have own laundry service, golf course.
2. For construction period, one concern voiced by other tourism stakeholders did not seem important to this group – the fear that the military buildup would result in GovGuam diverting resources from supporting tourism away to military. That was because they did not feel there really was substantial GovGuam support.
3. However, the group was strongly concerned about labor supply and wage increase impacts in the service industry (and with some parallel concerns about labor supply and materials costs for any new resort construction) during the military construction boom years. Would always prefer Guam or other U.S. workers, but although this is a politically sensitive topic, employers are quietly studying the possibility they may need to take advantage of the H2 visa waiver cap for service workers during that timeframe.  
  
New FAS labor supply could just meet a small fraction (“drop in the bucket”) of anticipated total need, and past experience with Mainland workers suggest they find wages too low and/or the climate too problematic. Wage increases are considered inevitable, but also a serious challenge to the competitiveness of the industry with lower-cost destinations. H2s would obviously help with that. H2s have their own cost factors, so may be more realistic for larger employers than smaller ones.
4. **Q: How can (non-hotel) private companies supply all the needed housing for H2s?** Not entirely sure yet, but have strong faith in Guam’s entrepreneurial spirit. We are hearing about labor brokers who are also doing housing projects, such as conversion of existing structures for H2 use. These would then be presumably converted to other uses after the boom.

5. **Q: Will materials shortage interfere with ability to provide non-military housing or business development?** We'll make it happen. More concrete silos being built at port. New cranes will help assure steel and aggregate brought in through port. Costs will go up, but we will cope. The real bottleneck and QOL problem will likely be traffic, with all the construction vehicles on the road.
6. **Q: Will short-term employees brought in to deal with non-construction jobs in boom have many dependents?** Consensus is no, very few dependents.
7. **Q: Based on previous hotel construction boom, do workers cause many social problems?** No, tended to save money and send back to Philippines. Would be bigger social impacts from US construction workers, who spend more at bars, etc.
8. **Q: Concerned as other industry stakeholders about large military operations displacing higher-paid premium guests during some seasons?** No, the market will work that out – we'll take the higher-paying guests, and military will learn to do things in off-seasons. However, we do expect aircraft carriers to create booms when in port. We don't know the numbers, but we have a sense this will happen a lot more now. Unfortunately, no good data on importance of military-related business or friends/family tourism impact, as GVB entry forms not detailed enough.
9. Additional concern about military impact on tourism: Need to be sure GovGuam can provide enough additional police to reassure Japanese visitors – who have unfounded but strong perceptions about unruly U.S. Marines – that Guam will remain a safe destination for them.

**Other comments:**

Carl Peterson reported hearing Veterans Administration spends \$30M/year in Guam.

**Guam Economic Development Authority (GEDA)**

February 6 2009, 1500 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Caroleen Toyama	Community Planner, NAVFAC Pac
Joseph M. Borja	Administrative Director, Chamorro Land Trust Commission (CLT)
Mike Cruz	Manager, Real Property Division, GEDA
Larry Toves	Program Coordinator IV, Real Property Division, GEDA

*Note:* Intent was a joint meeting with the CLT and the Guam Ancestral Lands Commission (GALC) and with GEDA as land managers, but GALC Exec. Director Eddie Benavente did not attend. Most of the Q&A was with Mr. Borja.

**Meeting Summary/Topics Discussed:**

- Q: How does CLT function with so many unfilled positions?** Agency had black eye past few years in terms of getting things done. Front office says limited to \$500K. Since we have special funds account, based on revenues. Asked Legislature to approve staffing pattern. Created unfunded positions that we'll fill as get money coming in.
- Q: Is the CLT financed from general funds or do you have to generate your own revenues?** Own revenues (from licenses and leases), not GovGuam or Federal.
- Q: How many complete Residential and Agricultural Lease Applications are awaiting processing? Is there a backlog?** Backlog of about 3,000. We're addressing, got through 10%. Found that only about 25% really ready to go forward. Sometimes not qualified or have duplicate applications.
- Q: How long is the term of the residential and agricultural leases and what is the annual cost of the lease?** Ag and residential – 99 years, \$1/ yr, \$50 application fee. These are for “Chamorros,” but now defined as anyone descended from people residing in Guam from period between 1898 and prior to Aug. 1 1950 (Organic Act). Homestead lots are between 0.5 and 1 acre. Ag lots from 0.5 to 20 acres.
- Q: What about commercial?** Non-residential or non-ag can be for anything lawful based on zoning, not just commercial. There are two tracks: (1) Commercial licensing for non-Chamorros administered thru DLM, 21-year licenses (set back in 1976, when 20-year mortgage standard), all funds derived go to Land Trust, though DLM has done terrible job in administering these. One of the biggest licenses is Raceway. (2) Commercial leases of varying lengths, 50 year + 49 year option for Chamorro sole proprietor applicants or corporations 51% Chamorro-controlled. In the future, will be able to initiate commercial leases after promulgating our rules and regs. However, now accept leases only if initiated or handed over by another govt agency or Legislature, and

bound by terms. One is municipal golf course. Governor is prohibited from touching Land Trust property – however, Legislature can shift lands.

6. **Q: How many acres of land are under the control of the CLT, and do you have a map?** We think about 10,000 acres, and all are developable. Land Trust and GovGuam in general doesn't really know what it owns. But this info being developed by DLM, supposedly by next week (he doubts it).
7. **Q: Is the Trust responsible for putting the infrastructure in place in residential areas before beneficiaries can construct their homes?** A (Mr. Cruz): Not sure, except knows some lessees don't have infrastructure.
8. **Q: What is your policy on leasing lands to the military?** No policy on that. Commission just starting to talk about it. If military approaches us, we're open – they're just another customer. For licenses, we may work deals other than cash – in-kind services. In fact, prefer that, so Legislature doesn't grab it. Decisions about commercial licenses are made by Board, not Mr. Borja – he recommends but they decide. Applicants can appeal to Legislature, but happens infrequently.
9. **Q: Are you legally authorized to enter into that kind of lease – policy wise, should it be you or should the Legislature decide?** Legislature wants to decide first. They want know, what are you offering? Are you just going to take it, or offer something? What's in it for Trust beneficiaries? Firing range by Andersen could take away 800 homesteads. There's a reversionary clause – why doesn't the military just exercise that?
10. **Q: Do you have inspectors to assure compliance with lease or license terms?** You're looking at him. And we did terminate a license or two for non-payment. Advertising for someone to do that on a full-time basis.

**Other comments:**

Mr. Borja noted that the Commission is appointed by Governor. Recent law requires elected Vice Chair. Now four members and one vacancy. He reports to Commission and is not confirmed by Legislature.

**Guam Coastal Management Program (Bureau of Statistics and Plans)**

February 6 2009, 1130 hrs

Attendees:

Attendee Name	Title/Organization
John Knox	Pres., JMK Associates
Caroleen Toyama	Community Planner, NAVFAC Pac
Evangeline (Vangie) D. Lujan	Administrator, Guam Coastal Mgmt. Prog.

**Meeting Summary/Topics Discussed:**

1. Ms. Lujan is finding it difficult to respond to our request for “best” workload indicators because of the variety of numbers kept and because simple indicators like permit applications do not reflect the key dimension of time. Ms. Toyama suggested another agency has developed an index based on size of development. Ms. Lujan said she will consider feasibility of that for her agency.
2. **Q: Greatest workload impacts from construction period?** Inspections to monitor things like sanitation. We’re already into that – determining if there are problems with stormwater, sedimentation, etc. Also, during 80s, construction workers “raped the reefs” because they don’t understand local conditions and prohibitions; harvested things like sea cucumbers we don’t eat here so we don’t have regs. Took shells and corals. Dept of Ag DAWR (Division of Aquatic & Wildlife Resources) has documentation of that. This will increase our workload to inspect those violations. If there were fees for fishing permits, might fund our enforcement, but thus far Legislature has not approved this.
3. **Q: Greatest workload impacts from operational period?** Will be more on private-sector side, because of things like restaurants and commercial activities and housing and tourism starting to gear up. As with construction, this will lead to increased need for monitoring/enforcement activities.
4. A monitoring policy and mitigation strategy should be ready by end of March. Trying to improve functionality by lessening threats – in terms of monitoring, making sure that solutions are improving the resources. In terms of mitigation, compensation for loss of resources. Can be compensation somewhere else, because (for example) in Apra Harbor there will always be problems, so choosing other areas to spend compensation dollars where we can have an impact.
5. New Guam Seashore Reserve Plan to be implemented “hopefully soon.” (Draft Plan on BSP website now, and Final to be posted by end of February.) When Plan implemented, her agency will take over from Dept. of Land Management the task of working with the Guam Seashore Protection Commission as principal technical advisor on seashore development. Will add elements of monitoring of permit conditions and obtaining some compensation for impacts on public ability to use resources. Will initially increase agency workload by at least 30% to 40%, then stabilize at 20% increase. (This is not totally a buildup impact per se, though buildup contributes substantially to the workload especially in next several years.)
6. Ms. Lujan to send requested 2005-08 staffing; however, it has not fluctuated from 2005 – 11 filled full-time positions, plus some part-time student interns for special public outreach and other



programs.. Have been authorized 3 more full-time people since last fiscal year. Did fill 1 last year with a well-qualified person, then this person quit to take another job with higher pay. Someone else passed it up because of salary, too. Now intend to be less picky, take whoever is available.

7. **Regarding** facilities, needs about additional 500 s.f. For public outreach, you need storage for materials. (Students don't work out of here but come in and get stuff.) This is written down in needs assessment – will e-mail Dinell and Knox. However, she did not link the space needs directly to military buildup.

**Other comments:**

1. CMTF task force still meeting anyway, despite legislative action, and this cooperative discussion is "really helping in terms of focusing our attention on issues. We don't feel so isolated, have much better communication and problem solving." Her program wants to assist DPW integrating smart growth and green approaches into building codes.
2. Emphasized how much time required to respond to various consultant requests and said she hoped this would pay off in terms of federal assistance to them. Assured her that any further inquiries from Tom Dinell would be capped at one more, at most.

**Guam Community College**

February 3, 2009, 1500 hrs

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc.
Mary A.Y. Okada	President, GCC

**Meeting Summary/Topics Discussed:**1. Programs:

- a. Adult Education: Specifically for adult education – a) Adult High School and b) GED. Funded by workforce development funds (federal) –. In terms of H2B accessing these courses, they are not qualified for the federally funded program. In reality, it is the H2B employer accessing the program – if they want to offer ESL or business services courses etc – GCC can offer packaged classes for H2B cohorts. The package is priced for the company. GCC would then recruit additional teachers – these teachers may or may not be full time,
  - b. Apprenticeship: Employers sponsor apprentices (have to be currently employed by that specific employer). The employer works with GCC to develop a set of standards needed to be a professional in a certain area – set of standards is approved by the DOL. Currently 265 employees (as apprentices) and 38 employers participate. Funding for courses is covered by the Manpower Development Fund received by GCC. Some students may qualify for WIA funding provided by the Guam Department of Labor. GovGuam also offers some tax credits for participation in the program (training). Working with employers directly - have prior relationships.
  - c. Continuing Education: Culinary program and electronics are both very expensive and thus are housed in the continuing education program (Guam law allows anyone 55 and older free tuition to degree programs, and can't afford to offer culinary and electronics for free). Other programs in continuing ed include: short term, long term certificate programs (for ex. health). The program is also used to test-pilot programs and to offer other internationally recognized, professional certifications like HR management (PHR). Offer all the training requirements that employers want – GCC is flexible – it is not really a problem in recruiting for the positions. Approximately 10,000 residents per year access these courses.
  - d. Career and Technical Education – offered in high schools (secondary) and postsecondary environments.
  - e. Degrees and Certificates: Over 50 courses of study provided by the college.
2. Eligibility
    - a. H2B – course must be offered through continuing education.
  3. Department of Labor – Active relationship with DOL that still needs tweaking.

4. Locations: Potentially a problem that GCC will lose space at high schools if they become overcrowded with an increase in population. One option would be to offer Career & Technical Education programs in the evenings at the high school campuses.
  - a. Guam Community College Main Campus
  - b. Southern High School
  - c. Simon Sanchez High School
  - d. Okkodo High School – no culinary program at Okkodo.
  - e. Satellite locations in the villages at community centers etc. for the Adult Education program
5. Preparation for Construction - If GCC was going to train the workforce for the buildup, then yes, GCC needed additional resources 3 years ago. Currently, not ready for the construction phase except for the two programs (Boot camp in Construction and Electronics that will be offered this summer). Can use youth employment and additional money through the recovery package, and once the contracts start rolling out, then apprenticeship programs can begin as well. Depending on what they are asking for, can put together a series of classes. GCC has two options, and has federal funding for both – 1) bootcamp – introduction to construction and electronics work for secondary level education this summer and 2) earmark grant – construction and IT – federally funded. If can access federal funds, can put cohorts through these programs. In the short term, the employers are looking to find what students we have that they can employ. Local construction training programs need to be part of the recruitment process – local people would seek out the training if they knew there were jobs out there, but experience with the past construction boom showed that once the boom was over, all the jobs disappeared. Need to provide continuity into the jobs following the construction phase, in the service sector. Green jobs are also the new buzzword for workforce development – GCC is seeking to fit into that model – federal funding will be available for this type of development.
6. Post-Construction Programs – these can focus on safety certification, marketing, OSHA training, inspections, etc.
7. GCC has begun the construction of an allied health building which will be completed September of 2009. Already have a wait list for the LPN program. Salary is one issue in recruiting for nurse instructors. UOG offers the RN program.
8. Articulation is one issue between GCC and the UOG. This is also a regional issue – student courses taken at community colleges in the region are accepted at UOG based on the Pohnpei Accord, a regional MOU between regional community colleges and 4 year institutions is focused on addressing this issue. Other Universities in the region also accept courses, such as the University of Hawaii- Hilo and Manoa.

**Guam Contractors Association**

February 6, 2009, 1000 hrs

Attendees:

Name	Title/Organization
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Caroleen Toyama	Community Planner, NAVFAC Pac
James R. Martinez	President GCA

**Meeting Summary/Topics Discussed:**

1. Workers culturally inclined to fish a lot and fish out waters? Don't know...depends on where they are from. Like to eat fish but can buy fish. Depends on proclivity of those folks to want to fish for sport. Complaints back relate to working for lower wages and resentment from that GCA is pushing DOL for enforcement.  
 Will be more foot traffic, walking on side of roads. Don't use crosswalks and can get killed crossing the roads (mostly FSM folks). Seeing more people from FSM. Good to have FSM if can be taught to be productive but lots of times they come for 5 yrs to get in welfare system and then leave after 5 year limit.
2. Wages: Will go up. Can train 500 at most and will need to augment that supply with oth
3. Last time mentioned this place could turn into the 'wild wild west', can provide some color on that statement? What are the expected habits of workers re: drugs alcohol prostitution etc.? More the individual than where someone is from that measures whether they will cause problems, get in trouble, drink etc.  
 These things will increase due to larger population.
4. Assumptions Confirmation: Labor change – there is a company Manpower company to bring in US workers from Vegas about 3,000 workers, may be more at peak. Will be housed in an apt. building. Will charge contractor a fee. Would displace mostly H2 workers. Won't affect CNMI Local, FAS...2 cnmi programs. 33,000 FSM residents on Guam currently. Center for Micronesia empowerment tries to get FSM folks jobs.  
75 per \$100 Mil - Still accurate...but what specific trade will be needed.  
 Navy job not as labor intensive, but maybe not – would be best to keep 75 per \$100M
5. Purchased on Guam: Lot of mainland suppliers looking to establish business here. Four new steel companies, mostly steel and other materials suppliers. Mainland are looking for opportunity on Guam.  
 Tough to use off-island design because won't be 'stamped and approved'. Equip assumption is OK. Design may shift. May increase. Tanaguchi, Rim TG engineers. Directory.

**Guam Department of Corrections**

February 5, 2009, 0900 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc.
Captain Marie Borja	
Captain Jessie Q. Tupaz	Department of Corrections, Administrative and Financial Affairs

**Meeting Summary/Topics Discussed:**1. Data

- a. SCAAP grant data – Jessie will email SCAAP grant information for the last couple of years.
- b. Database being funded by federal grant (Edward Byrne Memorial Justice Assistance Grant (JAG) Program). Database went live in December 2006, crashed for 6 months in 2007. Ethnicity is currently not recorded fully. Can email 2008 numbers and grant applications.
- c. Types of crime listed – usually people come in on several charges, and final charges might differ from initial charges – at the entry level, when data is collected, they list the most serious crime as the main crime.
- d. Struggle to get both corrections locations to use the database on a equal basis.
- e. current prison population 550 plus.

2. Staffing

- a. Corrections Social Worker – provides any support necessities for those that have been convicted – decides treatment programs.
- b. Parole Officer – in charge of supervised releases. Each officer roughly has about 70 cases – have 7 FTE POs – and a chief PO (more administrative and when has to, will assume a load). One of the POs is currently used as executive security.

3. Cooperation with other Forces

- a. In some states all forces are considered under “public safety”, but here everyone is separate, but all are considered peace officers (have powers of arrest without being deputized - but not a part of the daily work. Parole officers have a little more authority - can go into homes and search and seize without a warrant.
- b. Special ops teams work with police and customs units.
- c. Work with law enforcement when providing assistance during holidays (security support) - 40 corrections and parole officers that are trained in WMD.

- d. Work very well with GPD. Assist GPD with DUI checkpoints – special operations – most of these done at night – curfew is at 10, so doing two things at once – checking DUI and making sure parolees are staying in.
- e. Work a lot with the Marshalls (court officers).
- f. Work really closely with immigration bureau. If going to release someone, will contact immigration bureau. Immigrations office is just now establishing their database. People from Chuuk have been known to come in using one name, and when deported, they come back under a different name.

#### 4. Funding

- a. Federal – SCAAP provides – reimbursement for funds used by correctional facilities to care for non-nationals (can't be from US or territories and the commonwealth). DOJ runs this – in jeopardy of getting cut. Submit total inmate days – receive \$30 a head for total inmate days. Prior year received \$32 a head. Funding is going down per head, but number of people served is going up. Funding pot is a set amount shared by all applicants.
- b. Revolving Account – inmates use of payphone – phone company gives 5%
- c. Local reimbursement – housing per inmate
- d. GovGuam – general admin. Do not get direct funding for compact impact – provide statistics to the governor's office.
- e. Everyone that gets locked up comes to corrections – want to build a 1,000 bed facility and 300 bed facility. Looking into the rural block grant through USDA (provides 80/20 funding) and are applying to participate in the National Institute of Corrections planning to be held September 2010 in Colorado.

#### 5. Service Population and Problems

- a. Inmates are going up because of immigration – Federated states is the fastest growing pop on the island – see a lot of young – culture plays a role – actions that are accepted in the outer islands but are taboo in the U.S. system (ex. can take a wife at 14 or 15 years - CSC (criminal sexual conduct) is one of the biggest violations, as well as DUI and aggravated assault). Alcohol is scarce in the outer islands – it is very expensive – but on Guam it is all over the place. Federated states citizens also practice an eye-for-an-eye or deal with conflict in alternate ways (“My mother called the victim's mother and everything is ok now - paid for funeral – ok with forgiving them”).
- b. Problem: IDs. Families can't see family members because they don't have ID. If someone has a simple charge such as public intoxication, can be released if have ID, but because they have a different ID and a language barrier, these people will be sent to corrections until the court can identify them correctly or get them residential stability. Sometimes they end up doing their time just waiting for this to happen – average amount of time is 6 months if they have all the information/ID. Have been working with DOJ on this (consent decree).
- c. Military – at one time, Air Force entered into agreement that DOC hold their more violent people. However, the last time they got anyone was in 2005. There is a working agreement with Air Force. Military is charged in Guam court – if they are arrested outside, they go through the local system. This is not a common occurrence. If caught for DUI, just an overnight – don't want military to find out. Usually not a problem, unless they have been gone a long time and come back and go out in a large group. Expecting a younger, rowdy population with the buildup. Some military names have showed up in jail

(Perry Doyle, Parker, Spence), but usually they are kicked out of the military for bigger crimes and sent home. Police will be affected more immediately.

