# CAMDEN KINGS BAY JOINT LAND USE STUDY

**May 13, 2014**

AMEC Environment & Infrastructure, Inc.

*This page intentionally left blank for double-sided printing*

# Table of Contents

List of Tables and Figures

List of Acronyms

Acknowledgements

1. Introduction....1-1

2. Study Area Profile and Growth Trends....2-1

2.1 SUBASE Kings Bay Facilities and Activities....2-1

2.2 Study Area Profile and Growth Trends....2-3

2.3 County and Municipal Profiles....2.7

2.4 Current Development Overview with the Study Area....2-8

2.5 Regional Assessment….....2-13

3. Existing Plans and Programs....3-1

3.1 Naval Support Activity Camden County....3-1

3.2 Local Jurisdictions and Planning Tools....3-1

3.3 State/Regional Entities, Tools, and Legislation....3-1

3.4 Federal Entities, Tools, and Legislation....3-3

4. Compatibility Evaluation....4-1

4.1 Methodology for Evaluation ....4-2

4.2 Compatibility Factors....4-3

5. Findings and Recommendations....5-1

5.1 Findings and Recommendations....5-1

5.2 Implementation Plan....5-17

5.3 Conclusion....5-23

# List of Tables

Table 2.1 Historic Population Growth Trends and Forecasted Population Estimate.....2-4
Table 2.2 Housing Values.....2-6
Table 2.3 Median Household Income.....2-7
Table 2.4 Proposed Transportation Recommendations and Current Projects.....2-14
Table 2.5 Threatened, Rare, and Endangered Species.....2-21
Table 5.1 Summary of Recommendations.....5-18

# List of Figures

Figure 2.1 Site Location Map.....2-2
Figure 2.2 Annual Percent Population Change by Decade.....2-5
Figure 2.3 Building Permit Trends for Camden County, Kingsland, St. Marys and Woodbine....2-6
Figure 2.4 Local Government Jurisdiction Boundaries.....2-9
Figure 2.5 Existing Land Use.....2-12
Figure 2.6 Major Roads and Transportation Features.....2-15
Figure 2.7 Aeronautical Chart Vicinity of St. Marys, Georgia and SUBASE Kings Bay.....2-19
Figure 4.1 Methodology of Evaluation.....4-2
Figure 4.2 Multi-jurisdictional Zoning Map.....4-5
Figure 4.3 Natural and Environmental Conditions.....4-6
Figure 4.4 Large Vacant/Undeveloped Properties.....4-7
Figure 4.5 Waterways Cumberland Area.....4-12
Figure 4.6 Community and Military Infrastructure.....4-16
Figure 4.7 Transportation Analysis.....4-17
Figure 5.1 Recommendations: Land Use Notification Area and Marine Navigation Area.....5-4

# List of Acronyms

| | |
|---|---|
| ACE | Army Corps of Engineers |
| AICP | American Institute of Certified Planners |
| AIWW | Atlantic Intracoastal Waterway |
| AMEC E&I | AMEC Environment & Infrastructure |
| ASLA | American Society of Landscape Architects |
| ATC | Altamaha Technical College |
| ATFP | Anti-Terrorism Force Protection |
| CCJDA | Camden County Joint Development Authority |
| CAPT | Captain |
| CCA | Candidate Conservation Agreement |
| CCBOC | Camden County Board of Commissioners |
| CDR | Commander |
| CEDS | Comprehensive Economic Development Strategy |
| CO | Commanding Officer |
| CPLO | Community Planning Liaison Officer |
| CR | County Road |
| CRC | Coastal Regional Commission |
| CRS | Community Rating System |
| CSG 10 | Commander, Submarine Group 10 |
| DCA | Department of Community Affairs |
| DOD | Department of Defense |
| EA | Environmental Assessment |
| EDICCIMAD | Every Day in Camden County is Military Appreciation Day |
| EIS | Environmental Impact Statement |
| EMA | Emergency Management Agency |
| FAA | Federal Aviation Administration |
| FBO | Fixed Base Operator |
| FEMA | Federal Emergency Management Agency |
| FONSI | Finding of No Significant Impact |
| GADNR | Georgia Department of Natural Resources |
| GAEPD | Georgia Environmental Protection Division |
| GASP | Georgia Aviation Systems Plan |
| GDOT | Georgia Department of Transportation |
| GEMA | Georgia Emergency Management Agency |
| GLCP | Georgia Land Conservation Program |
| GNHP | Georgia Natural Heritage Program |
| IFR | Instrument Flight Rules |
| INRMP | Integrated Natural Resources Management Plan |
| JDA | Joint Development Authority |
| JLUS | Joint Land Use Study |
| KIC | Keep It in Camden |
| LLC | Limited Liability Company |
| LOS | Line of Sight |
| LOS | Level of Service |
| MACC | Multi-Agency Coordination Committee |
| MCSFBN | Marine Corps Security Force Battalion |
| MFPU | Maritime Force Protection Unit |
| MSST | Maritime Safety and Security Team |
| NEPA | National Environmental Policy Act |
| NFIP | National Flood Insurance Program |
| NMFS | National Marine Fisheries Services |
| NOAA | National Oceanic and Atmospheric Administration |
| NSSC | Naval Submarine Support Center |