- d. Problem: Mixed martial arts is big on Guam – they are testing their mettle against the marines. Everyone being told “take care of your wives the marines are coming”.
6. Documents Provided (via email):
- a. Annual Report – 2007 and 2008
  - b. Detention Population comparison (2003-2008)
  - c. Hold and movement statistics

**Guam Department of Labor – Meeting 1**

February 4, 2009, 0900 hrs

Attendees:

Attendee Name	Title/Organization
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Gary Hiles	Chief Economist GDOL
David Dell'isola	Director AHRD

**Meeting Summary/Topics Discussed:**1. General Update on Guam Economy

- As of September 30 2008..GovGuam revs. Up 8% over 2007, attributed to construction and economic stimulus
- Employment actually up 500 jobs – from construction and federal employment
- Tourism about 5 mos. Ago dropped like 15% 1<sup>ST</sup> Q 2009. Trend continuing lower.
- Hotel rest. Association occupancy tax exactly the same as last year...Raised prices in face of lower occupancy and prices cleared. Renting better products/hotels have improved in quality.
- Power prices just starting to decline.
- Military construction still up, keeping economy and tax revs going. Will continue into 2010.
- Increase in min Wage increasing tax revs.
- Inflation increasing tax revs.
- Hotel jobs down.

2. Housing

- Cheapest 2 bedroom is 150 k and even upper level Gov. workers can't afford these homes.
- Speculative bubble in housing
- Prices may fall temporarily BUT no continuing construction of new housing units.
- Shopping center below JFK was supposed to happen but never materialized.
- 10% vacancy in Homes 20% in apartments (can get verified?)
- No housing shortage but cost too high.
- Not all vacant units listed, check back with Gary
- Pricing of rentals based military OHA
- Rents have been pretty flat over past year. A year or two ago they were increasing.



- Bureau of Statistics and Plans has expanded coverage of CPI.
3. Housing w/ buildup
- Executive homes would be rented.
  - Not sure whether housing can be built during const. phase since workers unlimited (due to H2B availability).
  - Especially early in the construction phase, housing could possibly be built.
  - Possible constraints at port and cement shortages. Everyone expects materials shortages.
  - If worldwide economic growth does not pick up then materials will be plenty...port will be the choke-point.
4. Expecting what down the road?
- More post-holiday layoffs than we've seen already – have already seen some.
  - Austere measures to keep employees is ending as businesses will start closing down.
  - Could change things (improve) – possible that travel may be shorter so Asia may come to Guam instead of Hawaii or mainland.
  - New route from Australia to Guam
  - Closed Bali, Hong Kong routes
  - Visa waiver may be applied to Hong Kong so that mkt. may open up.
5. Local industry
- Small scale for local mkt. Food manufacturing and printing. Ship repair facility. Hawaiian Rock concrete. Some local gov. infrastructure.
  - Wholesale market growth is part of economic development strategy. Airport property opening warehouse, DHL could have distribution hub...infrastructure is being set up to make Guam a shipping/transport hub.
  - Agriculture, no econ advantage to doing it here...unless there was fresh high value organic food for supplying hotels...could grow but expect to stay moderate since labor cost in Phillis so much lower.

**Other comments:**

GDOL is creating time-series data on website should be available on website.

**Guam Department of Labor – Meeting 2**

February 4, 2009, 1000 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
David Dell’Isola	Director, Agency for Human Resources Development, Guam Dept. of Labor (GDOL)
Greg S. Massey	Administrator, Alien Labor Processing & Certification Division (ALPCD), GDOL

**Meeting Summary/Topics Discussed:**

1. Dept. of Homeland Security (DHS) decisions hurting Guam economy in terms of getting competitive bids outside the fence, because Chinese contractors and workers provided the lower end of tier in construction workers, doing projects like lower-cost homes. Korea now is on the approved list, and hoping this may fill some of the void. Malaysia and India also not on DHS list, but hoping they will be after another year or so. They could help with lower end, too.

Korea was always allowed...the statement allude to this being a new situation. The economy in Korea dictates whether or not Korean construction workers will find it appealing to seek overseas work.

2. Under current system (with new DHS provisions but prior to upcoming removal of cap on H2s), can only file permit applications for H2s in April and October – 33,000 limit each time (66,000 per year). H2s becoming much more popular on Mainland, where it is used to legitimize alien workers already there. So must file very early to be competitive, as the slots can be claimed in just a day. At this time, it’s a 4-tiered process: (a) initially file with GDOL (lots of documentation and bonding); (b) file USCIS, which takes a while to adjudicate; (c) embassy levels for visas; (d) Customs and Borders Protection when they land. Can take up to 6 months to get workers on the job here. GDOL has tried to speed its process to help expedite.

Comment: Instead of using permit applications, they should say “H-2B petitions”.

3. In June 09, when caps are lifted, back to more normal process for us for approved countries. People can apply any time – 40 days for GDOL, up to 60 days with USCIS, so just 90-100 days to get workers on ground. However, there is litigation right now that may delay implementation.
4. Larger worker barracks historically have seen more abuses, such as converting really dilapidated old buildings. Right now, 90% of contractors using apartments rather than barracks for housing have proper sanitation, connection to sewers, etc. Barracks have communal showers, sanitation problems, not always sewerred, etc.

Comment: Yes, most abuse detected are from large barracks, however those instances are rare All large barracks must meet building codes or they don’t get approved by Public health. The last sentence is a little off. Yes, they have communal showers, but rarely have all those problems.

5. **Q: Staffing needs:** Serious concern, though we laid out our needs in CMTF report. Needs are incremental – first, beef up Chief Economists’ office to provide better data about what’s happening. In regard to processing, in last construction boom, ALPCD had 15 staffers. Right now it’s down to 4. Really wanted to ask for 30 positions, just asked for 10. Thus far, not one dollar of additional staffing funds. 6.

**Guam Department of Parks and Recreation**

February 13, 2009

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc.
Joseph Duenas	Director

**Meeting Summary/Topics Discussed:**1. Services

- a. Administers public parks, recreational facilities, and beaches
- b. Historic Preservation – monitors all building permits – Section 106 review – that will be the biggest initial impact – increase in number of projects needing to be reviewed.
  - i. Review process:
    - ✓ Send plans
    - ✓ Archaeologist will review
    - ✓ If areas of impact, send letter saying they need to get a monitor – good working relationship
    - ✓ Don't have the authority to stop any construction, just recommend mitigation
    - ✓ Charge for the permit –will have to look into this.
- c. Run softball, baseball leagues, swimming, tennis – provide lessons and have competitions – different people managing this – public private partnerships in terms of teaching.

2. Facilities

- a. Approximately 70 public parks, recreational facilities and beaches:
  - i. Paseo de Susana – basketball court, stadium for baseball, softball field
  - ii. Sports complex in Dededo is being built, more baseball fields and swimming pool
  - iii. Hagatna pool and tennis court – pool is quite old, built 1969 – fair condition
  - iv. Dededo Skate Park – built fairly recently
  - v. Tiyan Rec fields – fair condition
- b. Community centers and parks etc fall under the mayors – 19 mayors on Guam – they deal with maintenance. DPR works closely with them. Mayors also work on after school programs, senior programs, youth centers, etc. at their discretion.

3. Staffing

- a. Can email numbers.
  - b. Historic preservation staffing: 1 planner 4, Territory archeologists, Historian, Administrative Aid, 2 Historic Preservation Specialists, 2 Program Coordinators, 1 Archeologist Technician, Computer Data Librarian.
  - c. Staffing number has probably decreased or not changed significantly over the last couple years since 2003.
  - d. 12 years ago – 160 employees. Today – less than 80.
  - e. Staffing for parks – mostly outsourced – need park attendants (they enforce the rules, pick up trash), and more lifeguards.
  - f. Two most popular beaches on Guam – Ipa and Matapan beach parks – have own lifeguards.
  - g. Maintenance is outsourced (grass cutting etc). This administration recommends outsourcing a lot of agency work. Have contracts per park site – Southern contracts go to one vendor, and Northern contracts to another.
4. Current Issues
- a. A lot of public drunkenness
  - b. Some fights
  - c. Drownings
  - d. Park rangers take care of issues and if they cannot, will call GPD.
1. Impacts
- a. A lot of speculation – real estate.
  - b. Buildup will really affect Guam at the beach parks and visitor parks and community playgrounds and rec facilities.
  - c. Workers will utilize all these facilities.
  - d. Military sometimes go to community parks – 40-50% will go outside, the younger guys will want to be off-base – drink at night – don't want to be on post
  - e. Sports – MWR on base, DPR off base – currently don't work together at all. Should work together more.
  - f. Military – biggest challenge – see it as it is going to be a military mission – there will be a cultural crisis. It is a different world on base than off. Concern that the gap might increase. Cost of housing will go up.\
  - g. Cultural impact/dilution – language.

**Guam Department of Youth Affairs**

February 5, 2009, 1500 hrs

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc.
Christopher M. Duenas	Director, DYA

**Meeting Summary/Topics Discussed:**1. Locations and Services:

- a. Mangilao – for correctional and status offenders – owned, medium adequacy of space. Mangilao – Houses male and female dorm for pretrial or adjudicated for juvenile delinquent (JD) – up to age 21, capacity including drug court is 75 (usually 30 male dorm, 30 female dorm, 15 drug court). Juvenile drug court – more emphasis on the treatment – stringent requirements – opened an additional unit to service these people – originally an overflow unit. Right now 80% of the population has been picked up for possession or intoxication (usually alcohol or marijuana). Most frequent offense is alcohol, 2<sup>nd</sup> most frequent is marijuana. Typically in the school setting – there is a harsher sentence for violation of controlled substance use in a school zone – that violation was designed in law for adults, but a lot of kids get caught in it.
- b. Talofofo – for correctional and status offenders – owned, medium adequacy of space. Status offender facility cottage home – 18 spaces
- c. Dedeo – resource center – leased, adequate space.
- d. Mongmong-Toto-Maite (MTM) – resource center – good center because it is in the GHURA low cost housing – old facility, needs repairs.
- e. Agat (Haya) – resource center – good space
- f. Agat (Pagachao) – GPD took over this space very recently – used to be a satellite facility about 3 months ago – it was originally a GHURA resource center that was vacant.

2. Regionsa. North and Central

- i. Northern part of the island has the bulk of the service population.
- ii. MTM is in the middle of the island - north and central usually work as a team.
- iii. The North has higher socio-demographics, which leads to more burglary.
- iv. North – a lot more activities for youth – skate park, recreation center, malls, raceway is a combo drag strip and has the land mass to offer an off-road competition place.

- v. A lot of kids hang out at the raceway for the drag strip – the raceway park was constructed to alleviate prior deaths that had been occurring because people were racing on the highways at night – GPD and investors got together – it is Chamorro land trust property – lease given and it was built – it has eliminated completely drag racing. Good for public safety – also, a lot of adults in that environment to keep youth straight.

b. South

- i. In terms of crime, Agat has quite a caseload.
- ii. Yona and Agat are gateways to the South – that area is all handled by those resource centers.
- iii. Southern parts – see a little more violence, assault and quite a bit of burglary.
- iv. Quite a bit of marijuana and alcohol – some of the reason is accessibility – South is not as densely population – space to grow marijuana.

3. Military

- a. Altercations with the military will probably occur in the 18-21 year old age bracket.
- b. Alcohol - Guam drinking age is 18 – a lot of guys without a lot of money, have girlfriends, like to go out and have fun – there is a frequency when the ships are in and the altercations are mostly jealous boyfriends – not a military issue per say. But when carrier groups come in, military have been 90 days under way and are not used to drinking. The understanding is that GIs won't be allowed to drink, base stores won't sell alcohol to marines on base. A recent decision –Captain Ruggerio might have more information.
- c. Ultimate Fighting is very popular on Guam. The last fight packed a 3,000 seat venue. Large fights at the field house will draw 5,000. There are rumors that youth are training and test themselves against Marines. Marines will react.
- d. Shore Patrol - When carrier group comes in – shore patrol will defer to local law enforcement or MP can take over. Shore patrol will actually go into the bars - they run busses. Navy is good about shore patrol. Recommends civilian/military enforcement in entertainment district areas.
- e. Military Youth Corrections - Military under 21 – JGPO has no intention of building a youth correctional facility – if there are troubles – they will be more than likely to use DYA to service them. Military dependents will be seen in the DYA, but probably not active duty military.
- f. Bases are good about MWR. However, military dependents will venture out to locations near where they are living and go to the malls, etc.

4. Construction

- a. Don't foresee H2 workers bringing dependents.
- b. Need to remember that there a lot of other MILCON contracts coming out – not just construction – all the logistics-based service population (US citizens, foreign nations etc.) – they will be on Guam too.

5. Micronesia Population

- a. Cultural Issues - Chuukees don't always require their kids go to school past third grade, for example, and this becomes a truancy issue.

- b. Generational Issues - Would like to develop a Management Information System - want to create fields for data that shows ethnicity but ALSO how long they have resided on Guam. That will determine if it is modernization of the FSM issue (second generation FSM dependents) – or if it is migrant population that is not aware of Guam’s law/customs.
  - c. Disproportionate Minority Content - Core requirements of the office of juvenile justice and delinquency is not to have disproportionate minority content – currently FSM 12-14% of Guam population but FSM population can be as high as 60% in DYA facility.
  - d. Issues with FSM not necessarily related to their culture, but is because they are predisposed to a lower socioeconomic status
6. To Meet Needs of Impact
- a. Guam will have a window of difficulty from 2009-2012 – will be impacted but will not have the resources to meet that impact.
  - b. DYA has MOU to run a school house. Employ 8 teachers – average ratio is 7 students to 1 teacher. Partnering with Guam Trades Academy, GCC, and DOL to allow at risk youth the opportunity for education/job opportunities. Would like to see more seamless access to more services – DOL and One-stop.
  - c. Mayor’s council is also a good contact with the community that should be tapped in order to address youth affairs.



**Guam Department of Agriculture**

February 4, 2009, 1500 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc.
Caroleen Toyama	Community Planner, NAVFAC Pac
Paul Bassler	Director of Agriculture Administration

**Meeting Summary/Topics Discussed:**

1. Services: Mostly natural resource preservation
  - a. Plant Inspection Facility
  - b. Forestry and Water Resources
  - c. Aquatics and Wildlife Resources – Natural Resources Management and conservation law enforcement.
  - d. Agricultural Development
  - e. Animal Control – stray dogs etc – will see increased activity.
2. U.S. Fish and Wildlife, U.S. Wildlife Service, NOAA, U.S. Forest Service and APHIS are their Federal counterparts. Federal funding is provided for very specific programs – most likely not to dovetail with military buildup impacts.
3. Impacts of Construction Phase – must sign off on construction permits if impacting the environment. Need staffing to survey and collect data. The timeline is very tight especially compared with similar but much smaller projects (kilo wharf, alpha bravo project). The Department of Agriculture is looking at putting together a stand-alone division that can function on its own, focusing mostly on environmental review and commentary on the EIS. Cumulative impact is difficult to define until the final footprint has been designed. Past experience with military projects have resulted in distrust due to findings of no impact in areas where there were clear impacts – biological studies in this EIS will have to be confirmed. Also seeking a forester because of impact to endangered species – will have a lot of input into mitigations.
4. Current Impact of Buildup: wanted to see increased staffing last year. Buildup already taking a lot of staffing time. Agencies need to be included in the planning of the project.
5. Provided CMTF document. Analysis was done by project, scale of project, site visits, analyzed based on past experience.
6. Staffing: Will need conservation officers (locally funded), animal control (locally funded), commodity inspectors (locally funded), technicians to biologists and biologists. Currently do not have enough staff. Difficult to hire – salaries are lower.
7. Document Provided: CMTF letter

**Guam Department of Land Management (DLM)**

February 4, 2009, 1430 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Carl Untalan	Acting Chief Planner, DLM
Marvin Aguilar	Planner III

**Meeting Summary/Topics Discussed:**

1. Objectives were to gather background info for subcontractor Tom Dinell, in charge of determining impacts on growth permitting agencies. Part of the discussion involved clarification of agency structure, responsibilities of DLM for Land Use Commission vs. Seashore Protection Commission, etc.
2. Planners now seriously under-staffed. Of 24 positions, only 10 filled, including admin staff. Only 6 actual planners, including 1 assigned to special projects and 1 who had been away on military services from 2005 until return in past few weeks. Until his return, Mr. Untalan was only one certified to handle condo applications.
3. No official plan for getting new bodies to handle requests associated with military buildup. Had legislative approval for 5 more bodies and believed could obtain them by recruiting away from other agencies. But this is now in doubt because of across-the-board budget cuts due to the landfill situation
4. Currently in A-E phase of planning new Natural Resources Bldg. to house agencies including DLM, Chamorro Land Trust, Ancestral Lands, a few others. Hopes to increase DLM space from ca 4,000 to 10,000 sf. But building won't start construction for 2 years. Occupancy may be by 2013.
5. **Q: Anticipated greatest new demands during construction period?** Lots of design, A-E review. Military has been good about including us in their plans. Anything requiring use of external facilities – e.g., demolishing old buildings (when materials disposed, need both EPA permits and DLM clearing and grading permits).
6. **Q: Anticipated greatest new demands during operational period?** Lots of change orders and revisions, lots of enforcement/inspection of what was approved. There will be dismantlings of temporary buildings. As housing industry grasps the new demand, will be conversion of uses – e.g., conversion of hotels to condos, one of which already in works.
7. Now receiving and processing at least three applications for conversions or renovations of barracks that could accommodate several thousand H2 workers. Two of these involve rezoning from commercial to light industrial

**Other comments:**

1. Legislature grappling with how to zone returned military lands, which were taken by military prior to any zoning system. Proposal to put them all into Ag initially, which doesn't make sense for many of the lands but at least would give them a designation for purposes of review by Land Use Commission.
2. Director Terezo R. Mortera greeted consultant team but did not participate in discussion.

**Guam Department of Public Works**

February 9, 2009, 1330 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John M. Knox	President, JMK & Associates
Larry Perez (had to leave after 15 minutes)	DPW Director
Jesus (Jess) Q. Ninete	Administrator, Building Permits & Inspection
Ramon (Ray) Padua	Acting Chief Engineer, Highways
Marlon Leano	Engineer III, Highway Maintenance & Construction, Capital improvement Projects
Joaquin (Quinn) R. Blaz (joined second half discussion)	Acting Administrator, Division of Highways, Office of Highway Safety

**Meeting Summary/Topics Discussed:**

1. Do not receive direct applications from military. If no off-base housing for military and their dependents, not much direct impact on DPW. It is the indirect impact that concerns DPW. Also DPW does not know what the military highway demands are going to be.
2. Private contractors have been submitting applications for housing for several years, Now applying for two-story structures rather than the usual one story dwelling .When new housing develops, must also adjust street and highway traffic flows. Struggling now with how to tie-in traffic and align streets. Note was made of the current moratorium (due to lack of water and sewer capacity) on issuing permits in Central Guam area (Tumon) until April.
3. JMK discussed need for one or a few indicators that can be extrapolated to predict approximate burden on DPW permitting function as a consequence of increase in military. The initial ideas centered on permit applications and traffic counts as means of anticipating staffing and budgetary requirements. The permit application counts alone may be insufficient as size of application has different impacts on DPW. Furthermore, it is not just the need for more inspectors but related staff as well. Need follow-up discussion between Tom Dinell and staff, and possibly with DPW's consultants joining in, to pin down the measures to be used as quickly as possible and simultaneously minimizing burden on DPW.
4. Jess Ninente can get permit application data from 1983 through 2008. Marion Leano can send staffing pattern data for all parts of DPW involved in permit actions under divisions represented at meeting. The Highway Master Plan 2030 provides predictions of traffic counts, but Ray Padua stated DPW still needs to determine number of military interfaces.
5. One-stop residential building application may be simultaneously sent to GEPA, GWA, GPA, Parks and Recreation (historic preservation, and PEALS Board (re certification off-island professionals). A non-residential building application, in addition to above, agencies, is sent to

Guam Fire Department and Division of Health and Environmental Services within Dep't. of Health. After agency approvals, DPW simultaneously sends to own internal units: architecture, structural/civil, mechanical/plumbing, electrical, and highway encroachment.

6. Cannot hire permanent civil service employees for brief boom period. Difficult to hire locally because salaries can offer are lower than those being offered elsewhere. Can issue an RFP for personnel services, which could be from off-island. Already received an unsolicited proposal for third-party review from a Hawai'i company.
7. Concern from the highway side is quality control, given DPW's limited resources, when improvements must be designed quickly

**Guam Department of Chamorro Affairs (DCA)**

February 3, 2009, 0900 hrs

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Caroleen Toyama	Community Planner, NAVFAC Pac
Sylvia Flores	Acting President, Dept. of Chamorro Affairs
Patrick Bamba	Acting Exec. Director, Guam Council on the Arts & Humanities Agency (CAHA)
Thelma Hechanova	Sr. Advisor to Governor Camacho
Dr. Marilyn Salas	Chairman of Board, Dept. of Chamorro Affairs
Mary Torres	Dep. Exec. Mgr., Guam Airport Authority, Board of Trustees of Dept. of Chamorro Affairs

**Meeting Summary/Topics Discussed:**

1. All the GovGuam participants questioned why military could not take this opportunity to do all the studies that need to be done on Guam, why there is not more consultation with community and/or GovGuam. Caroleen explained the legal focus and scope of EIS. Paul and John described the current consultation process with GovGuam in terms of agency contacts and human service capacity studies. Caroleen and Paul also talked about the challenges of a changing project description and the need to get the numbers right as the basic first step in the study process. (This discussion accounted for more than half the meeting time.)
2. John explained EIS discussion of impacts on “Chamorro issues” will be necessarily succinct and qualitative (except to extent people can provide data). He asked if his understanding from past meetings correct that issues might boil down into six categories: (1) *Impacts on political status (sovereignty, Commonwealth, etc.)*; (2) *“Minoritization” – ethnic Chamorros retaining political power in Guam*; (3) *War reparations, associated with previous consequences of military presence in a wartime situation*; (4) *Desire for Guam museum to serve as repository for findings in archaeological digs*; (5) *Status of ancestral and/or returned lands*; (6) *Perceived respect for local identity and related need for cultural orientation program*. General concurrence, except Sylvia asked to add a few more (below). Also, strong consensus that the issue of “respect” should have first priority in any discussion – belief in both military history of disrespect and also continuation in the current process.
3. For political issues, smaller proportion of Chamorros in voting population would affect not only who is elected, but also likely political support for funding Chamorro programs (priority given to these issues by GovGuam).
4. Marilyn: Law says cultural artifacts to come first to DCA and State Historic Preservation Office for disposition; upset that NAVFAC archaeologist Dr. West is proposing disposition to University of Guam. All expressed strong feelings about need for museum. Caroleen suggested they contact Dr. West.

5. Some written materials and websites have been produced to introduce military or other newcomers to Chamorro culture. Thelma is lead for developing more.
6. Sylvia said one additional issue is potential loss of medicinal plants/trees from military bulldozing. Also, hardwood trees (called ifil or ifit) getting bulldozed; nobody know what happens to wood. Caroleen suggested development of protocols for replanting smaller plants/trees or disposition of hardwood.
7. Sylvia also mentioned several other issues – run-up in housing prices, history of H2 workers marrying locals (not all will leave), and the Tarague Beach access issues. Felt the contrast between military enjoying beer and burgers above vs. local families having to drive through ocean to area unserved by utilities symbolized concerns for local people beyond just those affected. Said one must directly experience “30-40 pigs running around them” to appreciate the disparities.

**Other comments:**

Participants voiced some different views on importance of war reparations – very important to several, but not all.

**Guam Economic Development Authority (GEDA)**

Feb. 6 2009, 1500

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Joseph M. Borja	Administrative Director, Chamorro Land Trust Commission (CLT)
Mike Cruz	Manager, Real Property Division, GEDA
Larry Toves	Program Coordinator IV, Real Property Division, GEDA
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.
Caroleen Toyama	Community Planner, NAVFAC Pac

*Note: Intent was a joint meeting with the CLT and the Guam Ancestral Lands Commission (GALC) and with GEDA as land managers, but GALC Exec. Director Eddie Benavente did not attend. Most of the Q&A was with Mr. Borja.*

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Meeting summary/Topics discussed:

1. Q: How does CLT function with so many unfilled positions? A: Agency had black eye past few years in terms of getting things done. Front office says limited to \$500K. Since we have special funds account, based on revenues. Asked Legislature to approve staffing pattern. Created unfunded positions that we'll fill as get money coming in.
2. Q: Is the CLT financed from general funds or do you have to generate your own revenues? A: Own revenues (from licenses and leases), not GovGuam or Federal.
3. Q: How many complete Residential and Agricultural Lease Applications are awaiting processing? Is there a backlog? A: Backlog of about 3,000. We're addressing, got through 10%. Found that only about 25% really ready to go forward. Sometimes not qualified or have duplicate applications.
4. Q: How long is the term of the residential and agricultural leases and what is the annual cost of the lease? A: Ag and residential – 99 years, \$1/ yr, \$50 application fee. These are for “Chamorros,” but now defined as anyone descended from people residing in Guam from period between 1898 and prior to Aug. 1 1950 (Organic Act). Homestead lots are between 0.5 and 1 acre. Ag lots from 0.5 to 20 acres.
5. Q: What about commercial? A: Non-residential or non-ag can be for anything lawful based on zoning, not just commercial. There are two tracks: (1) Commercial licensing for non-Chamorros administered thru DLM, 21-year licenses (set back in 1976, when 20-year mortgage standard), all funds derived go to Land Trust, though DLM has done terrible job in administering these. One of the biggest licenses is Raceway. (2) Commercial leases of varying lengths, 50 year + 49 year option for Chamorro sole proprietor applicants or corporations 51% Chamorro-controlled. In future, will be able to initiate commercial leases after promulgating our rules and regs. However, now accept leases only if initiated or handed over by another govt agency or Legislature, and bound by terms. One is municipal golf course. Governor is prohibited from touching Land Trust property – however, Legislature can shift lands.



6. Q: How many acres of land are under the control of the CLT, and do you have a map? A: We think about 10,000 acres, and all are developable. Land Trust and GovGuam in general doesn't really know what it owns. But this info being developed by DLM, supposedly by next week (he doubts it).

7. Q: Is the Trust responsible for putting the infrastructure in place in residential areas before beneficiaries can construct their homes? A (Mr. Cruz): Not sure, except knows some lessees don't have infrastructure.

8. Q: What is your policy on leasing lands to the military? A: No policy on that. Commission just starting to talk about it. If military approaches us, we're open – they're just another customer. For licenses, we may work deals other than cash – in-kind services. In fact, prefer that, so Legislature doesn't grab it. Decisions about commercial licenses are made by Board, not Mr. Borja – he recommends but they decide. Applicants can appeal to Legislature, but happens infrequently.

9. Q: Are you legally authorized to enter into that kind of lease – policy wise, should it be you or should the Legislature decide? A: Legislature wants to decide first.

They want know, what are you offering? Are you just going to take it, or offer something? What's in it for Trust beneficiaries? Firing range by Andersen could take away 800 homesteads. There's a reversionary clause – why doesn't the military just exercise that?

10. Q: Do you have inspectors to assure compliance with lease or license terms? A: You're looking at him. And we did terminate a license or two for non-payment. Advertising for someone to do that on a full-time basis.

Other comments: Mr. Borja noted that the Commission is appointed by Governor. Recent law requires elected Vice Chair. Now 4 members and one vacancy. He reports to Commission and is not confirmed by Legislature.

**Department of Public Health and Social Services, Division of Environmental Health,**

February 3, 2009, 10:00 AM

Location: 123 Chalan Kareta, Vietnam Veterans Highway, Mangilao, Guam 96913

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Cynthia Naval	Planner IV, DEH
M. Thomas Nadeau	Environmental Health Specialist, Administrator, DEH

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 Meeting summary/Topics discussed:

1. Services Provided: Regulatory activities (generate revenues), issue citations (resulting from regular inspections, complaint investigations, or if implicated by situations such as a food-borne outbreak), generate sanitary permits (facilities) - 3,100, generate health certificates (employees) 31,000. Health certificates do not add costs – costs and revenue balance out.
2. Documents Provided: Rules and Regulations for various regulated facilities.
3. Recruitment of Staff: difficult due to pay, very limited promotional opportunities (experience a lot of lateral transitions to another agency within GovGuam for same pay for the promotional opportunities), competition from private sector agencies that pay a lot more.
4. Funding: Revenue makes up about 50% of total budget – has to be appropriated by the legislature – Environmental Health itself sets the fees. \$135 for an application (renewed yearly, pro-rated by number of months, additional \$5 per employee for establishments with more than 10 employees). Health certificate costs are covered by the fees (\$10).
5. Procedure for Facilities Permitting:
  - a. Application Submitted
  - b. Pre-operation inspection (sanitation, health and safety)
  - c. If pass, inputted into database system, payment made, sanitary permit generated.
  - d. If don't pass, additional inspections are charged a fee of \$25 per hour.
  - e. During the year – as resources permit, 4 inspections for every regulated facility, with the exception of temporary facilities. This includes checking worker health certificates during the inspection. In reality, can't even do one inspection per year, target facilities by priority.
6. Procedure for Health Certificates:
  - a. Apply for certificate (\$10)
  - b. TB skin test (\$20)
  - c. If food related certificate, must take a half-day GCC food safety workshop – offered 4 days a week – must pass this (\$15)
  - d. Certificate issued – lasts for one year, can get it renewed without taking the workshop.
  - e. TB skin test is a yearly requirement for jobs such as those at massage parlors, cosmetologists, institutions, etc.

7. Permitting Increases: Have had a significant increase in application for number of dormitory applications. Some people are renting apartments and retrofitting them as dormitories. Dorms are under hotel motel facilities in rules and regulations. Have also had increases in therapeutic massage places. Not so much an increase in eating place permits.
8. Worker Barracks Inspections: Will be doing inspections. Examples of what would be looked at: running water, potable water, waste disposal, toilet facilities (the ratio for this is available in the uniformed building or uniformed plumbing code), kitchen, square footage per each individual.

**Social Security Administration**

February 13, 2009, 10:00 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Evelyn Resto	District Manager

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 Meeting summary/Topics discussed:
5. Social Security Cards

- a. Documents need to be verified when issuing SS cards. Documents that need to be verified depends on the status of the individual
  - i. H2B – have to verify INS status with the Department of Homeland Security (DHS) – can do immediately, online, if posted on Homeland Security’s Systematic Alien Verifications for Entitlement (SAVE) site. Otherwise, we are required to do a secondary verification with DHS, which can add days or occasionally weeks to the process. H2B worker – sometimes people come in a little too early after arrival on the island and homeland security system has not been updated. We have noticed is that it takes approximately 10 days after arrival for the SAVE database to show the worker’s immigration status and information.

Based on recent information shared by Naval Facilities Pacific during a discussion on Workforce Housing and Logistics issues, which was hosted from February 17-20<sup>th</sup>, the Guam office will be heavily impacted as the number of workers hired for the military build-up increases from 2,754 to 15,419 in the upcoming years. These workers will potentially be enumerated by our office, especially those with an H-2B visa.

- ii. Those from Micronesia – normally not too many problems – Have a website, SAVE to verify their immigration status. They need to have their I94 and their passport for original cards. However, we can use a certified copy of their birth certificate in the absence of a passport. For individuals coming from Marshall Islands we have to use the SAVE database to verify their document and immigration status. When the SAVE database is unable to provide online verification, we have to use a secondary verification process with INS, which can add days or occasionally weeks to the process.
  - iii. Military – pretty easy to verify their documents – for the most they already have SS number and card – it would be a replacement card, or a name change (marriage/divorce/adoption). If the SS number and card is for their new born child, we will verify the document (e.g. birth certificate) with the custodial of that document (e.g. Vital Statistics). When applying for retirement benefits– might need to verify birth certificate to establish the age.
- b. Takes about 2 weeks to receive SS Card in the mail once the application is approved by the field office

6. Enumeration at Birth

- a. There is no Enumeration at Birth on Guam. We process all social security applications for all people born and residing on Guam.
  - b. According to the Guam Department of Vital Statistics indicated that there are 300 births on Guam per year and approx 50 births on base per year
7. Enumeration at Entry
- a. The Enumeration at Entry process is used the Department of State (DOS) and the Immigration and Naturalization (INS) for individuals who are issued immigrant visas and who will be admitted for permanent residency. These individuals are 18 years of age or older.
  - b. The INS and the DOS work on this process The INS collects all the data and transmits info to SS. Social Security receives the record created by INS, process it and issues an original or replacement card. -When Social Security cannot process the record because there is an exception (e.g., incorrect sex code, multiple spaces in the parent's name, place of birth, etc) the record received from INS is placed on an "incomplete" status. When this happens, the alien must visit a Social Security office to complete an application.
8. Benefits
- a. No supplemental security income benefits on Guam.
  - b. No other benefits that aren't available on Guam. Everything else is available. Benefits for retirement, survivor and disability dependent on earnings.
9. Services/Staffing
- a. Serve an average of 168 individuals per day, up to 24 visits per staff member per day.
  - b. No plans to expand office.
  - c. Staffing of 8 including Evelyn at the present time. 4 service representatives and 3 claim representatives and Evelyn.
  - d. Home leave only available to employees that are hired in the US – currently have 4 people that were hired in the US and are eligible for home leave.
  - e. Do not have temp staffing to draw upon. Not a lot of turnover – high interest in positions with the agency – is recruiting for one more service rep.
  - f. 3 of service reps speak Tagalog and one service representative speaks Chamorro. One claims rep speaks Chamorro.
10. System Connectivity
- a. Lose system connectivity at different times of the day depending if the U.S is on Standard time or Daylight Savings Time. whereupon connectivity is lost until the following day. Everything is then done manually and entered the next morning. Done by paper. Also can't-do any benefit verifications. The office mails the customer their verification the next morning. However, some recipients elect to come into the office the next morning to pick-up the document in person
  - b. During Standard time, we loose connectivity on Mondays at 2:30p.m, From Tuesday-Friday, lose connectivity at 4pm. Once time changes to Daylight Savings Time, we loose connectivity on Mondays at 1:30 and for the rest of the week at 3:00pm.
  - c. Open 8 am – 3pm. No bus that gets here – only for those with disability.

Other comments:

The only reports I was able to locate were the following:

SS-5s (Enumeration applications) processed by our office in 2008: 16, 683.

Retirement Claims processed in our office in 2008: 476\_ Retirement/Survivor Dependents: 482

Disability claims processed in our office in 2008: 233  
55

Dependents of Disabled number holders:

**Veteran's Affairs**

February 4, 2009, 11:00 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Caroleen Toyama	NAVFAC Pac
Fred Gofigan	Administrator, Guam Veterans Affairs Office

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 Meeting summary/Topics discussed:

1. Advocates for veterans as well as active duty personnel on benefits provided by the VA.
2. Facilities:
  - a. VA Guam Community Based Outpatient Clinic (CBOC) – Agana Heights – Currently staff of 9-10 including 1 full-time physician/practitioner.
  - b. Vet Center – provides counseling for veterans that have seen combat – Currently 4 staff including 2 counselors, office manager and outreach person.
  - c. Guam Veterans Cemetery – 2 sites (Piti and Agana) – under Fred Gofigan's (Gofigan) purview – state cemetery for veterans on Guam – not a national cemetery which can be federally funded. State can apply for funding from the National Cemetery Administration for construction, improvement and expansion of state cemetery. NCA provides \$300 reimbursement per burial. Currently, free for veterans to be laid to rest. Currently, the main cemetery has no staffing and it costs about \$250,000 a year to run. There is currently no staffing so work with Department of Parks and Recreation and Department of Corrections to help with cleaning and maintenance. MOU – gave them equipment to clean their facilities, and they provide cleaning services. VA also provides workers with lunch – have fundraisers to raise the money.
  - d. Federal VA Center – now have a VBA extension of Honolulu office – now have 2 staff. Would like a satellite office to process the claims that are currently processed in Honolulu for Guam, CNMI, Palau & FSM.
  - e. Current location – close to airport and hospital but don't get a lot of people from Andersen.
3. Benefits:
  - a. Veterans Health Administration (VHA) – health services
    - i. Homeless Program (Drug & Alcohol Abuse treatment – contracted to Salvation Army).
    - ii. Section-8 Vouchers for Veterans.
  - b. Veterans Benefits Administration (VBA)
    - i. Education/Training – dependent will qualify for educational benefits if father or husband has 30-50% disabilities, have educational benefits to go to University at a recognized school, and get a stipend (if child is dependent, veteran receives stipend). If veteran is 100% disabled the child receives stipend if attending higher education. Nothing for lower education. Can get reimbursed for civil

- special schooling (note DDESS or GPSS), if your child has a learning disability (if sponsor is 100% disable).
  - ii. Pension Benefits – VA assists veterans in filling out the application, getting doctor’s letters etc. Benefits (Compensation & Pension) processed in Hawaii.
  - iii. Vocational Rehabilitation/Employment Services: Initiate the application on Guam – no staff on Guam – staff from Honolulu comes to Guam on a quarterly basis – provides funding for technical courses at GCC for example, or getting into a business opportunity and putting a plan together through University of Guam or Small Business Administration.
  - iv. Home Loan Services – a lot of active duty take advantage of this – can purchase a house, stay for 4 years and turn it over.
  - v. Life Insurance Benefits – assist with the application
  - vi. Dependency and Indemnity Compensation – assist with application
  - vii. Burial Services – under the National Cemetery Administration - If the dependent of an active duty personnel passes on, they are eligible to be laid to rest @ the Guam Veterans Cemetery.
- c. State Benefits:
- i. Free Drivers License for veterans only (those in active duty and out of service) – must be honorably discharged. Charge for non-veterans is \$25 for a license.
  - ii. Vehicle Plates (identifying the branch of service you were in) – all eligible – not free.
4. Common requests from active duty personnel for benefits provided by the VA:
- i. Home Loan Certificate of Eligibility request
  - ii. Education
  - iii. Information on eligibility for VA benefits before and after they exit active duty
5. Definition of a veteran:
- a. 90 days in a combat zone (includes active duty).
  - b. Retiree (have 20 years of service or a medical disability) – no age requirement.
  - c. Misconception that you must be retired.
  - d. 10% of Guam’s population are veterans – outreach program results. Difficult to identify.
  - e.
6. Population Served:
- a. 3,600 veterans currently served – before Fred came in, no data at all.
  - b. Fred can provide the number of applications that the VA has processed, broken down by type of benefit – in an access database.
  - c. Guam VA serves Micronesia too – as service improves for veterans on Guam, have vets from the outer islands coming in for benefits. Services in Micronesia are non-existent – the VA doesn’t have educational outreach program in Micronesia – because they are from Micronesia, all their claims go to Pennsylvania, because they are considered a foreign country.
  - d. Currently 50 calls a day and 30 visits a day. With buildup – would expect twice the number of visits/calls
7. Medical Treatment
- a. Naval Hospital right now is basically for those and their dependents in active duty.
  - b. Vet population is getting Geriatric care (Are being referred to Civilian Doctors & Naval Hospital). With some retirees – referred to clinic in Naval Station in the south.



- c. Go to Community-based Outpatient Clinic (CBOC) first, if you need more attention, they will schedule you for Veteran's Hospital(Naval Hospital) if more specialized care is needed they will be referred to Tripler Medical Center in Honolulu.
  - d. Clinics are over capacity. Can't answer a lot of the questions. Can ask how many people they see – that info can be obtained from the Honolulu office – Doctor Hastings.
  - e. If a VA clinic can't see someone, there is a 3-4 hour wait as a walk-in.
  - f. Veterans can be seen at Guam Memorial for urgent – they apply for reimbursement from VA – this is sent straight to Honolulu – Dr. Hastings
8. Disabled veterans are saying that they are not getting buildup contracts (business opportunities) – information from UOG conference in September – Fred can get that for us.
9. Documents Provided:
- a. Summary of VA Benefits
  - b. Consolidated Federal Funds for Guam Report (1993-2006)
  - c. Consolidated Federal Funds Report – Guam Veterans (1997-2007)
  - d. Veteran's Administration CMTF Report

**Department of Mental Health and Substance Abuse**

February 6, 2009, 2:00 PM

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc
Dr. Shimizu	
Dr. Lighthouse	
Mr. Simeon Palomo	

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 Meeting summary/Topics discussed:
1. Availability of Data

- a. Currently developing a stronger MIS system which will house information on financial, procurement, data from service population, manpower. That will be a major cost. Have purchased a software system (quarter million dollars) and are engaged in the training of staff and use of the system.