| | |
|---|---|
| OEA | Office of Economic Adjustment |
| OCGA | Official Code of Georgia Annotated |
| OHPA | Ocean and Highway and Port Authority |
| OREMC | Okefenokee Rural Electric Membership |
| PAO | Public Affairs Officer |
| PAPI | Precision Approach Path Indicator |
| PEQ | Planners for Environmental Quality |
| PWO | Public Works Officer |
| REILS | Runway End Identification Lights |
| REPI | Readiness and Environmental Protection Integration |
| RIR | Regionally Important Resources |
| SR | State Road |
| STEM | Science Technology Engineering and Math |
| STIP | State Transportation Improvement Program |
| STRACNET | Strategic Rail Corridor Network |
| SUBASE | Submarine Base |
| SWFLANT | Strategic Weapons Facility, Atlantic |
| TFR | Temporary Flight Restrictions |
| TRF | TRIDENT Refit Facility |
| TTF | TRIDENT Training Facility |
| USACE | United States Army Corps of Engineers |
| USCG | United States Coast Guard |
| USFWS | United States Fish and Wildlife Services |
| USMC | United States Marine Corps |
| WWII | World War II |

# Acknowledgements


### Project Management
Mike Fender, Camden County
Kelsey Pauxtis-Thomas, Camden County Joint Development Authority

### Policy Committee
Charlie Smith, Jr. – Chairman – Camden County
Gary Willis – Vice-Chairman – St. Marys
Stan Fowler – Camden County
Jimmy McCollum – Kingsland
Roger Tyo – Kingsland
Jeff Barker – St. Marys
George Hannaford – Woodbine
Louise Mitchell – Woodbine
W. Burford Clark, Jr. – Camden County
Captain Harvey L. Guffey, Jr. – SUBASE Kings Bay CO (ex officio)
Commander Shawn Follum – SUBASE Kings Bay PWO (ex officio)

### Technical Committee
Roger Weaver, Chairman – City of St. Marys
John Peterson, Camden County
Ken Kessler, City of Kingsland
Sandy Rayson, City of Woodbine
Lupita McClenning, Coastal Georgia Regional Commission
Sheila McNeill, Camden Partnership
Melinda Nessmith-Picard, SUBASE Kings Bay Community Planning Liaison Officer

### Office of Economic Adjustment (OEA)
Amber Levofsky
Captain Daniel Schebler

### AMEC Environment & Infrastructure, Inc.
Ron Huffman, AICP, ASLA
Lee Walton, AICP
Paige Hatley, AICP
Demi Patch
Inga Kennedy – Planners for Environmental Quality (PEQ)

### Special Thanks To:
Camden County Board of Commissioners
City of St. Marys
Camden County Sheriff's Office
Camden Partnership
Greyfield Inn, Cumberland Island

"This study was prepared under contract with Camden County, Georgia, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of Camden County and does not necessarily reflect the views of the Office of Economic Adjustment."

*This page intentionally left blank for double-sided printing*

CHAPTER
1

# Introduction

In addition to their critical role in national security, military installations are vital to local, regional and state economies. In Georgia, the Armed Forces employ approximately 55,000 people[1] and the private industries that support the military employ many more. The sustainability of military installations and the communities that surround them is of highest importance. One of the most pressing issues involving military installations and the civilian communities that surround them is incompatible development, which can pose challenges for the continuity and effectiveness of military operations and missions. Collaboration among military installations and local communities is critical to protect military missions, to enhance the health of communities, and to preserve rights of private property owners. A Joint Land Use Study (JLUS) is one way to foster this important collaboration.