2. Service Population and Issues

- a. DMHSA services A-Z – does not deny anyone services for any reason. Doesn't see someone as military or civilian.
- b. Prioritize the most indigent in the department. People with insurance typically go to private practice.
- c. However sometimes, even those that have insurance can't afford the co-pay, or the cost of medication. Of those that have been diagnosed elsewhere but go to DMHSA for medication because they can't afford the co-pay, DMHSA doctors must diagnose them again.
- d. They are the only inpatient facility in the West Pacific. Navy relies heavily on them. If military needs are more long term however, the individual is usually sent off-island.
- e. Military have drug and alcohol and child issues. Department has been providing military with care. They don't bill TRICARE because they don't have the capacity. They are in the process of forming an MOU with the military to share staff and training. When active duty are deployed – difficult to keep treatment consistent.
- f. H2B – see a lot of substance abuse in this population – it is very stressful, intensive work – a lot of H2 companies would rather send a migrant worker home than pay for their mental health care. Thus, this means the worker will hide any problems from their employer. These people come to the attention of DMHSA through courts, because they are arrested.
- g. Micronesian – island as a whole is very underfunded in terms of compact impact. For every \$10 Guam spends, it receives \$2.
- h. Veterans – VA in Guam struggles with a lot of aging veterans with needs for mental health and residential care. VA is paid for these services but do not have room, so some vets are referred to DMHSA. DMHSA ends up footing the bill of finding residential care – VA needs to come to the plate more – entitled to benefits and that money – those funds should be utilized for their care.
- i. Have seen people arrive on Guam that have been given a ticket to Guam and no support at all.
- j. Sometimes consumers are not always medication compliant.

- k. DMHSA contracts out services to Sanctuary, Oasis, and Salvation Army – for some services.
3. Funding/Costs
- a. At this point, developing a fee schedule, to capture the population with health insurance, for those using self-pay option – having an economic impact statement done on the DMHSA fee schedule.
  - b. Cost of medication is phenomenal– try to stick with 3<sup>rd</sup> generation (1<sup>st</sup> generation : recent, and 3<sup>rd</sup> : later trials) –sometimes newer drugs can impact poorly – 1<sup>st</sup> generation is usually very expensive because of r&d costs. Department has its own dispensary and also some private pharmacies that dispense. Trying to get private clinics to prescribe 3<sup>rd</sup> generation drugs, which are less expensive. Medications cost \$1-\$3 million a year over a year.
  - c. Under permanent injunction – have to hire x amount of staff – have to borrow money to do this.
  - d. Other infrastructural needs: air conditioning, substandard air quality, mold, fire suppression issues.
4. Military Health Care
- a. Military health care capacity – military utilization rates have never been released – exchange of mental health information has not happened.
  - b. Mental health services are underutilized in the military because they fear it will impact their jobs.
  - c. Military dependent service – it is all confidential – will not tell military. If military says do not see any of our population, we do not have an impact, they need to make that a directive.
  - d. For overseas assignment, there is a screening for special needs, and sometimes certain people are not sent. However, many people want to come to Guam and thus they don't report any mental health problems – military might believe there is no impact.
  - e. Also, the strain of coming to a remote location might create strain.
  - f. Culturally, military mental health regulations are different – Air Force is most stringent – Marines are more lax on the mental health criteria – more likely to have people that have utilized drugs in the past etc. However, on the other side, stricter rules may mean that air force people would be less likely to access mental health services.
  - g. Need to develop cross-cultural training for military. Mayors of villages need to be involved. Will reduce the number of conflicts that may occur.
  - h. Guam has a high track record of people extending their tour of duty. Some people have even retired here from active duty.
5. Staffing
- a. Bio Psycho Social model used – team of specialists consult on one patient.
  - b. Recruiting for staff – no different than anywhere else in the nation – Doctors and Phds in Guam are are not very common.
  - c. Use headhunters, networks within professional groupings.
  - d. Marketing needs to be done better – staff is putting together a marketing package to bring out professionals.

**Salvation Army**

February 11, 2009, 8:30 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Joseph Chargualaf	Lighthouse Recovery Center
Capt. Thomas Taylor	Corps Officer and Micronesia Islands Coordinator
Simion Kihleng	Family Services Center Director

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 Meeting summary/Topics discussed:
1. Programs:

- a. Natural disaster first responder, assistance to families
  - b. The **Family Services Center (FSC)** provides services to those that are in need of rental/mortgage and utilities, food and clothing assistance. Many of our clients are those who are facing a financial crisis, eviction, or homelessness and disconnection of power or water. The program provides food sets, clothing vouchers, and emergency assistance for rental and utility payments, in addition to counseling, case management, and referral services. Education is an important aspect of the program. FSC provides money management training and life skills classes on topics ranging from landlord/tenant issues, parenting skills, safety, health, employment issues, and relationships. FSC is the hub of The Salvation Army's Seasonal Activities, including distribution of toys (2,000 in 2008) and holiday food boxes (from November to December). Also youth enrichment program for at-risk youth: Wednesday is outreach in the community (protective mission attitude) – includes fun activities such as music and band, things that would not be available to them anywhere else.
  - c. The **Lighthouse Recovery Center (LRC)** is a residential facility that helps men make the transition from homelessness, substance abuse, or recent incarceration to independent, drug-free lifestyles through a structured six-month program. Located on Marine Drive in East Agana, the LRC also provides recovery classes and other support to men and women through its outpatient program, and conducts regular outreach activities to the homeless. The LRC hosts an annual Thanksgiving dinner for the homeless at Chamorro Village, serving upwards of 800 individuals. LRC also provides aftercare - moves people into transitional housing – it keeps leases on 17 units (which are currently all full), and provides outpatient treatment program (current 60 clients).
  - d. Twice a month they do homeless outreach – go out into community, provide food, make referrals, - these average about 30 people contacted per outreach.
2. Eligibility: Lighthouse Recover Program is limited strictly to males. Current capacity is 24 clients - right now housing 13 people (7 homeless). Right now the target is homeless or at risk homeless men over 18 years, with substance abuse issues.

3. Plans for Expansion: About to open a new 30 bed facility. Once this is open, the target population will change. Currently, the military sends people with substance abuse treatment needs to Japan or San Diego. Guam doesn't have an accredited facility. Once the new place is opened, will pursue accreditation – CARF accreditation – will be open to current active duty military – for a short-term 6 month residency program. Also have an outpatient program which could be offered to the military. Have had dialogue with military chaplains about these possibilities.
4. Services for Other Agencies: Have contract with the VA, who will pay up to 7 beds – currently they are housing 2 veterans. Judiciary and commercial insurance entities have asked about their homeless restriction – they are considering allowing a number of beds that don't have the homeless restriction as an income source, however homeless would have priority. HUD built the facility.
5. Population Served:
  - a. Military – Have had dialogue with them about sending short-term substance abuse needs people – would use the facility if there was availability and it was accredited. No idea about number of military served. But can see with a problem with the military teen dependents. Military is pretty good about Christmas assistance program, etc. but they do have dependents in the Salvation Army youth programs – mainly because SA has an outreach program in the Dededo area. SA gets along well with the military community. Will see more – sometimes spouses become restricted from going on base because of breakups/divorce etc. and then they become homeless. For example, a military person left his wife for a local girl and she was left stranded, needing help with food etc. As another example, a veteran marries someone from the Philippines and moves there, they break up and Guam is nearest US territory, so he goes there.
  - b. (Compact Impact) - Because of relationship with (Freely Associated States), do see a fair amount of these populations. Have a lot of kids from Saipan, from (other islands of) Micronesia. (Many) of the kids don't attend school. There are truancy laws on Guam but they are not well-enforced. However, SA programs are not a substitute for school – they are usually afternoon programs. Work with parents and get their kids into school. A lot of the problem is cultural – coming from very (different cultures), depressed economies where there is little educational requirements. When come to Guam, all kinds of issues come up. SA has an integration program. During the construction phase, the head of household will come first and then will want to bring dependents - families won't live in contractor housing. It is also possible that singles will come and marry into the local community. In a recent meeting with NGOs (2 day workshop) – the biggest population of concern was the (Chuukese)
  - c. Still, the number one client base is still Chamorro – there is a perception out there that we only serve Micronesians – particularly in the homeless outreach, Chamorro number 2 to 1. (The Chamorro and other Micronesian cultures) is one where family takes care of family – this is starting to break down due to growing prevalence of ice (alcohol & other drugs) on the island – people are thrown out of the house, family disruption. Last week's preliminary numbers from the homeless count are almost triple what was counted (2) years ago. Also, starting to see landlords hedging their bets on the housing market. There is a perception that the military takes care of their housing – but that is not true – already they can't take care of their housing issues. Middle income housing will become scarce.

6. Data: Can provide numbers –Last year in all our programs combined, (youth, family, lighthouse, etc) – duplicated 40,000 people touched last year.
7. Alcohol is still the most prevalent substance abuse.
8. Staffing: Don't anticipate an increase in staff. Could use it, but can't budget for it. Depending on what transpires with military and commercial insurance contracts, could add dedicated staff.
9. Challenge – would like to purchase a multi-unit dwelling and use it for aftercare – these units won't be available in 2 or 3 years because of the buildup – the programs will die here not because of lack of funding, but because of lack of bed space.
10. Documents Provided: Statistics from FSC Programming – 2003-2008

**Guam Memorial Hospital**

February 6, 2009, 11:00 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
William N. Kando, MSM	Hospital Chief Planner
PeterJohn D. Camacho, MPH	Hospital Administrator/CEO
Joseph F. Mesa	Associate Administrator, Operations

Meeting summary/Topics discussed:

1. Service Population/Eligibility

- a. Only civilian hospital on Guam – Naval hospital is restricted to caring for active duty military. However, if civilian is severely injured, EMS (either Naval Hospital EMS or Local EMS) may take the patient/victim to the Naval Hospital Guam first due to incident proximity to Naval Hospital to stabilize patient prior to transferring to GMHA.
- b. Veterans - VA from Hawaii is interested in establishing a provider agreement to provide services for veterans (especially disabled) requiring skilled nursing services.
- c. FAS citizens, but primarily FSM citizens – Primarily seen in the public clinics, will come into GMHA if they need hospitalization.
- d. H2 Workers: Generally do come to GMHA for services. They are always insured. Do not track these individuals coming into GMHA. Maybe Department of Labor would have this information?
- e. Self Pay – 20-23% are considered self-pay. Of these, 6% actually make the payments – others are not able to. GMHA uses 5 different collection agencies, and has arrangements with revenue and taxation to garnish money from taxes or stimulus bonuses.
- f. The Naval hospital's capacity is small – military dependents do utilize GMHA – GMHA bills TRICARE for these services. Can provide information on what has been billed to TRICARE.
- g. Registration Process:
  - i. Interview
  - ii. Insurance Information
  - iii. Address Information
  - iv. Citizenship Information

2. Services

- a. Certified at 158 acute care beds.
- b. Approximately 250 total beds (acute beds plus non-acute beds)
- c. Skilled Nursing Facility located at Barrigada Heights – 40 beds licensed to provide skilled nursing services.
- d. Outpatient Dialysis on site – 13 stations plus 1 isolation room (each patient takes about 3-4 hours per session)
- e. Inpatient Dialysis in the medical surgical unit – 4 stations.

### 3. Capacity

- a. Guam Memorial Hospital is currently a 220,000 square feet facility.
- b. Right now over-capacity most of the time.
- c. PDN gives a daily listing of hospital bed availability - red (100%), yellow (90%), green. This portrayal however is a snapshot of one aspect of GMHA capacity that is made public.
- d. Looking at getting good financial statement audits.
- e. When public clinics are full and people do not want to wait anymore, will go to GMHA emergency room.
- f. Not enough room – requested \$7 million for A/E Services – taking a look at what we needed for on-site. GMHA looking for consultant(s) to do Operational Assessment and Feasibility Study. The prevailing wisdom is that it would cost more to renovate the existing hospital. One option is to use the old hospital site to build a replacement hospital. If GMHA expands its existing facility, key services (e.g., ER, ICU/CCU, OR, etc.) would have to be maintained throughout the construction/renovation. Whatever option it takes, GMHA believes it needs to expand its capacity to a total of 250 acute care beds to more appropriately serve the needs of the Guam Community.
- g. Building a new hospital would take time (3-5 years). However, construction at new site poses fewer challenges than construction at existing site while maintaining continuity of services.

### 4. Staffing

- a. The number of annual vacant positions are getting lower. Getting better with hiring nurses. Using travel nurses – come for 13 weeks with an option to extend. Local pool for nurses is not enough – recruiters from mainland coming to Guam – graduates coming from UOG – leave island, private or home health – compared to national average, Guam is pretty close.
- b. Very difficult to predict peaks and valleys of staffing needs – one year experienced a huge influx of neonates requiring intensive care – never happened before or since. This similar situation occurred in the writing of the Department of the Interior assessment with blanket statements made about the condition of GMHA with no quantifiable data.
- c. Health professionals – under H2B professional and H1C. With immigration reform – aggressively looking into this staffing possibility.
- d. Military dependents will sometimes be available to work as health professionals. Marines need to advertise possibilities.
- e. Feel there is competition for employees with the private sector. Less so with the military.

### 5. Funding/Payments

- a. Primarily through patient payment
- b. Pharmaceutical Fund: 6.19% of gross receipts tax of GovGuam – recognize that GMHA has indigent needs – 4 years of this funding.
- c. MIP program
- d. Medicare – get reimbursed on a per client basis – different than states - \$1,100 per day per admission, cap is \$6,000 (i.e. can only stay six days). Lengths of stay average around 4 days. Can provide these numbers.

### 6. Ambulance



- a. GMHA EMD works very closely with Guam Fire Department (GFD) EMS, as well as the military EMS ambulances.
- b. EMS are firefighters with additional training that certifies some of them as EMT's.
- c. Local GovGuam EMS (e.g., ambulances) is run by the Guam Fire Department – there are no ambulances run by GMHA
- d. GMHA provides training to GFD EMT's (e.g., Basic Life Support Certification, Advance Cardiac Life Support Certification, etc.)
- e. There has been talk about private ambulance services, but it hasn't materialized to date.

**DISID**

February 10, 2009, 10:00 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Dr. Zenaida Napa Natividad	Deputy Director
Dr. Albert San Agustin	Vocational Rehabilitation Administrator
Rita	Fiscal
Evie	Division of Support Services
Frank	Guam Get Care

Meeting summary/Topics discussed:

1. Servicesa. Division of Vocational Rehabilitation

- i. Training, job placement
- ii. Not everyone is eligible not every disability is an impediment to employment.
- iii. Have a mission to help most disabled – most people don't want to see disabled people on the front lines – greeters at half time – don't have to be FTE – also generate enough money to qualify for social security
- iv. Motivate people to be employed – pay tax

b. Division of Support Services

- i. Look at doctor's certification of the permanency of the disability – majority are permanent – able to access case management
- ii. Provide social workers to maintain contact – they do home visits, assist in if a person needs to go through governmental agencies – advocate for these people.
- iii. Goals placed in an individualized service plan – each person has a service plan that they work towards and social workers help them in getting there – if want a job, coordinate with VR.
- iv. Outreach to the community – someone will call and let them know someone needs services. Will meet with mayor and assess that individual in that environment
- v. Transportation issues
- vi. A lot of elderly.

c. Guam Get Care system

- i. Web-based system – comprehensive directory of services
- ii. Aging and Disability Resource Center program (federal funding that runs out in September). Received a person-centered planning program in 1997, which has been sustained through 2010. Consultants are pursuing other grants to service the system - great challenge
- iii. Hits on the system are recorded – current count on hits is 30,000 per month average
- iv. Believe there are people that are accessing the system to make sure if there are services on island. Continue to populate the directory with all the services –

want to provide it to become the 211 system (like 411 system) 211 system – call in to find out what services are available – handy during times as disaster.

- v. Get Care also allows the agency to share forms etc.
- vi. DISID was created to be a single-point of entry for people with disabilities –
- vii. Get Care also comes with case tools – case managers can share notes between staff etc. (with user ID and password protection)
- viii. Currently entering data into the system so can generate accurate data.
- ix. Guamgetcare.org – see all the links, search mode
- x. Have MOU with DPHSS – Division of Senior Citizens – their consumers can also be in the system – they use it, but do not contribute to maintenance/funding. DISID does the work – apply for grant, contract through AG office.

d. Evaluation Enforcement and Compliance

- i. formed to focus on ADA requirements
- ii. processing grievances/complaints that are not VR. Complaints can come from any agency/private person – if grievance is against Dol or D of Health
- iii. Only 3 staff
- iv. Used to be locally funded for 6 years until Legislature abolished it
- v. Since injunction, has been reestablished as a program – not locally funded.

2. Eligibility

- a. VR: Review medical, psychological and physical evidence – determine if becomes an impediment to employment – develop special job for them.
- b. Bring evidence to them and if they don't have it, DISID can purchase the assessment – VR can pay for that – will try to maximize those – send them to private clinics to do the assessment.

3. Service Population

- a. VR – ethnic breakdowns – can provide this.
- b. Active duty – don't service them.
- c. Do service military dependents, and retired, veterans.
- d. Guam has a very young pop but seniors are also starting to increase. People starting to migrate to guam – not just buildup related. People on the mainland see that Guam is a potential for living – people are coming out again.
- e. Guam is the most convenient green-card holding place – can always fly back to Philippines. More expensive to go to GMHA than to the Philippines – surgery is cheap, hospital there is JACO accredited, prefer to go to the Philippines.
- f. There are instances when enlisted military are qualified for welfare – the lower enlisted with children – food stamps are now accepted in the commissary – and WIC too.

4. Standards

- a. VR ratio – nation-wide ratio – for every 30,000 on island, can hire additional staff – this in limited to population looking for employment.
- b. Census 2000 there are about 40,000 identified as those with disabilities – can use this in analysis – that number might increase in the 2010 census. That ratio seems high – 2000 census questionnaire asked for general disability (diabetes etc) – 2010 census question will be a bit more specific.

5. Staffing

- a. Don't have interpreter or Braille reader – sign language interpreter

- b. Not really a need for different languages – for those that come through the door, usually bring someone to interpret for them.
  - c. Other agencies will call for interpreters – can refer them to GCC and UoG for interpreter pool.
  - d. Most interpreters are employed by GPSS and GCC – so burned out by end of the day.
  - e. Of the new population coming, their Braille/sign language skills will be used.
  - f. Lot of economic opportunities for those that move – some dependents may bring skills that we need – physical therapy, speech therapy, etc.
6. Potential Issues/Impacts
- a. If anyone is receiving SSI benefits, can't get these on Guam if they live off-base. Anyone living on base (even civilians) can receive SSI.
  - b. Guam doesn't have unemployment insurance – this will be a community impact.
  - c. Did they do screening of military dependents for disabilities?
  - d. Any federal program mandated to set aside programs for disabled. Already getting inquiries from vendors in Hawaii to transfer their operations – 10 separate vendors will be transferring gradually – mobile canteens, setting up of magazine shop, veterans hospital has to have space for disabled veterans - staffing in cafeteria, staffing in stores, have to some representation in the workforce - wagner act. The mechanism is in place
7. Important evidence of strains on agency capacity that have yet to be solved (e.g., penalties levied by the federal government);
- a. Permanent injunction
  - b. Proposed merger of DISID and DMHA – might know by Friday – court hearing with federal judge – don't know what will happen – can find out then.
8. Solid plans or proposals that would improve your capacity but have not yet been funded or implemented. (We will ask if you can provide copies or links, if available).
- a. Build facility with a permanent home for staff – this facility is leased – very expensive – everyone is leasing.
  - b. Already have the land and the AandE plan – all we need is \$3million.
  - c. Land is across from JFK – in front of K Mart.
  - d. The new building will be a one-stop shop – convenient for those new to the island, including the military.
9. Funding
- a. Grant between local and federal gov't
  - b. Federal funds increase every year – up to 5% each year.
  - c. 21.3% local matching funds required
  - d. During budgeting process, given a ceiling to work with – within that ceiling, have to take care of all the services – director makes that decision
  - e. DVR is able to carry over funds from previous fiscal year – work with carry-over funds
  - f. other divisions – the primary is the general fund
  - g. Have other federal discretionary grants that have to be applied for (for instance ADRC 100% federal, compact impact funds 100% federal, and through USDOE)
  - h. Can provide a list – Amber will follow up
  - i. Recently transferred two of their homes – funding went with the contracts – total of \$1.2 million – gone over to mental health – will not be included in 2010 budget – this year the funding has been very very strict compared to past years. Budget office has been very strict in releasing funds – didn't allocate based on

- j. Working very closely with GSA – every time we spend money – very strict – case by case basis – have to justify on a case by case.
- k. Federal side – don't see a problem with the future VR funding. Other grants – smaller grants – discretionary – PCP (person-centered planning) grant – start at first year as discretionary ... end up 3 year grants – recently a no-cost extension on the ADRC grant.
- l. All other are based on formula grants – USDOE – look at population – don't look at how much they spend.
- m. July/August – go through a reallocation process – requesting for more and/or returning federal grant. Puerto Rico returns a lot of money. Guam gets a lot more than what is spent for VR.
- n. Permanent injunction – the compact impact funds – DOI – 2006 received 1 million, every year after that, received \$500,000 – addressed a lot of permanent injunctions – built a new facility, taken over by mental health.

#### 10. Suggestions

- a. Would like to see more community integration between military and civilians – for instance Kmart is a good example of attracting military off base – those that go off base are the ones that extend their stay .
- b. Need to have an orientation program 2-3 days – to learn about the culture, to avoid the barriers – don't like to hear “we don't want to be on this rock” - cultural competency – orientation should be mandatory – will break that shell – will be more accepting. Opportunity for integration is there.
- c. Military bring skills from off-base – have contracted their services - some military doctors even moonlight and have private practice.
- d. Needs to be an aggressive program of recreation that integrates military and civilian – military sometimes volunteer for the villages.

**DPHSS Central Office**

Tuesday, February 3, 8:00 AM

Department of Public Health and Social Services, Bureau of Family Health and Nursing Services

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Margarita B. Gay	BFHNS Administrator
Suzanne A. Sison, DDS	Acting Chief Public Health Officer

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 Meeting summary/Topics discussed:

1. Locations: BFHNS located at central location, have a room at the Northern clinic, no room at the Southern clinic, but able to visit. Margarita manages central clinic. Community Health Nurses all over the community making visits.
2. Service Population: 1) service only those without insurance; 2) *except* when a TB or STD case; 3) usually H2Bs don't come to them because they have health insurance, but will be seen if they are referred to DPHSS
3. Insurance Issues: 1) no authority to turn anyone away; 2) If they do have MAP or Medicaid card, will be referred to Northern, Southern, or Private Clinic.
4. Common Services to Different Populations: 1) Military: Immunization, WIC, STD. Mostly at the Northern Clinic; 2) Military Dependents – chronic screening in the community, Healthy Mothers Health Babies, military access services for babies; 3) Compact State – use all their services, especially the Chuukese population; 4) H2 Workers – TB clearance, health certificate, skin tests – use community health centers for this, or private clinics;
5. Cooperation With Military – no day-to-day cooperation, trying to work with them on hearing program but not really getting off the ground, work with them during times of pandemic, share statistics to vital statistics;
6. Staffing: most difficulty getting nurses. Private and school nursing is more attractive (more pay, better hours, better benefits. Currently nurses are retiring, going off island. Used to have a one-year hospital experience restriction on hiring, but have removed that hiring requirement.
7. Capacity: This year, not following the tickler system, which indicates when nurses need to check on certain patients. Need to prioritize other DPHSS needs (roughly this order: infectious diseases, child health, prenatal, women, chronic, family planning). Lacking supplies (syringes, needles, clinical supplies) and antibiotics, amoxicillin)
8. Documents/Data Provided:
  - a. Workload Output Accomplishments History 2005-2008,
  - b. Workload Output 2009 anticipated and 2010 projected levels.
  - c. Village caseload Count (2008?)

- d. BFHNS Nursing Personnel Staffing Pattern History, April 2005 and January 2009
- e. 2007 Compact Impact Report – number of FSM population served.
- f. 2008 Annual Report
- g. 2008 Clinic Encounters
- h. Central Region Health Clinic 2008 Goals and Objectives
- i. Central Region Health Clinic 2008 Encounters by Service
- j. BFHNS mission and programs description

**DPHSS Central Office**

Tuesday, February 3, 9:00 AM

Department of Public Health and Social Services, Bureau of Communicable Disease Control

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Josephine T. O'Mallan	BCDC Administrator
Cecilia Teresa T. Arciaga	Tuberculosis Control Program, CDC Coordinator III

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 Meeting summary/Topics discussed:

1. Locations: All services provided at the Central Location only, have MOUs with the North and South Clinics so patients can access services that way. Northern and southern see 22,000 a year. Morbidity is higher at the northern area.
2. Services: 1) STD/HIV/TB Related services; 2) Immunization Services (children and adult); 3) Laboratory Services.
3. STD/HIV/TB Services:
  - a. Everyone eligible.
  - b. Program responsible for surveillance and control, clearances for work and school (clinical testing of often done at private clinics and then brought to DPHSS for final clearance).
  - c. Active TB cases are referred to DPHSS for a workup.
  - d. H2 workers are supposed to get screening done in their home countries, but DPHSS has brought up with the DOL that there is no way of verifying this screening has been properly done. Although there are dedicated foreign quarantine centers abroad, when H2 workers arrive on Guam, they still have to report to DPHSS and have tests re-done (x-ray, skin test, sputum).
  - e. Those coming from FSM do not require a screening when coming to Guam. This population also seeing HIV/AIDS increasing.
  - f. Ryan White program is a federal program for HIV/AIDS – provides limited funding. H2 workers restricted from this.
  - g. HIV AIDS is pretty stable – average 3-6 cases per year rising.
  - h. Chlamydia is huge – top 10 for the past 10 years – probably due to a better reporting system
  - i. Gonorrhea and syphilis is increasing
  - j. See close to one thousand morbidity numbers per year from STDs.
  - k. HIV surveillance data is showing that many cases are coming in delayed and being diagnosed automatically with AIDS.
  - l. Test 8000 cases HIV/AIDS per year in central and public health centers – less than 1% test positive - possibly losing some infected people to migration (not testing partners because can't find them) – it is difficult to tell if there is a continuum of care going on. DPHSS is part of the Pacific Island Jurisdiction Aids Action Group
4. Immunization for Children: Tier One: Vaccines for Children (VFC): Children 0-19 years that meet criteria (medicaid eligible; uninsured; American Indian or Alaskan Native, underinsured)



- a. These vaccines must be received at a Federally Qualified Health Center (Guam's Regional health centers are considered either Federally Qualified Health Centers or Rural Health Centers).
  - b. Underinsured means they may have private health insurance, but it only covers specific immunizations.
  - c. Some vaccines are strictly for VFC (for example, HPV, Prevoner, MGC4F)
5. Immunization for Children: Tier Two: 317-Purchased Vaccines: available for all non-VFC eligible children 0-18 years of age. Some vaccines available for VFC, are not available through this program.
6. Immunization for Adults:
- a. Adult influenza vaccine: 16-18 months of age, adults 50 years and up, high risk adults 19-49 years (with doctor's prescription). Get this yearly.
  - b. Adult pneumococcal vaccine: adults 65 years and up, high risk adults 19-49 years (doctor's prescription). Get this once in a lifetime.
  - c. Tetanus booster – not regularly available – depends on supply and if it gets local funding.
  - d. High risk adults – every year CDC comes out with flu recommendations, and those with medical conditions.
  - e. Sometimes get local funding for adult vaccines.
  - f. H2B workers restricted from immunization services
7. Other Immunization Services: 1) Walk-In Immunization Services: at main public health building – used to be offered daily, currently Monday and Wednesdays – first 30 people in the morning and first 30 people in the afternoon. 2) Community health nurses go once a week to different parts of the island to provide immunization services. Northern and Southern Clinics charge a fee, services at the main building are completely free.
8. Laboratory Services – provides all lab services for DPHSS's programs – mostly provides testing services for Maternal Child Health Program, STD Clinic, TB Clinic.
9. Verifying of Eligibility: This is done at face value – there is no way to check - issue of confidentiality with obtaining info from insurance providers.
10. Staffing: Communicable Disease Control Positions and Laboratory Positions are key. Communicable disease investigators investigate cases that have been reported (including interviews, home visits). The number of contact investigations are increasing (06 to 07 number increased by 70%). Direct Observed Therapy – DOT - make sure TB patients take their medications daily (Drug resistant TB is developing because people not taking their medication. This treatment lasts from 6-9 months.)
11. Programs for Staff Hire: More in regard to physicians - Community Health Association (Hawaii) - Medical Service Corps - GCC has a LPM program – Medical Assistants Program. All staff hired under the Department of Administration.
12. Military Information: Have seen an increase since 2001 in gonorrhea and syphilis. Reporting system doesn't require that military identify themselves as military. Naval Hospital is supposed to tell DPHSS about health issues that have come up – DPHSS is not sure if Naval Hospital is reporting or not. Change of duty affects relationships with the Naval Hospital – haven't seen a

report in years. They are supposed to report to state department – class 1 and class 2 diseases. Fine that military have their own infirmary but their partners are not seen by military – concerned about contacts. Focus on the local partners. But also provide clinical services to see how to treat them.

13. Compact State: Syphilis comes from the islands – Women not seeking prenatal care eventually burden clinic staff. Trend – pregnant women coming to give birth so their children are citizens. No immunization records that come with FAS people – children have to be caught up. Know these are new cases because they are not in the reactive file. Chuuk especially has no systems in place.
14. Documents/Data Provided: 2006 and 2007 Annual Morbidity Reports for Guam (sent via email).

**Department of Public Health and Social Services, Division of Public Welfare**

February 3, 2009, 11:00 AM

123 Chalan Kareta Vietnam, Veterans Highway (10), Mangilao, Guam 96913

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Linda Susuico	Bureau of Management Support
Lydia D. Tenorio	Bureau of Social Services Administration, Bureau Administrator
Annie V.T. Gozum-Soto	Bureau of Management Support (BMS), Acting Bureau Administrator
Ma. Theresa Arcangel (Not in attendance but is POC)	Bureau of Health Care Financing Administration (BHCFA), Bureau Administrator
Elsa S. Perez	Bureau of Economic Security (BES), Acting Bureau Administrator
Christine San Nicolas	Work Programs Section (WPS), Social Services Supervisor I
Francis L.G. Damian	PC IV
Teresita C. Gumataotao	PC IV

Meeting summary/Topics discussed:

1. Bureau of Social Services Administration – administers Title XX programs, Foster Care and Adoption (no other adoption program available on island – administers services for on and off-island adoption), Child Protective Services, Family Preservation and Support Services (short-term prevention home based care), etc...
2. Bureau of Management Support (BMS) - responsible for the investigations of alleged public assistance fraud, collection enforcement, quality control reviews, fair hearing coordination, management evaluation reviews, small studies, etc...
3. Bureau of Health Care Financing Administration (BHCFA) - administers the Medicaid, State Children's Health Insurance Program (SCHIP), Medically Indigent Program (MIP) and Catastrophic Illness Assistance Program (CIAP)
4. Bureau of Economic Security (BES) - administers the Supplemental Nutrition Assistance Program (SNAP – formerly the Food Stamps Program), TANF (temporary assistance for needy families), General Assistance (locally funded), Adult Programs, Determines eligibility for Medicaid, MIP (Medically Indigent Program) and CIAP.
5. Work Programs Section (WPS) - administers the Jobs Opportunity and Basic Skills, Guam Employment and Training Program (GETP), eligibility for Child Care and Development Funds (CCDF)

6. Other programs: Old Age Assistance (OAA), aid for the blind, aid to the permanently and totally disabled, Catastrophic Illness assistance program (local), EAP (enhanced allotment plan – Medicare modernization act), Early periodic screening and diagnostic – for children 0-21 years, Job opportunities and basic skills (JOBS), Title 20 - Consolidated Guam Grants program, Child care, intake and permanency plans, Licensing for Child Care Operations
7. Location – Central location is the main public health building, administrator is located here. Eligibility sites exist for the above programs – these are scattered. Really need a larger centralized location with all programs in the same building.
8. Eligibility – As long as a child is born in the territory, they are eligible for services, MIP program requires a 6-month residency for eligibility (not citizenship),
9. Military Impact – just starting to ask military to identify themselves, but have not previously done so. Military families come in for food stamps, but sometimes won't show their military ID. Military also come in for child care services (payment dependent on income level); if deployed, they must identify a representative to take care of their dependents. During cases where DPHSS must remove a military child from the home (due to situations such as child abuse and neglect), they will coordinate with military on the investigation (civilian AG and military negotiate who will prosecute), and child will eventually become a ward of the state. The occurrence of removing military dependents are minimal. DODEA has agreed (through MOA) that will report any suspicion of abuse. Family violence statistics can be obtained through law enforcement agencies. Some expectations include: issues emerging out of Okinawa and the Philippines (ex. GI babies). Drunk driving is a big issue, and rapes. It is easy for the military to pursue divorce, adoption etc, since JAG provides easy, fee legal services. Military children and spouses use shelters such as Alee Shelter.
10. Child Care – often people use relatives as in-home providers.
11. Micronesian Impact – the shelters house a lot of Micronesian sibling groups, violence is not reported because it is culturally accepted, difficult to establish paternity because of migration patterns
12. Funding – if children come into foster care, they come under Medicaid and foster care is locally funded.
13. Private companies have stopped service to DPHSS due to issues of untimely payment – might occur even more frequently if their services are being utilized heavily by military and workers.
14. Staffing – difficult to recruit for social workers, as well as administration assistants – because of high caseloads, low pay, poor benefits, high stress, they often seek other careers. Currently have 198 positions, of which 65% are filled and 35% are vacant. In the case of eligibility specialists, DPHSS has had applicants decline a job offer because it is too stressful.
15. Documents Provided – 2008 Food Stamp, Medicaid, and MIP Program Statistics



**Judiciary**

February 12, 2009, 10:30 AM

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc
Daniel J. Tydinco	Director of Policy, Planning and Community Relations
Robert Cruz (POC)	

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Meeting summary/Topics discussed:

1. Master Plan/Needs Assessment
  - a. National Center State Courts working with consultant Design Partners of Hawaii (Albert Tsutsui in Honolulu) on the master plan.
  - b. Looking at:
    - i. Current needs (natural buildup)
    - ii. Growing population up north
    - iii. Military buildup
  - c. Judiciary had been planning for the first 2 items but with the buildup went with hiring a consultant to look at facility needs, and to look at the master plan with a judicial perspective.
  - d. National Center taking the fact sheet information of buildup population from JGPO and doing a comparative analysis of this info relative to population and relative to caseload. For example – active duty military – what is their median age etc – compare to a comparable county on the mainland and see what the impact might be on Guam’s caseload (family issues, DUI, etc). Will probably look at BRAC in other communities in the states.
  - e. Major resources considered:
    - i. Facilities
    - ii. Judges
    - iii. Interpreters
  - f. Facility needed up North. This is where 60% of the population is. Will soon open a satellite center in the Dededo mall – have leased commercial space – enough for one courtroom. Will be an anchor client to a shopping center. Process small claims, traffic violations etc.
  - g. Parking is an issue.
  - h. Land is difficult to acquire.
2. Data/Analysis
  - a. Staffing numbers from needs assessment takes into account 3 judges and 1 magistrate and their corresponding employees - can send that information. Basis for these numbers are internal.
  - b. Robert has formula for the needed personnel
  - c. Did a time study - information is in annual reports.
  - d. Annual reports also break down by case types.
  - e. Without the buildup need 1.3 judges – with the buildup and general population growth – will estimate around 3-4 judges.

- f. Distributed between Northern and Hagatna locations.
3. Service Population and Services
- a. Outer islands are a big issue - Many individuals that come to Guam are not prepared – value systems are different. Right now caseload of indigent defendants are 80% Chuukees – that will continue and grow. Need interpreters
  - b. H2B workers during construction – living outside bases. If they violate a local law, they will be prosecuted through the GovGuam system, other than if they violate something that is under the federal court’s jurisdiction. Can get deported eventually through a judge order – but at some point they are in the system. They would first fulfill all the probation requirements, pay all their fines, go through all the treatment, and then go thorough deportation – dependent on case by case basis. Need interpreters.
  - c. Military – have concurrent jurisdiction which allows access on base, for example, Marshalls can go on base to serve court orders. Dependents can get into trouble. All civil cases done through Guam system. Even if they relocate, the jurisdiction on that case stays with the Guam court. They utilize the NCIC database to coordinate with other locations – works well.
  - d. Not linked into info on the foreign workers coming into Guam – this would be done through Interpol - have been talking to FBI – have to go through the encryption process and develop an MOU. Guam is the gateway to Asia – FBI or homeland security would be in charge of this.
  - e. Family court processes youth cases.
  - f. Therapeutic Courts: Mental health court and other counseling programs – collaborate with nonprofits and other GovGuam agencies and the business community. If an individual leaves the program clean, their record is expunged. Adults have had a 95% success rate. Juveniles have about an 80-some percentage success rate. Funding for these programs is becoming an issue however.

**Latte Treatment Center**

February 9, 2009, 2:00 PM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Eddy Reyes	Administrator

Meeting summary/Topics discussed:

1. Only place that has a clinical team associated with a group home.
2. In the past, the only places providing residential treatment programs for youth were off island. Latte was providing off-island treatment for the price of \$150,000-\$200,000 a year at the Shiloh Residential Treatment center in Texas. Now, established on Guam and avoiding the cost of sending youth off-island and service 3 times more youth on island.
3. Service Population
  - a. Primarily see kids with serious emotional disturbances. One step down from lockdown – all on psychotropic medications.
  - b. Chamorro – largest percentage of service population, 2<sup>nd</sup> is Chuukes.
  - c. Youth are pretty successful. Current difficulty is with adults that go in and don't leave – need to be able to reintegrate into society.
4. Program Stats
  - a. Started June 2005
  - b. Total 40 youth served
  - c. Currently serving 15 youth
  - d. 25 youth returned home successfully
  - e. Currently serving 8 adults, total capacity of 12
  - f. Capacity of 10 youth in residential facility, 20 youth in day treatment facility
5. Cooperation with Other Agencies
  - a. Non-profit organizations provide contract services to GovGuam agencies such as DMHSA.
  - b. Latte is an LLC and provides exclusive contract to DMHSA. Currently DMHSA does not have a child psychiatrist. Child Mental Health Initiative grant (federal) pays for this contract. The initiative has a requirement for Guam to establish 11 mandated services. That grant funding is not permanent (6 year grant) - local government will have to fund it in the future.
  - c. Use local pharmacies for medication – also take advantage of getting medications from Shilo in Texas. Usually, formulary is not a problem but for instance at DMHSA, they have a limited formulary, cannot get 1<sup>st</sup> generation medications.
6. Impact of Buildup
  - a. Construction workers are not going to bring families
  - b. Because of job growth – people will migrate here – open up opportunities for jobs – if they bring families – will see a growth in requirement from FSM and CNMI people



looking for jobs. Potentially families from the Philippines relocate here. Need to provide culturally competent services.

- c. Military have very strict rules for service members relocating overseas – not sure what the threshold is – if a family has children with serious emotional issues, they most likely won't be sent here. However, some youth will develop illness here – these are sent off island – and families might have to be sent back. This presents a good rationale to establish service here.

7. Future

- a. Would be willing to invest resources to build capacity – but wouldn't do that without GovGuam.
- b. To determine the real impact, DOD needs to provide data on what has happened in Okinawa – alcohol, mental health, etc.
- c. Have had interest from military families, but since the facility is not yet JACO accredited, TRICARE will not fund this care. Youth and Adult facilities are pursuing JACO accreditation.
- d. Could also provide services for insurance companies, as per day, per bed, Latte is able to provide services for half the cost in the mainland U.S.
- e. Telemedicine is something that Guam should commit to.

**Naval PD**

February 5, 2009

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Lt. Gregory J. Jacobs, USN	Security Officer
David Dimmick	Supervisory Security Specialist

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 Meeting summary/Topics discussed:
1. Work with GovGuam

- a. In the past, when service member gets in trouble – DA turns it to the Navy. In the past, the military would penalize the service member.
- b. Starting about 6 months ago, GovGuam prosecutes. Military go through the same system. Sometimes it depends - sometimes after looking at the case, GPD will turn it over to the military to handle it.
- c. SJ on base coordinates with the DA and the AG office and negotiates.
- d. Any time GPD has a service man locked up, they will call security department (AF or Naval)
- e. Camp Lejune (NC) also has a program – have MPs that ride with local police department – if military person is arrested, the military take them. However, there is some trouble with the legality (posse comitatus – military enforcing local law). People complain because of this – even with military out there at DUI stops. Also provides revenue for GPD - a traffic ticket (\$200).

2. On Base

- a. Do not lock up military for DUI on base.
- b. Larger crimes – if on base – they handle on base.
- c. They will call GPD if a civilian is involved in something on base – anything from theft to reckless driving, altercations.
- d. Civilian on-base – criminal act, picked up, charged, go to federal court – not much different – go through the same procedures but now on federal land. This does happen – 2/3 of this base is civilians.
- e.

3. Facilities

- a. Had a military corrections facility but closed it.
- b. Andersen has a small correctional facility 4 cells –but usually don't get confined or those that are a flight risk.
- c. In the 80s there was 10 man facility on Naval base - closed it in late 80s (only getting 1-10 person per year)
- d. Talking about a new corrections facility in Barrigada 60 bed – shared.