The purpose of the Camden County Kings Bay JLUS is to anticipate and mitigate existing and potential compatibility issues through improved coordination among Camden County, the City of St. Marys, the City of Kingsland, the City of Woodbine and Naval Submarine Base (SUBASE) Kings Bay. SUBASE Kings Bay was established in 1978 in Camden County, adjacent to St. Marys. Its development has dramatically impacted population growth trends in the subsequent decades. According to the US Census Bureau, the population of Camden County increased over 275% (from 13,000 to 51,000) between 1980 and 2010. Though projections do not suggest that local population growth will continue at this level, growth of the Camden County population and economy is expected. With development pressure likely to increase as the local economy recovers and the real estate market cycle progresses, coordination of military and local community entities is vital to ensure that military operations are not negatively affected by new development, while also encouraging the community to prosper and support military families.

## SUBASE Kings Bay - Past and Present

In 1954, the US Army began to acquire land at Kings Bay to build a military ocean terminal to ship ammunition in case of a national emergency. Initial construction at Kings Bay was completed in 1958 but the installation was placed in an inactive state due to the lack of operational need for the installation. Although Kings Bay was never activated to serve its primary initial intended purpose, the base was used for other missions. For example, during the Cuban Missile Crisis, an Army Transportation Battalion of 1,100 personnel and 70 small boats was positioned at Kings Bay. Additionally, in 1964, Kings Bay was used as a shelter when Hurricane Dora displaced nearly 100 area residents.

In 1975, treaty negotiations began between the US and Spain regarding a proposed change to the US base agreement with Spain to withdraw Submarine Squadron 16, the fleet ballistic-missile submarine squadron, from its operational base at Rota, Spain. Congress ratified a treaty in June 1976 that called for

[1] US Census Bureau American Community Survey 2007-2011

the withdrawal of the squadron from Rota. After a comprehensive study of 60 sites along the Atlantic and Gulf coasts, Kings Bay was selected to be the new home for Submarine Squadron 16. Subsequently, the land was transferred from the Army to the Navy, and a massive construction program was initiated which continued for nearly a decade.

Today, SUBASE Kings Bay consists of 16,994 acres of land, approximately 4,000 of which are protected wetlands. The major commands of SUBASE Kings Bay include:

- Strategic Weapons Facility, Atlantic (SWFLANT)
- Commander Submarine Group Ten (CSG 10)
- TRIDENT Refit Facility (TRF)
- TRIDENT Training Facility (TTF)
- US Marine Corps Security Force Battalion (MCSFBN)
- US Coast Guard (USCG) Maritime Force Protection Unit (MFPU)

In addition to these, there are more than 60 supporting commands and tenants at SUBASE Kings Bay.

Each major command has missions that are of vital importance to SUBASE Kings Bay's overall mission and operations. SWFLANT provides strategic missiles and weapons system support to the fleet ballistic missile submarine fleet. Submarine Group Ten is the local coordinating authority for all matters assigned by the submarine force commander and exercises direct control over the administration and training of submarine off-crews at Kings Bay. TRF provides quality industrial and logistics support for the incremental overhaul, modernization, and repair of TRIDENT submarines and provides global submarine supply support. TTF trains sailors in the skills necessary to operate and maintain TRIDENT submarines and systems.[2] MCSFBN provides security for strategic assets and facilities. And MFPU, activated in 2007, provides additional security measures when TRIDENT submarines are operating on the surface during transit.

### Camden County, St. Marys, Kingsland, and Woodbine - Growing with the Coastal Georgia Region

Camden County is located at the south end of the coastal Georgia region. It borders the Atlantic Ocean and shares borders with Florida on the south, Glynn County on the north, and Charlton/Brantley Counties to the west. The dominant transportation corridor in Camden County is Interstate 95 (I-95) which divides the county into east and west areas and has affected growth and development within the cities of Kingsland and St. Marys as well as unincorporated Camden County. SUBASE Kings Bay's location in the southeast part of the county adjacent to St. Marys and the Intracoastal Waterway is approximately 40 minutes away from Jacksonville International Airport via I-95 which provides access to the base from three exits (Exits 1, 3 and 6).

Camden County experienced exponential growth between 1980 and 1990 due to SUBASE Kings Bay opening in 1978, and population growth continued beyond the year 2000 despite local impacts such as the Gilman Paper Company closing. From a population of 13,371 in 1980, the countywide population reached 50,513 in 2010 according to the US Census. The population of Camden County is predicted to continue to grow, though at a much slower rate than that experienced between 1980 and 2010. By 2030, Camden County's population is predicted to reach 71,000 people.

[2] Commander, Navy Installations Command, Naval Submarine Base Kings Bay

## SUBASE Kings Bay and Camden County – Working Together

The current mission of SUBASE Kings Bay is to provide support to the fleet, the military and military families. As a result of its mission and magnitude, SUBASE Kings Bay has a significant economic impact on Camden County and the surrounding region. Estimated annual expenditures include $78.6 million on goods and services, $600 million on payroll, $15 to $16 million on two crews of 165 sailors for each of the submarines, $19.7 million on the Coast Guard Maritime Force Protection Unit, and $8.6 million on the Coast Guard Maritime Safety Security Team. Currently, there are approximately 5,244 personnel on active duty, 1,696 appropriated fund employees, 367 non-appropriated fund employees, and 1,672 contracted employees totaling to an 8,797 person workforce.[3]

Many of the military personnel and families live in Camden County and take pride in giving back to their community. The SUBASE Kings Bay Public Affairs Officer (PAO) coordinates community relations programs including the Navy Community Service Program. This program includes initiatives such as Project Good Neighborhood; Campaign Drug Free; Health, Safety, and Fitness; Environmental Stewardship, and the Personal Excellence Partnership.

## JLUS Purpose and Process

Originally, military installations were located in remote areas due to land availability distant from urban areas. Installations have drawn people and businesses in close proximity, however, due to the needs of military families and the civilian job opportunities presented by military installations. As development and growth has increased around military installations, land use conflicts between military operations and community/civilian developments have become issues in some places. Urban development around a base can impact military operations, training, and missions. Likewise, military ground-training exercises, maneuver areas, and other operations can create noise that impacts the surrounding community. Collaboration between local communities and military installations is critical to protect community health as well as the success of military operations.

The Department of Defense (DOD) implemented the Joint Land Use Study (JLUS) program as a mechanism to enhance community and economic growth without jeopardizing operations of military installations. Unlike the majority of military communities in the US, a JLUS has not previously been prepared for the Camden County community. This JLUS process offers Camden County, St. Marys, Kingsland, Woodbine, SUBASE Kings Bay and a wide variety of community stakeholders a structured opportunity to collaborate.

The recommendations formulated in this JLUS provide a policy framework to support sustainable and compatible development, to protect military missions and to promote the public health, safety, and welfare. The JLUS is primarily funded by the DOD Office of Economic Adjustment (OEA); however, it is produced with contributions and leadership from the local communities of Camden County, Kingsland, St. Marys and Woodbine and is truly a community planning effort. The primary objectives of a JLUS, as stated by the DOD, are as follows:

Military:

- Promote the health, safety, and welfare of the military and civilian personnel living and working at or near the military installation
- Ensure the ability of the installation to achieve its mission, maintain military readiness, and support national defense objectives

[3] The Camden Partnership

- Preserve the ability of the installation to adjust or expand its mission

Community:

- Protect the health, safety, and welfare of residents and maintain their quality of life
- Manage development in the vicinity of military installations that would interfere with the continued operations of these facilities
- Provide for sustainable growth in an economically, environmentally, and socially conscious manner
- Maintain the economic vitality of the community

## Camden Kings Bay JLUS Benefits

The goal of the Camden Kings Bay JLUS is to protect the viability of current and future missions at SUBASE Kings Bay while at the same time accommodating growth sustaining the economic health of the region, as well as promoting/preserving public health and safety.

Objectives of the Camden Kings Bay JLUS include:

- Establish smart-growth land use and development procedures for vacant and redevelopment sites near the installation
- Identify existing and future non-compatible uses and recommend mitigation measures for SUBASE Kings Bay, Camden County, St. Marys, Kingsland, Woodbine and other appropriate agencies
- Develop enhanced communication and access management plans involving various highway and waterway linkages between the community and the SUBASE Kings Bay

The primary expected benefit of the Camden Kings Bay JLUS is to preserve and retain the mission of SUBASE Kings Bay in the community. This is accomplished by addressing current and potential non-compatible uses and other compatibility factors. In doing this, the JLUS will also assist in establishing a greater understanding between the installation and community, as well as enhanced communication and coordination.