#### 4. Shore Patrol

- a. When big ships come in (ex. Boxer) it is required that they have shore patrol (1 for every 200 sailors).
- b. Shore Patrol stays out till about 0300 – they will not pull people out of the bars, will talk to them and try to get them to the base – GPD may turn people over to shore patrol – if there is something major – police to police is the best way to deal with this issue.
- c. HSC25 – helicopter squadron has shore patrol all the time. They are on Guam all the time.
- d. 1:200 is a ratio that came up on Guam – but not really sufficient. In the 7 Fleet Area, and the Admiral for this area has his own ratios and standards – which is probably 1 every 50 or 75.
- e. Once Marines arrive, can shore patrol on a regular basis. Everyone will cooperate to do shore patrol.

#### 5. Joint Region Marianas

- a. Joint region requirements – just starting to be implemented.
- b. Navy is the lead for this joint region – work good together
- c. Base Suspension or Debarment - if lose privileges on Andersen, lose them on Navy property as well.
- d. Navy and AF share trainers.
- e. Still being discussed if marines will fall under the joint region – Jackie Chandler is coordinating the Navy side and Judy is coordinating Andersen – Amber will follow up.

#### 6. Marines

- a. Idea of a “Warrior Culture”: The training Marines go through is a little different – train young kids to think they’re invincible – that is the way that they are trained. Marines go in before anyone else goes in – that is what they are trained to do.
- b. Gangs exist throughout the military – not as obvious as in some other areas – in the Marines and Army see a lot more gang-type training. Sometimes, gang members are going into the services to learn these techniques. Navy and Air Force don’t offer that much of that type of training. (Stars and Stripes news article “FBI says US Criminal gangs using military to spread their reach”.)
- c. Marines will have a security department and security officer – they are looking at 120-150 full blown CID security officers – they will most likely be transferred from Okinawa.
- d. Guam police will need more officers, better equipment, best training you can get – marines won’t back away from trouble like a normal person would.

#### 7. Fights:

- a. A lot of fights will be military on military – ships will fight each other.
- b. There are fighters out there – they are training because the marines are coming – those are the people that need to be targeted.
- c. Alcohol is usually involved.

#### 8. Weapons:

- a. Guam has a 30 day weapons registration – Navy requires that weapons be registered – and to take your weapon off base to go to a shooting range – have to have a letter.
- b. Customs is supposed to catch those with weapons coming in.



**Police Department**

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Chief of Police Paul Suba	Guam Police Department

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 Meeting summary/Topics discussed:
1. Military

- a. Work really well with the military. Chief Suba met with the general and admiral and share mutual concerns for the community and made agreements to train military personnel – particularly with issues that might come up with Chinese illegal aliens.
- b. Police headquarters are located in old Navy facilities.
- c. Have already implemented a program with Air Force and Navy for law enforcement to meet together in the tourist district to work together and handle any military personnel – intervene and bring them back to the base.
- d. Providing safety briefings for military.
- e. NCIS, OSI working with them to establish a mapping of where new massage parlors will be located, and if they are licensed and legal.
- f. Military arrested off-base go through the GovGuam system – the UCMJ can apply – but a majority do go through the system – bar fight and some cases DUI.
- g. Marines have their own law enforcement system and contract a security team for the bases. Prior to the downsizing of 80s or 90s – had their shore patrol come out and assist GPD – they would intervene when they see drunk military personnel – before the situation escalated. Have set up now a smaller version of that – with reps from both military branches in Tamuning / Tumon – want to see it return to the 60s and 70s when military shore patrol would come out and actually be visible.

2. Outer Islands

- a. Lot of people coming in from outer island.
- b. Traffic accidents – 10,000 crashes annual and 20-30 deaths – way too many for such a small island. Getting lower because aggressive enforcement and cooperation from community.
- c. Some that come with good intentions become involved in vices and end up not working etc.
- d. Many of the women and children are the victims – esp when the male becomes involved in vices and is not longer a viable provider for the home. Younger ones get involved in the gangs.

3. Construction Workers

- a. Not directly involved in where they are going to be housed – have seen in the past when construction workers were housed improperly – camp would be a concern for the community.
- b. Also there has been civil litigation over contract issues – for instance on Saipan – lot of civil unrest due to not getting paid/paid properly/health concerns not being met. This is an anticipated challenge.
- c. If H2 workers are involved in anything – they can go through the civil litigation process

- d. Family members can come to visit. Security concerns exist re: who are these people and are they really here to meet
4. Tourists – drowning in Tumon area
5. Types of Incidents
- a. Traffic Accidents and Drowning – those are the two more severe cases when people lose their lives.
  - b. Military Traffic Fatalities – (AF) Andersen to Route 1 and 3 – (Navy) – Adelup to gate.
  - c. Military drowning fatalities – in the north, around Gabgab area (Navy).
  - d. Traffic Congestion is a concern – more fender benders, but that is not a safety issue.
  - e. Air Traffic Congestion. Only one runway – today F18s need to make emergency stops here. There will be more military and commercial aircraft convergence – esp more flights coming in from Narita, Korea, Philippines – Continental has increased its flights around the military area.
  - f. Fights: When military go out into the club: Racially motivated fights – now that diversity in military is up, have seen a decline in altercations. Now more motivated by gender issues (girlfriends etc)
  - g. Illegal Drugs and Prostitution. Clubs, strip clubs and massage parlors are all co-located. AG, GPD, GFD, PH, Revenue and Tax all working together to do inspections.
  - h. Gangs: have a gang problem – not a big problem, but there are indications that this can become larger – gang-related crimes (graffiti, drive-by beatings). Been hearing that some folks within the military are already gang members. Youth from Guam go off to east LA/ California and bring back the gang attire/signs/violence. Micronesian community also picking up the same type of gang culture – affiliating with gangs to validate themselves – dealing with those challenges. Used to be village to village, but now Chuukees community against the locals (flair-ups for example Chamorro youth retaliating against the Chuukees youth – pouring gas on cars and burning them, using slingshots with metal/ball bearings/ knives/ machetes).
  - i. Firearms: To own a firearm, must possess a firearm ID, register the gun through GPD. Military have come on island and fail to get the gun registered – then sell the gun before they leave because they can't get it through customs –
6. These needs are not just because of the military buildup. Guam has seen a lot of challenges – super typhoons – economy – everyone is short on personnel – but this is not an excuse.
7. Recidivism. System can't handle the number of arrests so the court will allow people to remain in the public under certain other controls – find that they don't comply with the restrictions.

**GPSS**

February 9, 2009, 9:00 AM

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
David Kiernan	Principal and Chief Analyst, Business Case Analytics
Dr. Nerissa Bretania-Shafer	Superintendent
Jacqueline	Acting Controller
Toni Santos	Assistant Personnel Administrator
Fred Nishihara	Legal Counsel

Meeting summary/Topics discussed:

11. Original Survey: Will complete and send to Amber
12. Locations and Student populations
  - a. 3 new and upcoming schools that are going to open
  - b. School populations range from 58 to 1100 (Finnegayan).
  - c. Regionally – population has shifted to the north and central areas. Therefore schools in the southern region have room (capacity 700, but population is 250).
  - d. Redistricting has to happen for a number of reasons
    - i. New elementary school (Adacao) opening up – students that will be closer to the new school need to be shifted from Price elementary (pop 1,000 students).
    - ii. Also necessary because currently there are too many students at JFK and George Washington High Schools (5,000 students), necessitating the holding of double sessions (first session 6:55 am to noon, and second session 1 – 6pm – students are not afforded the full instructional hours they deserve. JFK site has been closed to the condition of the facility. George Washington has reached its max of 2700 students.
13. Service Population
  - a. Compact Impact – done using ethnicity, not necessarily place of origin
  - b. Military dependents served by GPSS – Research, Planning and Evaluation can provide this information, which is used for military impact aid funding. GPSS currently has about 100 students that fall into this category, including the dependents of activated National Guard.
  - c. Can provide demographics of students by region.
14. Funding
  - a. Not given by population. All school funding comes from the same pot.
  - b. 89-90% budget is spent on personnel (salaries/benefits), then second is contracts for services, third utilities, fourth supplies and materials.
  - c. What is released is less than requested.
  - d. Allocation of funds done by default – get funding only for filled positions.
  - e. Would want more flexibility in terms of the conditions under which students are taught. For example, board union contract prevents schools from increasing their student to staff

ratio. Also, the federal mandate under IDEA means schools are required to have a large number of one-to-one aids (tied into their IDP). These aids are hired directly by GPSS. IDEA is a federal program that provides funding – right now spending local funds as well for one-to-one; the IDEA program requires that GPSS maintains a certain level of local funding (can't go below last year's spending). Currently under review by the Office of Special Education Programs. IDEA program is mandatory and funding comes from a different source – there is a strong lobbying group.

- f. Can provide information on federal funding that comes into GPSS – total around \$40 million

#### 15. Impact of the Buildup

- a. CMTF Education Committee projections were based on certain assumptions. Frustrations in that they don't have much data on the project – how many are coming in, married, with family, how many not eligible for DODEA.
- b. Already seeing companies offering services to GPSS. For instance, BA systems wanted to offer GPSS the opportunity to sponsor a robotics team. More companies are wanting to meet with the Superintendent for contracts such as maintenance. A construction company is offering a temporary site for schools by converting barracks into school.
- c. Military schools will siphon staff, especially special education – just can't compete with their wages – even with the GPSS incentive pay, can't match the wages.

#### 16. Charter Schools

- a. Very new concept
- b. Guam Education Policy Board will still provide overall governance. Charter schools still have to turn budget in to Superintendent, who in turn submits it to the Policy Board. Charter Schools have independence to run their schools and don't have the same kind of restrictions (procurement, assignment of personnel) that GPSS schools do. Copy of this law can be provided.
- c. Currently no charter schools at all.
- d. Any of the GPSS schools can apply to be a Charter school. For example, Southern High has a fine arts auditorium – could establish a charter school specializing in fine arts.
- e. Private schools might also be able to apply – there are certain legal safeguards.
- f. The jury is still out on whether or not charter schools might harm public school funding. On one hand, there is different funding for charter schools. Usually GPSS is funded through a consolidated grant. Charter school funding is separate. However, others feel this will be taking funding away.



**GFD**

February 9, 2009

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Amber Guillory	Environmental Planner, TEC Inc
Chief David Peredo	Fire Chief
Eric Rosell	Teleprocessing Network Coordinator

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 Meeting summary/Topics discussed:

1. Staffing numbers provided are full time firefighters, including EMTs
  - a. Around 200 EMTs – all are uniformed personnel
  - b. Around the clock – 24 hours – 12 hour shifts – NFPA regulations targets 4 on duty (meaning you need 6-8 to ensure this staffing level)
  - c. About 32 staff that can perform open water rescue.
  - d. Hazardous Materials Response Team – in the works – a response to 9-11 – have people in training.
  
2. “Unit” means one vehicle
  - a. Minimum of 2 units per station (engine or EMS).
  - b. It depends on the magnitude of the alarm, but typically two units will respond.
  - c. Typical house fire: 2 engines, 2 rescue, and an ambulance
  
3. Standards
  - a. Based upon Response Time (first), Population and Hazards
  - b. Response time – 4 minutes.
  - c. Hazards are type of incidents – terrorist, structural fire, auto accident – SOP
  - d. Hazards – industrial areas that store chemicals, port authority etc.
  - e. High rise buildings require additional services.
  - f. In the late 70s – used 15,000 as population to determine standard.
  - g. NFPA indicates four on-duty personnel per engine company and per ladder/truck company – does GFD have that? No – right now average is 3. One challenge is military deployment. GFD has 96-98 personnel in the services – deployment impacts the agency. Normally, reservists need to give employer 30 days in advance but this doesn’t always happen. In the worst case scenario, recall people from off duty.
  - h. NFPA indicates 5-6 on-duty personnel in jurisdictions with high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by Authorities Having Jurisdiction (AHJ) – can you identify some of these locations on Guam? Can’t meet this. Locations: Tamuning and commercial port. See a lot of activity on Cocos Island – likelihood of incidents here is high –
  - i. Are upgrading system that is tracking EMS response times.
  - j. All stations have engine companies. There are plans in procuring ladder/truck – right now none.
  
4. Stations
  - a. Planning 4 station upgrades and one new station.

- b. Agat – originally a public health building, present location prone to flooding, designated as flood zone. New fire station is being built at a different site.
  - c. Piti – lack space, property for further expansion, - looking into relocation. Area where oil tanks – high hazard area.
  - d. Sinayana – originally a public medical clinic rebuilt to a fire station – placement is in a bottleneck – next to school, church, community center.
  - e. Tamuning station – ladder truck will be assigned here
  - f. Inarahan – rebuilt in 2003, not 2000 – mountainous area – response time is longer so need more people.
  - g. Yigo – really affected by military buildup – proposal to open another station – also looking at heavy duty land rescue unit for traffic accidents etc.
  - h. Talofoto – proposed a sea rescue unit – there is a launching site. Built in 1992
  - i. Astumbo – 1998 built – population is shared with Dededo – built this station because of response time. Close proximity to bases. More units needed. Want to add to this so that it can cover Ritidian point.
  - j. Rescue base 1 – this is temporary housing – need something permanent. Need something for land and sea but need to identify funding. Basically cover ½ the island. Housed temporarily in old NAS buildings.
  - k. Rescue base 2 – need new facility – equipment expose to the environment.
  - l. Umatac and Inarahan – thinking of open water rescue, Allied Emergency.wants to upgrade the southern area, especially the east side – land and open water rescue.
5. Impact of Buildup
- a. Worker barracks – there are code requirements to use them as a dwelling – still needs to meet the codes – can design in as a dwelling but will be obligated to meet uniform fire codes.
  - b. One stop – 2 inspectors – will be inundated with plans. Also have a code enforcement section that inspects areas.
6. Cooperative Agreements
- a. Have MOU with military – help each other out.
  - b. During time of attack however, military first protects its own assets, will not respond to civilian needs.
  - c. Can't go through military land if going to a fire/rescue – especially affects Astumbu and Yigo.
  - d. Coast guard – good working relationship – they work with them (helicopters).

**Army National Guard Readiness Center**

February 11, 2009, 11:00 AM

Attendees:

Attendee Name	Title/Organization
Amber Guillory	Environmental Planner, TEC Inc
MG Donald J. Goldhorn	Adjutant General, Guam National Guard

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 Meeting summary/Topics discussed:
1. Membership

- a. Currently: 1250 Army and 450 Air Force
- b. 250 full time force
- c. The rest are part-timers. Part time: train one weekend a month, attend 2 wk annual training and other training.
- d. Most are on duty more than part time bc they want to be.
- e. 9 out of every 1000 Guam residents are Guard members, national average is 2.5
- f. Heavily deployed force – impacts solidiers/airmen and families; provides economic relief to those that are un or underemployed
- g. Right now, no spouses of active duty – 99.9% of guard population is local. True throughout the guard - typically made up of local community members and it is very much family oriented.
- h. Will continue to grow. Air guard will grow a couple of hundred – adding a tankard squadron into the air guard. Army may expand by adding a signal company – but growth will only be another 100 or 150 in the next 2-5 years.

2. Emergency Response

- a. Emergency response is a tiered response.
- b. First responders (fire and police).
- c. Completed an exercise last year (TOPOFF 4) that tests the island’s capacity to respond to WMD/natural disaster/other man-made disaster. National exercise, pick a different state to have it in. First responders performed adequately.
- d. National guard is the 2<sup>nd</sup> tier – the first military responders – through civil support team – they also performed to standard.
- e. This island is well prepared for responses – have had a lot of practice with typhoons – come together as a community.
- f. Also have locally-driven exercises that test ability.
- g. First responsibility of Navy and Air Force is to perform the federal mission – not to come to the rescue of Guam –in any emergency their first priority is to ensure this. Will stay in that non-responsive mode until they are absolutely certain their assets are protected. Then, if asked, they will help perform missions in the community, and typically what the guard is unable to perform because of capacity. Have had assistance from Hawaii and other islands during the rebuilding phase in the past.

3. Benefits

- a. When in deployed status and for 180 days after deployment – eligible for full medical coverage.
- b. Can also buy TRICARE at all times at a very reasonable rate.
- c. access to commissary (50% savings) even when not deployed.

- d. Have access to a wide range of services. – Marie can provide information.
- e. Full time soldiers and airmen – their dependents can go to DODEA schools, as well as when they are deployed.

#### 4. Locations

- a. Barrigada complex
- b. Fort Juan Muna
- c. Air National Guard complex.

#### 5. Buildup

- a. Social impact on our soldiers and airmen – cost of housing has risen significantly simply on the prospects of buildup. This will become more significant. Average person is out of the market.
- b. Pressure on school systems – creating a divisive situation – DODEA compared to GPSS.
- c. The buildup is a double-edged sword in terms of recruitment – a poor economy is good for recruiting – it is clear that people are driven to the military because they are out of possibilities. Recruitment numbers are significant. When construction starts, not clear how this will impact job opportunities for service members. Lot of construction jobs available – who will they be competing with? How that will impact the soldier with a high school education, minimum skills, not sure. Someone with skills will do extremely well. Have always seen construction jobs – no one wants them other than the H2 workers because they are paying such a low scale.
- d. Guard is trying to work with Contractor's associate – want to hold a symposium where they give soldiers/airmen ideas about opportunities that match their skill set. Most people who have those skill sets in the military, have other jobs.
- e. Talk to JGPO frequently. The Guard is well represented. Interest is to ensure that the Guard can maintain adequate training/fire ranges for soldiers and airmen. Also concerned about quality of life for Guard members but can't impact that much. Currently do share training ranges = easy to share, but demands will be increasing with an increase in active duty military.
- f. Incredible amount of challenges presented by population increase: social econ problems, infrastructure. When buildup first announced, people were very supportive. As we go along, people begin to see the true impact and the fighting between executive and legislative branch – support is lessening.
- g. However, if there was ever a time to move this – the timing is right – with the economic downturn.

**Guam Dept. of Labor**

Feb. 4 2009, 1630

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Darrell Ferguson	VP, PPI Guam Inc.
David Su	El Dorado Resorts
David Dell'Isola	Director, Agency for Human Resources Development, Guam Dept. of Labor (GDOL)
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.

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 Meeting summary/Topics discussed:

1. GDOL arranged meeting because of their interest in the concept: PPI Guam, Inc. is recently-created Guam affiliate of a Texas-based HR recruitment company (with Philippine partner) interested in recruiting both Asian and US national construction workers for military construction periods. They are teaming with the owner of "El Dorado Resort," a largely vacant 30-year old Central Guam apartment complex with 412 units that can be (a) renovated to dormitory-style complex accommodat-ing 3,500 to 4,000 workers by converting to smaller bedrooms that sleep several people, then (b) after construction, converted back to apartments for long-term use.
2. El Dorado already zoned, and they are now applying for building permits (which they expect to obtain after moratorium lifted in April) to renovate and add cafeteria that could serve 1,000 people. Will also provide on-site health clinic (physicians assistants and arrangements with local MDs), recreational activities such as pool, game courts, video games. Bedrooms at least 150 s.f.; on average, ca. 50 s.f. living space per worker, so consider this more attractive than "container-style" approach to public housing.
3. For employers, they would be 1-stop employment center taking care of employee background checks, physicals, payroll, taxes, insurance, workers comp and (if H2B) visa requirements. Currently in discussion with various prospective employers who are enthusiastic and have given them letters of intent.
4. GDOL feels US workers should be given first priority. Based on PPI job fairs in places like Las Vegas, response from out-of-work construction workers has been very positive – some 7-800 workers (half those interviewed) said they want to come even being notified of prevailing Guam wages. Noted that prospective workers are "US citizens, not necessarily traditional American nationals" and that focus would on non-unionized workers.
5. SIAS team mentioned reasons we've heard that US workers are unlikely. Q: Ability to cope with Guam's climate? A: We're looking at US South, including southeast. Q: Competition from Stimulus or economic rebound on CONUS? A: May be true in 3-5 years, and then we'd switch to more H2s.
6. Q: Applicability of this to non-military construction or new service workers in same timeframe? A: Would have to find other properties, but PPI believes model can apply to non-milcon and maybe service workers. Can bring E-2 visa (5-year visa with no national cap) workers from Philippines to fill engineer and designer positions here, since rates would discourage US in-migration. Philippines is a "treaty country" so can bring such E-2s here. Now have 250 of those in Houston area.

7. David Su comments: Expects smaller construction contractors to lean to container-housing approach. Expects Micronesians to come for service jobs – they are used to 12 people per apartment with only 1 or 2 workers, but more dependents will work as economy expands. Owns 700 apartments; anticipates more rental hikes as housing shortage develops in boom period.