Implementation of JLUS recommendations by the local governments and other entities will result in enhanced compatibility and sustainability to mutually benefit the community and military.

## Stakeholders

Identifying and fostering collaboration among stakeholders is a key component of the JLUS planning process. Stakeholder collaboration is vital for the problem solving process. Stakeholders who have contributed to the Camden Kings Bay JLUS include:

- County and city-elected officials, representatives, and staff
- Coastal Regional Commission
- Non-profit Organizations
- General Public
- Business Owners
- Camden Partnership
- Camden County Joint Development Authority
- SUBASE Kings Bay Staff and Officers
- DOD officials
- Camden County Chamber of Commerce

- Brenau University
- Coastal College of Georgia
- St. Marys Kiwanis
- St. Marys Roundtable

### Policy Committee and Technical Committee

The Camden Kings Bay JLUS is sponsored and managed by the Camden County Board of Commissioners (CCBOC). The JLUS process is guided by a Policy Committee and Technical Committee.

The nine-member Board of Directors of the Camden County Joint Development Authority (JDA), the SUBASE Kings Bay Commanding Officer (CO), and the SUBASE Kings Bay Public Works Officer (PWO) comprise the Policy Committee. The JDA Board is appointed by each of the four local governments, with three members appointed by the County and two members appointed by each of the three cities.

The Technical Committee consists of various subject matter experts in the county and region, including the planning directors of the County and three cities, representatives of the Coast Guard and US Army Corps of Engineers (as related to the maritime study), a representative from the Coastal Georgia Regional Commission, a representative from the Camden Partnership, and a community liaison representative from SUBASE Kings Bay. The City of St. Marys planning director serves as the lead for the Technical Committee.

### Public Outreach Efforts

A stakeholder involvement plan was developed to guide the process of informing, educating and involving the public in the development of the JLUS. Several outreach techniques have been applied to generate public awareness and encourage broad and equal involvement in the JLUS process.

Information and feedback has been gathered throughout the planning process. Community involvement activities solicited input from the general public through public open house meetings, a project website, a web-based opinion questionnaire, social media, ongoing coordination with the public information officials, and other opportunities for input and feedback. The following is a summary of public outreach and involvement activities that occurred throughout the JLUS process:

- JLUS information Brochure Distribution
- JLUS Press Release
- JLUS Webpage Development
- JLUS Public Opinion Questionnaire
- Policy Committee Meetings (open to the public) – (March 15, 2013; June 21, 2013; July 19, 2013; Aug. 16, 2013; Oct. 18, 2013; Nov. 15, 2013; May 13, 2014)
- JLUS Technical Committee Meetings – (April 29, 2013; August 1, 2013; September 12, 2013; October 17, 2013; November 14, 2013; and March 7, 2014)
- JLUS Public Meetings
    - Public Meeting 1: JLUS Kick-Off Meeting (May 13, 2013)
    - Public Meeting 2: JLUS Public Workshop (Sept. 19, 2013)
    - Public Meeting 3: Public Open House - Draft JLUS Recommendations (Dec. 12, 2013)

## JLUS Document Organization

This JLUS report document is organized into the following structure for presentation of process, analyses, findings and recommendations.

*Chapter 1: Introduction*. Chapter 1 establishes the context for the Camden County JLUS, describing the principles and objectives of the JLUS, stakeholders, public outreach methods, and organization of the document.

*Chapter 2: Study Area Profile and Growth Trends*. Chapter 2 provides more detailed background information important to understanding of the installation and local jurisdictions within the study area. This chapter includes a study area overview and discussions of area population growth trends, area housing trends, education, employment and economy profiles.

*Chapter 3: Existing Plans and Programs*. This chapter provides an overview of relevant entities, organizations, plans and programs that impact the JLUS study area and that may play a role in addressing compatibility issues identified in Chapter 4.

*Chapter 4: Compatibility Evaluation*. Chapter 4 discusses compatibility factors identified through the Camden County JLUS process. These compatibility factors are organized into relevant categories, including Land Use, Safety and Security, Waterway Management and several others.

*Chapter 5: Findings and Recommendations*. This chapter summarizes JLUS findings and presents, for consideration recommendations with an implementation program to guide local governments and other entities to act on the JLUS recommendations that are within their authority and which they deem to have merit for formal action.