8. Possible factors that could interfere with accommodating expansion to house other than milcon workers: (1) Availability of materials such as cement; (2) Though lots of people with land and permits ready to jump in to develop, growing doubts about whether project will happen are causing people to hold back.

**Marianas Yacht Club**

Feb. 5 2009, 1500

Attendees:

<b>Name</b>	<b>Title/Organization</b>
Bob Leeper	Commodore, Marianas Yacht Club (MYC)
Helen Kennedy	Secretary, Marianas Yacht Club
Ginger Porter	Treasurer, Marianas Yacht Club
John Knox	Pres., JMK Associates

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 Meeting summary/Topics discussed:

1. Misunderstanding: SIAS team believed it had requested a meeting with marine tourism professional association. Marianas Yacht Club (MYC) includes private boaters and sailors, though Mr. Leeper is also an employee of Micronesian Divers Assn (MDA). We decided to discuss possible recreational and some economic impacts with MYC, and then do further discussions with Mr. Leeper in his MDA capacity. These notes reflect comments from MYC.

2. MYC hosts events like Japanese Regatta, which have economic value as well, right at entrance to Big Navy Harbor. A recurring issue has involved Navy telling us to leave in the middle because their ships are coming, despite all our permits being well in place. We suspect the folks who send out security boats not in communication with those who know about permits – “the potluck of personnel rather than policy.” At most military ports, vessels go through much more recreational traffic than here, so this seems puzzling.

Also, we’re close to new aircraft carrier dock. If they kick us out of the harbor for a day, will have tremendous impact. For small dinghy sailing, this is the only competitive area. Both things may be mitigated if MYC activates its advisory committee and includes a Naval liaison, though feel the liaison must come from Admiral’s office to assure effectiveness.

3. Otherwise, excellent relations with military. We provide them a recreational boating resource, and military bring visiting friends and families down to MYC.

4. Anticipated major population increase should strengthen club membership and provide sufficient economic base for development of new businesses needed by recreational boating community: (1) local retail outlet to sell sailboats or parts here in Guam – increase should provide enough market to support sales of smaller (15- to 25-foot) sailboats; (2) private commercial small boat repair service haulout facility – that would encourage cruising yachts to stay here longer and spend money; would also be used by smaller commercial businesses like dive boats and commercial fishermen. (However, some fear it would not be well planned if jammed through Land Use Commission during a period when too many development applications and too little time for public scrutiny.)

5. Down side of population growth could be more conflicts between different types of marine recreational uses. Example: Sasa Bay (“where we are, in the upper harbor”) is a MARINE preserve with little motorized boat traffic. In contrast, East Agana Bay is prime jet ski area. They have local rentals, and visting sailors, tourists, who moor ~~stay~~ out in open harbor, deeper water. Concern that some motorized boats or jet skis may spill over into bay. MYC is designated as managers for the mooring area, must

maintain the area. Fear conflict with motorized actions. No official speed limit in area. The wave action generated by motorized boats can contribute to shoreline erosion.

Knox suggested this may lead to what has occurred with population growth in Hawai‘i – substantial time by local government facilitating conflicts between various recreational (and commercial) uses to work out rules and regulations. Some concern that GovGuam currently lacks history or trained personnel to do that successfully.



**Marianas Yacht Club 2**

Feb. 5 2009, 1530

Attendees:

Attendee Name	Title/Organization
Bob Leeper	<del>Micronesian Divers Assn., Purchaser/Buyer</del> Commodore, Marianas Yacht Club (MYC)
John Knox	Pres., JMK Associates

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 Meeting summary/Topics discussed:

1. Misunderstanding: SIAS team believed it had requested a meeting with marine tourism professional association. Marianas Yacht Club (MYC) represents private boaters and sailors, though Mr. Leeper is also an employee of Micronesian Divers Assn (MDA). We decided to discuss possible recreational and some economic impacts with MYC, and then do further discussions with Mr. Leeper in his MDA capacity. These notes reflect comments from Mr. Leeper wearing his MDA hat, though he emphasized that he is not an official company spokesman and would ask his employer to review, revise, and perhaps add to notes.

[Subsequent e-mail communications established that Mr. Leeper's manager informally reviewed and agreed with his comments, but did not want to have them attributed to MDA without formal review by ownership in both Honolulu and Japan, which Mr. Leeper said was impractical. In an April 6, 2009 e-mail exchange, it was agreed that these comments would also be attributed to Mr. Leeper in his Marianas Yacht Club capacity rather than in his MDA capacity.]

2. MDA is a private company, not a true "association." (There is a structure for such an association within GovGuam, but it has never been implemented.) MDA and Guam Tropical Dive (GTD) are two largest companies, though many little scuba companies contract their boats. MDA tends to service the military/local market, while GTD specializes more in tourist-oriented dives (predominantly Japanese market). Given its market, MDA should expand – will likely benefit from buildup in military contractors as well.

Last year, 3 aircraft carrier visits made significant economic impact to Guam as a whole, including to dive industry in particular. As many as 100+ open-water certifications (entry level to learn scuba). We fly instructors out to do basic instruction even before they dock for just 3 days. So what's normally a week-long process gets done in 2 days. Big boost to dive industry! Recreational benefits to Military while in port

3. Downsides: Buildup in harbor itself and Kilo Wharf is having, and will have additional, detrimental effects on diving industry. Very rough outside harbor, so we dive daily in Apra Harbor, where one can touch two wrecks from different wars at once. Single most popular dive. Siltation from dredging affect visibility and possibly coral growth—loss of coral at Western Shoals from dredging. Not sure if this will be long-lasting or transient effect. Also, commercial shore growth will take out popular dive instructor spot for shore diving. Bulge in population increases divers, so need those instruction sites. (Another example of recreational conflict from population growth noted in MYC notes.)

Tourist industry has access via a mooring to reef off Navy Base's to Gab Gab Beach, one of the most popular shore dives – tourist industry has access via a mooring. Atlantis Submarine uses that site and is

subject to pressure by increased military use of harbor. Should talk to Atlantis. (Note: There is no trade association for activities and attractions.) Two major dive companies and smaller ones who boat out of Apra Harbor dock at Cabras Marina, and go out right past commercial port. Somewhere in the vicinity of 20-30 boat trips go out each day. Sort of a choke point that will get worse.

Original plan (believe dismissed now) for firing range at NCTAMS would have closed off main dive areas for Guam. At Orote Pt. in Naval Harbor, small-fire training would close us out. This is best diving spot on Guam, and would have domino effect on crowding other spots.

4. Tourist dolphin watching industry very critical and probably equal in size to dive industry – 4 or 5 boats out of Agat, more from Cabras and Hatgana. Will grow with “military tourism.” Not strong oversight here, but should be. Just self-regulation at present. It works because current businesses understand law and dolphin needs, but could change with growth and no oversight.

Other comments:

See related notes for discussion with Mr. Leeper about MDA

**Guam Fishing Co-op**

Feb. 11, 2009, 9:00 AM

Attendees:

Attendee Name	Title/Organization
Manuel (Manny) P. Duenas	President

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 Meeting summary/Topics discussed:
1. History

People consider it a fishing industry but it's a fishing community. "Guam's Fishing Community"

Over the past 50 years the fishing community has been stagnated by rules and regulations.

Inshore had been predominant but now going out further from shore.

Have fished for 3,500 years.

Recently technology and rights and privileges (coming with U.S.).

Not much economic development for locals since island land owned by federal government, US military or large private owners.

Ocean is last bastion of local economic development. Were worried about presidents blue legacy but did not affect Guam.

"Purse Seine" large big net trawl net and gill net drift net, industrial fishing banned. Long line is allowed. Only a training vessel for long line.

Have seen a decline on inshore fish and attribute to sedimentation and land use issues. Used to use tidal pools and could fish inside reef, no those tidal are gone - those impacts have not been addressed.

2. Buildup

Expect about 1% of new populace to have boats. Maybe 600 new boats Now only about 150 boats.

There will be plenty leisure time for new military. Military use leisure time to use the water.

Free dive and other fishing will increase due to buildup. And should be equal in concern.

Will be a dramatic change in life of fishing community.

Don't expect new harbors since no place to do it only could expand but, as of right now, there is no money to do that.

Federal Government fishery service saying there is a decline in fish but harvesting of fish will grow (as a result of the buildup) and regulations will remain or even grow (more area will become conservation) asking for 5 preserves now but will likely want more when pop increases.

Lots of talk about saving habitat but Guam Fishing Community is small and does not have much impact itself.

Especially concerned with use of off-shore, if military creates exercise zones the fishing zones will be lost - could lose up to 60% of fisheries if new conservation areas and with military exercise space. Military has not given consultation about waters to be used in exercises.

More people less area to fish – the fed agencies will come in and say they are over-fishing.

Max fishing range is up to 40 miles and same range for military exercise.

Ed Lynch is attorney – gave presentation on areas encompassed by buildup in ocean. Want to recommend funding for FADS (Fish Aggregation Devices) Bouys that attract fish (anchored buoys that attract algae. Also want funding to expand marinas. About 20-30 military members in harbors now.

Slip space price has already increased and expect it to increase more. And some people may get pushed out since can't afford. Most of time when folks get boats pushed out the boat sits and rots.

### 3. Socio-Cultural

Fishing is not economic, it is strictly social – fishermen priority is feeding family and may make sales to cover expenses. Also fish go to support cultural activities. “Chencule” – Form of helping each other out in community. (People donate to each other when death or marriage or christening) “Expense fisherman” Tradition of giving gifts. Required to give gifts when go to someone's house – culturally required. 60-70% of cultural values come from ocean – words and tradition.

Anthropological Sedation – what are now fishing preserves had been traditional fishing grounds, “safe waters”, where fathers teach sons how to fish etc. taught community cohesiveness. Preserves created an immediate breakdown. Misunderstand that traditions are evolving but basic premise is gathering and harvesting (tradition is the bringing home of fish) tradition changes but culture remains (technology changes but tradition remains the same).

Recreation (jet-skis) will impact (recently had a net runover) – want to study whether that scares away fish.

Scared about housing costs increasing – kids won't be able to afford to fish Island will not have any fresh fish and traditions will be lost.

Guam has always been lucky for sea mounts, underwater mountains, these are all hook and line fisheries, sometimes rather large up to 7 sq miles. They are the nursery grounds, they are all over 1-2 north 6-7 south huge range 100 miles off to east. Guam encompassed by sea mounts. But now those areas used for mil exercise (may use to explode ordinance?) Also hear they are placing big sonar bouys under water – would affect marine mammals and would probably affect other. Fish use marine mammals as guides..

Sea turtle ban has hurt and no study to say if population is still in trouble.

Turtles are the highest traditional use. Not served to general public, only to higher-ups in community and special guest (that's gone now). Chamorro not given consideration like Eskimos who can harvest seals. – no money value on culture..

Increase in preserve area will reduce local harvest. Fish may be down by 80% and will hurt fishermen lifestyle.

Judy Ainesbury did a paper on Guams fishing community – University of Guam.

### Environmental Concerns

EPA came in said they would dredge/clean sediment and dump on a sea mount, the solid stuff will stay but lots of the rest will just come right back sedimenting shores. Will kill habitat of sea mount. EPA says they can't ship stuff off but they doing it at Andersen right now.

Apra Harbor “glass breakwater” traditional fishing ground closed – about 10 years ago – due to prepositioned ships and Kilo expansion.

Pollution PCB (polychlorinated...oil to cool transformers), nuclear waste spill all bad for fishery.

Military cleanup still going on.

“Double reef” now called red reef...central north western side of island. is no longer whiht sand but red from construction.

Merizo Village told not to fish.

Nuke testing at Masrhalls - wind comes here, Guam has high rates of cancer.

According to oldtimes, island was fumigated (Agent Orange) and brown tree snakes used as excuse for demise of birds.

**GHURA Offices**

February 11, 2009, 2:00 pm

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Nora Camacho	GUAM HOUSING & URBAN RENEWAL AUTHORITY
Josephine Rosario –	Catholic Social Services, Guma San Jose Shelter
Lourdes Eclavea –	Catholic Social Services, Guma San Jose Shelter
Shirley Lee –.	Sanctuary, Inc
Annamarie Kenny –	Oasis Empowerment Center
Mark Martinez –	Catholic Social Services
Jerry Pura –	Catholic Social Services
Lou Hongyee –	The Salvation Army, Lighthouse Recovery Center
Amor Say	- GHURA
Anisia Terlaje-	Women’s Veterans Assoc.
Josephine Rosario –	Catholic Social Services, Guma San Jose Shelter

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 Meeting summary/Topics discussed:
1. Services Provided

Catholic Social Services (Guzman San Jose emergency shelter) – Shelter is open 24/7. Provides services for 15-22 people/day all ages (can stay up to 60 days) to find housing 755 single individuals last year but had to turn away 574 applicants due to lack of space. Provides meals 3/day 7days for folks not on food stamps also provides transportation services. Network w/agencies DPHSS Gov, mayors. Try to link individuals with employment or other services. Law 20-59. Have 2 centers in Harmon and Dededo. 2 houses w/ 8 br each.

Impact seen during construction will help homeless by providing jobs. Many trainable people who could get on their feet. Very tough to get out of homelessness with security deposit to get into apt. Have 12 employees with 1 case worker 8 shelter workers. Working with AHRD.

Min wage will go up in July but rent still too high.

Sanctuary - High risk teens with emergency, referrals from social services. Stay 30-45 days. Have transitional living program w/ 18 mo. Stay. Provide housing food, job assistance.

Oasis Empowerment center – substance abuse treatment, supportive housing for homeless single females w/ substance abuse, at capacity. Correlation between trauma and substance abuse among homeless.

GHURA - provide funding for non-profit homeless programs

Lighthouse recovery center – 24 men including 4 detox. All substance abuse and some homeless. Men stay 6 mos. Or longer. Must have Drug and/or alcohol problem. Shelter + care. Allowed 17 rental assistance vouchers. Fear not being able to find housing units with buildup.

Lean Program (CSS) – Transitional housing 30 units, all families....people have to work if not they are evicted, not easy to get a job. Homeless willing to work. Get money from GHURA. Recommend condition that it required 1 job for every unit. At least 30 hours per week.

Women vets for America - putting up transitional program for Vets. Looking to renovate property for transitional units. Want # of women veterans on Guam. Trying to get number from Naval hospital.

Social worker Adults with Disabilities (catholic SS) - 8 units transition from homeless. Service Homeless Vets.

Don't want rent control but there will be a housing shortage. Will price people out.

2. Hidden homeless – Hard to count. Some don't qualify because they are hidden..there are a lot. Use food programs and feeding programs.
3. Where do homeless stay? cars, tent, beach, cave, wander.
4. Employed Homeless - With LEAN they all work or they'll get kicked out. But most do not work and some have mental problems and some choose to be homeless. Some would rather drink than live with family or shelter, shelters have rules.
5. SMS Survey – Did not ask reason for homelessness. Did ask length and periods.
6. Increase in sex trade – will come along with buildup, will increase all other service needs. Guam not equipped for human trafficking.
7. Homeless prevention – Salvation Army does rental assistance, CSS provides utility assist. But limited, and life skills courses.
8. Stand-down – register and provide cloths for homeless. Project homeless connect.
9. Problems with homelessness –

For homeless – visible to friends and get embarrassed causes separation between families. Trammatization for women on street – all problems seem to get worse. Re-victimized. Can become aggressive over-time. Harder to get work once homeless.

For others – Guam homeless try to blend in. Do pan-handle. Keep to themselves.

10. Getting documentation (Drivers license, SS#) - can get documentation if have had before. But if from off-island and have never had local papers would be very hard to get new ones.
11. Regional - most are up north. People down south would not allow homeless on southern beach.

12. There is a lack of transportation on island - hard to look for apts. Or jobs. Hard to get to work and not worth it with length of transit.

13. Some shower at Public Library.

14. Housing availability?

Expressed fear is cannot control what landowners want to do. Want Gov. Guam to build and rent.

Just not enough places to stay.



**Fiesta Hotel**

February 10, 2009, 12:00 noon

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Mary Torre	President GHRA
Jeffery Schweizer	General Manager Fiesta Resort
Amber Guillory	Environmental Planner, TEC Inc.

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 Meeting summary/Topics discussed:
1. Military coexist with tourism?

Tourism on Guam for over 40 years, military for the last 50 years. Have had an influx of military, but tourism has continued to grow if military is in or out. Concerns with military – land use, infrastructure, all codependent on the same utility agencies. Even though bases have plans to be more independent, they are still using a lot of the same utilities. Don't want to see that the military has redundant system, but Guam doesn't have one – maybe the military can be a safety valve in case Guam's system folds. This applies to the island community as well. Hotels have water supplies but that is to hold us through typhoons – they have tanks to manage 2-3 days of water. Having plans to maximize resources and contingency plans. Contracts with military are usually one way – but there needs to be agreements of community getting supplies from military. A lot of opportunities for businesses inside the gate.

Military will add to tourism business – even today we benefit from military – active, permanent change of station, transient – they contribute to Guam's population. We rely on those markets. There are concerns that other tourists won't want to come because of the military factor – but Guam has always been able to market themselves – always want to market themselves as a family destination. In a sense, the industry adapts to their guests. For instance, Japanese – as an industry, we are always welcoming. Every section of the market will always have different needs/concerns. There will be some competing demands.

**It would be great if Guam was identified as an R and R place for all those that are nearer Guam than states-side. 1-5 months ... even with families ...** The MWR programs, benefits, discounts, programs to attract people. One is the resort destination for families. Also, the transition of employees back into the non-hazardous areas. Korea or Africa, Afghanistan, Iraq – go to Hawaii for post-deployment (treatments etc.), and then to Guam. For programs do talk with MWR, but this idea needs to be taken up at a higher level.

2. Segments that make up the tourist industry:

- Hotel
- Restaurant
- Some parts of retail
- Optional Tours

3. Tourism business

Wholesalers/distributors that meet needs of the hotels are a large part of the industry. 25% of the island's GDP (made up by tourism), but also brings a lot of services to Guam. Mary can have Guam Tourism send statistics to David.

Numbers are all non-military, numbers are greater when considering military.

Also however, Asia pacific region – Guam is a key gateway to the outer islands.

Get a lot of visiting rotating personnel, and once a year, airstrike carrier from Japan comes to Guam.

They stay in the hotels, and stay on the ship as well.

Concern – if they plan on increasing the hotels / bachelors housing on base, how will that affect contracts between military and hotels. These places house 45 people, and hotels get overflow. If more on-base then fewer would come to hotels.

#### 4. Military discount at the hotels

Average weighted occupancy was 65% - military tends to be a shorter call – their reservations are made closer in to the date of arrival – on occasion, we've been able to take only 20 rooms when a ship is coming in. Some reservations come from MWR, some from internet – usually there is time to block the rooms – military are always welcome. Make up the discount on rooms with extra food and beverage spending.

Competitive – advertise in stars and stripes – tourism is supportive of the military – just another market for us.

Hotel occupancy rates are available on the website – can track back to 1994.

GVB might track information on military spending vs. other tourist spending.

#### 5. Future Business

A lot of uncertainty in the market right now – crystal ball – Japan has a market – tends to be conservative – they're contracting, they're worried – have had some very very sharp falls over the last quarter – Oct – Dec Japanese market fell 16%. Unemployment is rising in Japan – employment is supposed to be stable. Also, there are interesting anomalies: you're out of work, I'm not going to travel (not traveling out of respect for those that cannot).

Our competition is to a great part from Asia. Prior to recent drop, Korean market has increased – Korean won is quite valuable.

Seeing growth in Japan's office lady demographic (20-30 year old, young, single lady, live at home, high disposable income) as well as the wedding market is up – total outbound is down. Guam is not really comparable. Even Hawaii. Guam needs to have a good balancing act – sheltered from US economy being down – banking and real estate seems more stable. Careful how we balance tourism – maybe can maximize the markets because closer to Asia.

With the military, we have to balance the opportunities.

Sport tourism – when you can find a niche market that you can develop – an example that has worked : Leo Palace resort – book golf tournaments – Asian lady PGA – Baseball, soccer, swimmers. They do it themselves. If Guam racing association is going to do this, has to come up with a good program that will sustain itself – can't rely on other businesses, government etc. resources are currently tapped out.

Guam very tied to Japan – Korea and Taiwan to a lesser amount – very affected by those economies. Looking at visa waiver from china and Russia - to be able to expand base for bringing tourists to Guam. At this point – Guam and CNMI have established an economic case to pursue this. Have had visa waivers for Japan and Korea that have been very successful. We have Hong Kong, but will not make up for the drop in Japan. Need to support of the federal agencies. Homeland security had to show that we truly benefited from these markets (Saipan has shown this) – they would reconsider it, if the security measures are in place.

Korean won is down, last quarter, easily 38% down – very affected by the ups and downs.

6. H2 workers working in a hotel?

Do bring people in as translation. Also have partnerships with schools – students come to expand their education – and employees on Guam learn from those experiences. Also partner with UOG and GCC – they do the cultural introduction and ESL and have had a partnership for 11 years with Aso College – students stay 12-18 months – they rotate through all the aspects of the hotel. That will always continue on Guam.

Hiring of staff not an issue on Guam right now – a lot of military spouses will also join the workforce – sometimes management positions – will recruit, but that gets expensive. Higher up positions – expertise finding here is relative to Guam itself –

GCC has the technical training

UOG has an international tourism focus

Guam is a small island – very important that you are a good employer – try not to do layoffs when times are difficult. There are swings so you head out to the same market for.

**Navy Housing Office**

February 5, 200, 2:30pm

Attendees:

Attendee Name	Title/Organization
Eugene Diaz	Director of People and Processes

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 Meeting summary/Topics discussed:
Health service for H2B workers

Health services for H2Bs are limited to Guam Memorial Hospital

Hospital operates everyday at full capacity, without buildup. So may not have capacity to cope with the buildup. Current on island providers support just enough, would need more capacity.

Are there going to be contract provisions dealing with H2B healthcare?

Yes, something written into contract during solicitation phases. Healthcare/ security/housing each covered.

Evaluation factors – how well contractors address factors (healthcare, security, housing).

2 major factors in solicitation: price and technical factors. Technical factors are equal to each other and technical factors, when combined, are equal to price. Would read and evaluate technical factors, feeds into source selection.

Small business/local business contracting

NAVFAC MAR all small business, larger contracts come from NAVFAC Pac...but recently NAVFAC MAR got MILCON authority. So far all NAVFAC Mar Milcon contracts have gone to small business.

Some local companies:

GFS – housing ops

DZSP-21 large contract awarded by Pac

Reliable Builders

Fargo pacific

Black

DCK

Watts constructors

what establishes a business as a “local business”? – NAVFAC MAR works with Small Business Administration – federal agency which determines what a small business is (they concur or do not) also determines if/if not business can do job or not. Small business coordination form goes to dd2579 SBA

Central contractor registration (CCR) contractors must register. Shows what companies are local...  
[www.ccr.gov](http://www.ccr.gov)

Bonding – depends on contract, must get a bond for construction contract to be awarded, for 20% of contract awarded....in case of stop work.

Expect first few months of contract to be devoted to building workforce housing.

Still up in air who gives large buildup contracts (NAVMAR or NAVPAC) But MAR will do all contracting with small business.

**Port Authority Guam**

February 11, 2009, 10:00 AM

Attendees:

Attendee Name	Title/Organization
Herman Paulino	Program coordinator
Glenn Leon Guerrero	General Manager

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 Meeting summary/Topics discussed:
1. Public/private relationship?

Not a Guam Agency but Gov Guam Employees

2. New stuff?

List of accomplishments in Master plan available (approved in Dec. 2008) also feasibility study in 2008. 3 new cranes and license agreement w/ Matson and Horizon – lines own cranes while port with a license to use for five years.

MOU (Memorandum of Understanding) Bush signed authorization – all funds or monies coming into port, POG improvement enterprise program. Have since issued a solicitation for program management team – would take expansion projects.

3. Capacity increase for the buildup

Would prepare for peak capacity, but then would lower capacity to stick to organic and operations growth. To ratchet down – Hiring FTEs (about 40) then those would go away (let go)...for physical infrastructure – can fit 2 ships now look to add a 3<sup>rd</sup>. to meet the surge, **will build to organic growth then will stack (containers) to meet peak demand.**

Break bulk – what is not containerized.

4. Navy Yard impede port business?

Carriers come in and gets Right of Way - military makes ship lines wait. Bottleneck comes from not enough tugs (space not the problem). In the past year, shipping lines have not been forced to wait for military vessel. Possible economic impact is not enough tugs to support if frequency of Navy embarkments (could slow private commerce) - looking at that as commerce picks up.

5. Shipping rate declines

No impacts from shipping rate declines. Volume has not dropped substantially. Has dropped by 10% over last year but increasing, starting to see it come back.

Last year was tough due to fuel price

Guam economy is starting to tank.

6. Even without buildup, local construction projects required new capacity. Major construction going on at hospital.
7. With no buildup the organic growth would not be as high as currently expected so the current plans would build to excess capacity.

Other comments:

Obtaining env. Docs. To send to TEC .

**Guam Visitors Bureau**

Feb. 5 2009, 1000

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Gerry Perez	General Manager, GVB
Debi Phillips	Research Manager, GVB
John Knox	Pres., JMK Associates
Paul Sage	Principal, TEC Inc.

Meeting summary/Topics discussed:

1. Market overview: Future for Japanese market flat at best, or down, because of Asian competition and population demographics resulting in erosion of Guam's youthful Office Lady market. Korean market also aging and has limited air service here (just 1 airline with no incentive to add seats or reduce pricing). Korean currency deteriorating, making Guam more expensive, and new national visa waivers for Koreans removes Guam's competitive edge over rest of US. Strategic forecast is our only real long-term growth opportunity is China. Chinese outbound market which can afford US travel is about 30-35M, about twice Japanese size. Chinese (and Russian) markets not currently so important to Guam as to CNMI, but China will have growing importance.

2. PL 110-229 authorizes DHS to come up with program that regionalizes Guam's wavier program to CNMI and to add new countries not now included, providing certain conditions met, key of which is national security. However, DHS was also to consider economic significance where possible. So their late January '09 decision was: We can add Russia or China, providing we meet certain kinds of requirements, and a big piece is automated system of processing visa requests. Guam is tooled up to satisfy machine-readable processing. (CNMI would have to pay \$60M+ for their various airports. If they don't get help, will have huge tax drain.) Other conditions are: Must be organized groups, machine readable passports, possibly bonding formulation – this last is a moving target because we need to negotiate with Chinese govt. that conditions being imposed by US are ones they can lock into. For example, there's an issue on repatriation – how to handle overstays. Govt. must agree ahead of time, if anything should happen, this is how it will be handled, and it will not be adjudicated in normal complex manner. So US govt must talk with Chinese, and we're trying to facilitate. Once these worked out, we project very rapid increase. Won't exceed Japanese market, but important second leg to tourism market.

Defense lobby very strongly against Chinese visitors to Guam. Strictly military viewpoint is keep them all away. But reality is engagement. If PACOM can invite Chinese to US for industry and commerce, indicates a search for balance. DoD guys have articulated their concerns, so we're now working toward balance.

3. GVB is trying to rebrand Guam to attract higher-spending markets by emphasizing historical and cultural attributes that make Guam unique. Guam is not Tumon Bay, but rather the cultural heritage and history that shaped the island. A massive research project (see Global Insight report on GVB website) looked at the overlap between what residents value and what tourists want, and determined the best hope for the future is a community-based and community-supported effort in which the key attractions are



found in all the villages around the island – e.g., the Agat Mango Festival. Given the market dynamics and lower-cost competitive destinations, the island’s current #1 industry has to succeed in this effort to survive.

4. What will be military buildup effect on this effort? First, improving the infrastructure will help everything. But there are possible detractions. The proliferation of military jargon and visual impact may blemish the cultural imagery – e.g., where you had “Marine Drive,” you now have “Marine Corps Drive.” Will tourists come to a place that – despite our branding efforts – in their minds is branded as a military base? We’ve found many business travelers had no idea Guam is anything but a military base. Our study indicates the Japanese leisure market says they are not bothered by that, but not sure how other markets will react.

It doesn’t have to be fatal. The military itself can be a partner if it gives active-duty personnel an appreciation for the culture by actions such as playing Chamorro music at the base exchange. It would also go a long way toward muting resentment in the community if it would make certain natural, historic, and cultural sites up north more accessible.

5. Reiterated concerns expressed in previous site visits about economic impacts when Naval exercises or other actions that “bubble up” military impacts on hotel rooms occur in peak tourist seasons, and displace higher-paying leisure tourists. Active-duty personnel here on orders don’t pay hotel occupancy taxes, though military-related business travelers do (so better for them to come in troughs rather than peaks, too). We know there are rough seas during some of our troughs. But the period from mid-April to mid-July has good weather and is a slow season for us. We have proposed this through Chamber scoping input and subsequent testimonies, but have had no feedback.

**Guam Visitors Bureau 2**

Feb. 10 2009, 1200

Attendees:

<b>Attendee Name</b>	<b>Title/Organization</b>
Gerry Perez	General Manager, GVB
John Knox	Pres., JMK Associates

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 Meeting summary/Topics discussed:

1. Wage escalation remains industry's biggest concern during the construction boom, due to competition with cheaper destinations in Asia. That's why branding so important – worth visiting Guam for more than beach. We will certainly lose workers to higher-paying jobs. When have normal construction capacity of \$500 to \$600M, and go to billions and billions, wage inflation inevitable. But volume forces training of more skilled workers who will contribute to Guam economy after boom. Positive for Guam overall workers is this opens door for employment opportunities better paid than hospitality industry, which at end of day is positive for community. Opportunities for skilled grads of training courses or UoG education in management for military.

Replacement service workers best from Guam or other US sources (Micronesia or CONUS), plus a few temp workers from Japan on internship. Final visa cap language specifies some skilled workers like nurses. By extension, one would think applies to hotel, but question becomes definition of "skilled." May be an option, but certainly not readily available. May look at H2 if situation worsens, but nobody talking much about it yet.

2. Q: Last construction boom had chaos right in Tumon Bay itself – did that affect bottom line? A: This was inconvenience, but didn't affect us that much. For market appeal, the only concern to me is traffic, huge trucks detracting from relaxing tropic environment – that's relatively minor compared to labor and wages. Q: What about social impacts in previous boom due to construction worker behavior? A: Don't recall any big deal on behavior back then, though noted that previous boom had proportionately more local construction workers due to other economic sectors having declined. Main social issue is sense of place – dilution of cultural attributes. Bubble of construction workers will come down to Tumon. Congestion, but that also has lots of economic value that would far outweigh behavioral issues.

3. Positive from next construction boom, now ramping up, is more business travel during what's otherwise a slowdown. We're leisure destination without much usual business traffic. Don't track business travel in our data, but indicators include JAL instituting business fares in last several years, due both to our marketing for higher-paying travelers and also sustained by military and related business travel.

4. Another potential construction concern is safeguarding runoff damage to reefs and pollution (siltation, noise, air). We have lots of sports/marine activities, dolphin watching – need to be sensitive with regard to military exercises

5. Operational period: In addition to previously discussed concern about seasonality of exercise, concerns about restrictions on cultural, historic sites on military property. To extent military expands footprint (especially restricted footprint), diminishes inventory of assets to support our "Brand Guam" marketing. Spanish Steps at Apra Harbor is historic site. Cemetery at Apra Harbor. Restrictions at Tarague and

Jinapsan Beach (past Tarague) – used to be viable option business tour got wiped out after 9-11, when military would not allow foreign nationals on base. Needs some agreement to allow military to provide escorted tours – even restricted hours, but just don't shut us out. Let us (community as well as tour industry) have something. Would do a lot of good will with people to have more access to those beaches.

6. Q: Example of feared additional loss of assets through buildup? A: Guam Raceway Track big deal because (a) many people spent blood, sweat, and tears to eke out facility well-used by community; (b) provides outlet for hot rodders instead of on street; (c) become part of circuit for Asia, so has economic value. This is also a place that brings military and civilians together with common interests. If that's acquired, needs to be replaced somewhere, someplace. Would have major good will if replaced anything better than what they have; should add new amenities. Mitigation is social, tourism, financial, and political.

7. If military must acquire new land, fee condemnation would be very negative. Long-term leases or joint use much more palatable.

8. Q: Is there industry consensus whether buildup would be net positive or net negative? A: Industry consensus not against buildup by any means. General consensus that two are not mutually exclusive. Just question of balance, and how it gets struck, whether much impact on Brand Guam and markets. The mitigation measures taken can go a long way if meaningful, like raceway or guided tours to important assets in military bases. If you put this much money, hope that it's a 50-year horizon, such that tensions with Asia would be blips and economic benefits prevail over long term. We consider this a Guam buildup, not a military buildup. Burden of supporting it needs to come from other federal agencies, too. Will be Congressional decision.

**Sanctuary**

February 11, 2009, 2:00PM

Attendees:

Attendee Name	Title/Organization
George	
Millie	
Dan	
Sarah Thomas-Nededog	Executive Director

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 Meeting summary/Topics discussed:
Programs2. Coed emergency shelter

On-site residential service, a core service. Designed for teens 12-17. Kids, based on assessment, determined temporary placement needed due to breakdown of family. For 1hr to 30 days. An assigned Sanctuary caseworker works with the family and the kid to resolve the issue that brought the disconnection. Also parent education classes. So within 30 days hope to get resolution. Goal is reunification. Sometimes long term alternatives are needed (Host homes come into play then). Provide school transport and enable continuation of lifestyle unless there are larger issues where kid needs psychological care.

Big family probs. – Abuse, Youth stays out parents fed up, parents overwhelmed. Cannot nail down reasons for family breakdown, always a different reason.

Get rich and poor kids, socio-economic status does not matter.

3. Transitional living program

16.5-21yrs old (mostly 18 and under). Those over 20 generally don't want to be there but are welcome. teach independent living skills. Can stay up to 18months. Accommodate up to 8 youth On-site. Each have own room and must take care of their own home. Many have jobs Sanctuary transports to Jobs. Get back into school and provide transport to school. Most kids in this program are 'victims'. Recently full down to half capacity. Caseworker working with them . Some are wards of the court and have no choice. Under federal Grant Only ones in Micronesia.

Sagan Na'Homlo

Residential substance abuse treatment. Therapeutic living community. Must be diagnosed chemical dependent. Most/all are court ordered to be there. Started as a gesture to courts in 2004. Facility part of sanctuary but off-site. House donated by David Lujan. 6br. Could house 10 at the most. Require certified attendants...and more staff. Always two staff at every shift and volunteers. Have scheduled activities. 12-17 yrs. And majority are male. And majority from other islands.

COPED –

Outreach program. Substance abuse and violence prevention. Go to DYA once a week and do educational workshops at school. And parenting skills and support. Mentoring. Youth development program.

#### Fan Machocho

Healing farms – teaches farming and aquaculture to kids. Admin for native Americans grant. Socio-econ development program. Kids in other programs work in fish farm and agriculture. Very therapeutic. Trained in organic farming. Hands-on ...partner with small business center and DoA. Also work with senior citizens.

#### Americorps

For anybody who wishes to build skills. Focus on supportive life skills and supportive counseling. Volunteer work, volunteers co-facilitate (assist in group facilitation) groups. Focus on community development. Majority of people in program are college students or soon to start college. There are expectations and a stipend and an educational award at the end to pay for college. Utilized to be mentors, they receive training. Get CPI Crisis prevention institute. Anybody 17 and up and at least in process of graduating high school.

Sanctuary has been successful in running AmeriCorps – National office asked them to join in for competitive.

#### Crisis intervention

24hr hotline. All sanctuary employees are cross-trained to handle crisis.

All sorts of crisis are involved. 1 person per night. The # is in the phonebook and everybody knows it.

#### Other and Buildup

Gov. of Guam agencies NEED Sanctuary. They RELY on sanctuary.

Emergency shelter max capacity 18 – 9 male, 9 female, transitional shelter 14 max both on-site. Drug and alcohol treatment 10 capacity, off-site.

Would need more facilities with the buildup.

When war in middle-east there was increase in families needing services...due to deployment of parents.

Anticipate there will be increase of families needing services.

“residential services” – kids that need to be removed from home into temporary setting.

If over capacity – will provide services by looking into emergency temporary placement. Would there be extended families.

Rural Host Homes program – able to identify families to be temporary foster families. 1-15 days. Try to also recruit and train families to become foster homes

## Appendix E

### Additional Guam and CNMI Interviews Conducted

<b>Date</b>	<b>Location</b>	<b>Organization/Department/Company</b>
2/12/2008	Guam	Andersen MILCON
2/12/2008	Guam	Andersen Operational Contracts
2/12/2008	Guam	Navy MILCON
2/13/2008	Guam	Civilian Military Task Force Infrastructure Committee
2/13/2008	Guam	Civilian Military Task Force Public Safety Committee
2/13/2008	Guam	Civilian Military Task Force Natural Resources Committee
2/14/2008	Guam	Civilian Military Task Force Labor Committee
2/14/2008	Guam	Civilian Military Task Force Education Committee
2/14/2008	Guam	Civilian Military Task Force Health & Social Services Committee
2/14/2008	Guam	Civilian Military Task Force Housing Committee
2/15/2008	Guam	Civilian Military Task Force Social & Cultural Committee
2/15/2008	Guam	Civilian Military Task Force Economic Development Committee
2/15/2008	Guam	Guam Department of Labor
2/15/2008	Guam	Guam Ports Authority
2/15/2008	Guam	Guam Contractor's Association
2/16/2008	Guam	Guam Chamber of Commerce - Other Economic Sectors
2/16/2008	Guam	Guam Chamber of Commerce - Housing & Real Estate
2/16/2008	Guam	Guam Chamber of Commerce - Operational Contracts
2/18/2008	Guam	Guam Environmental Protection Agency
2/19/2008	Tinian	Tinian Mayor's Office
2/19/2008	Tinian	Gaming Commission (Perez)
2/19/2008	Tinian	Marianas Visitors Authority
2/19/2008	Tinian	Tinian Chamber of Commerce
2/19/2008	Tinian	Tinian Department of Labor
2/19/2008	Tinian	Tinian Legislators
2/19/2008	Tinian	Bridge Investment Group
2/19/2008	Tinian	Tinian Dynasty Casino
2/20/2008	Tinian	Tinian Military Liaison
2/20/2008	Tinian	Department of Public Safety
2/20/2008	Tinian	Commonwealth Ports Authority
2/20/2008	Tinian	Tinian Health Center
2/20/2008	Tinian	Office of Community and Cultural Affairs
2/20/2008	Tinian	Tinian Finance Department
2/21/2008	Saipan	Saipan Department of Commerce
2/21/2008	Saipan	Public Schools; Troops2Teachers
2/21/2008	Saipan	Contractor Forum
2/21/2008	Saipan	First Hawaiian Bank
2/22/2008	Saipan	Ports & Customs
2/22/2008	Saipan	Department of Finance
2/22/2008	Saipan	Saipan Chamber of Commerce
2/22/2008	Saipan	Commonwealth Utilities Corporation

9/10/2008	Washington D.C.	Joint Guam Program Office; Office of Economic Adjustment
9/10/2008	Washington D.C.	U.S. Department of Agriculture - Rural Development
11/4/2008	Guam	Guam Department of Labor; Agency for Human Resources Development
11/4/2008	Guam	Guam Housing and Urban Renewal Authority
11/4/2008	Guam	Guam Contractor's Association
11/5/2008	Saipan	Governor Fitial, Lt. Governor Villagomez, Secretary of Commerce Ada, Secretary of Finance Inos, State Board of Education Public School System, Special Advisor for Public Health and Hospital Preparedness Office.
11/5/2008	Saipan	Saipan Chamber of Commerce; Commonwealth Economic Development Commission
11/5/2008	Saipan	Senate President Reyes, Tinian Senator Mendiola
11/6/2008	Tinian	Tinian Mayor and Cabinet
11/6/2008	Tinian	Tinian Power Plant Manager; Tinian Casino Gaming Control Commission
2/12/2009	Tinian	Power Builders International
2/12/2009	Tinian	Tinian Department of Commerce
2/12/2009	Tinian	Tinian Gaming Commission
2/12/2009	Tinian	Department of Community and Cultural Affairs; Department of Public Works; Department of Land and Natural Resources; Department of Public Safety; Tinian Health Center; Department of Public Lands; Department of Labor and Training Services; Ports; Tinian Government Military Liaison Officer; JGPO Forward
2/13/2009	Tinian	Tinian Chamber of Commerce
11/7/2009	Guam	Governor, Chief of Staff, Deputy Chief of Staff
11/7/2009	Guam	Guam Economic Development and Commerce Authority, Real Property Division
11/7/2009	Guam	Office of the Governor of Guam, Guam Buildup Office
11/7/2009	Guam	University of Guam Planning Officer
11/7/2009	Guam	Captain Real Estate