CHAPTER 2

# Study Area Profile and Growth Trends

The profile of the JLUS study area begins with description of SUBASE Kings Bay and extends to the surrounding local and regional context.

## 2.1. SUBASE Kings Bay Facilities and Activities

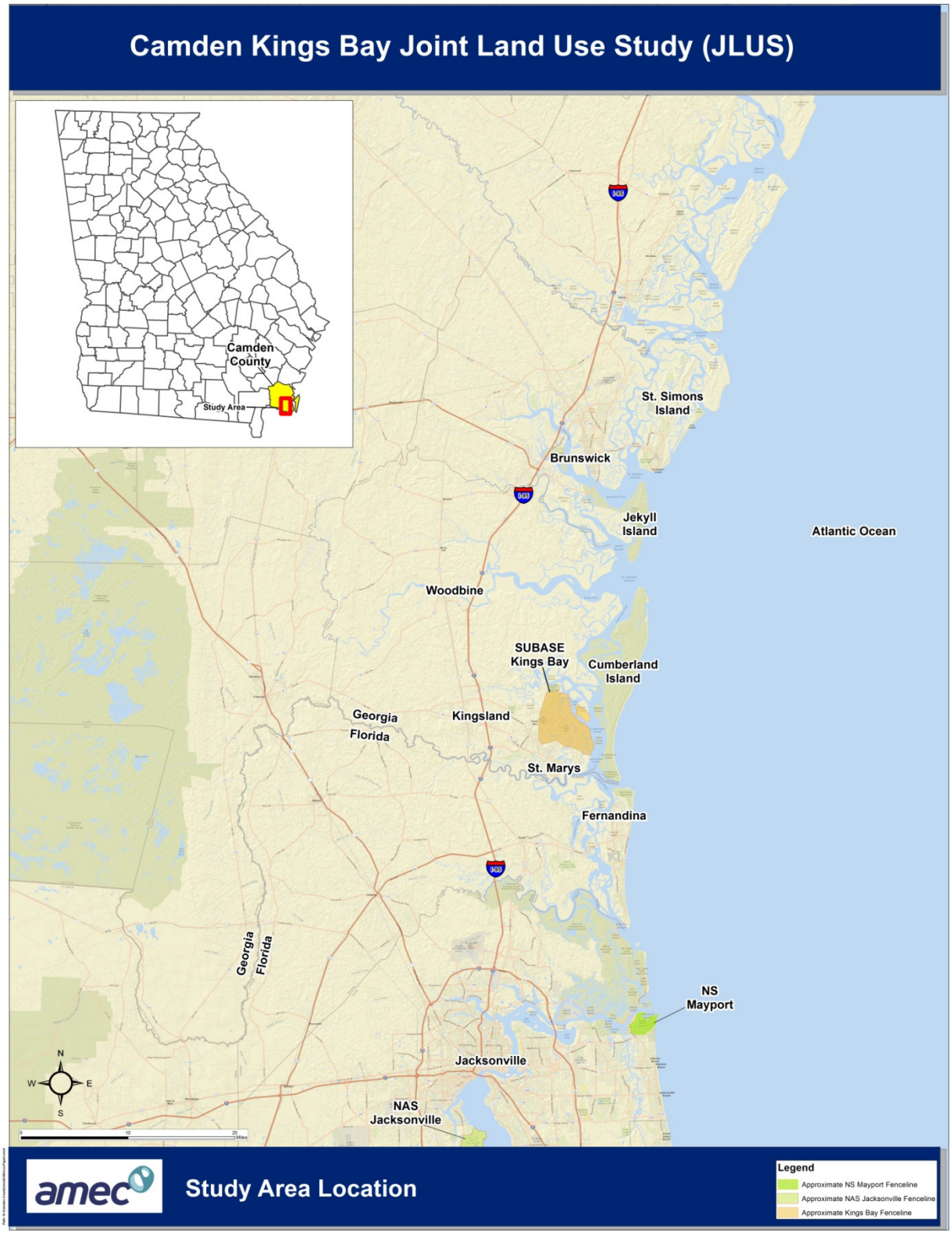
SUBASE Kings Bay is located in Southeast Georgia approximately eight miles north of Florida. The base is within Camden County; one of the largest counties in the State of Georgia. Camden County is home to three cities; St. Marys, Kingsland and Woodbine. The base is situated approximately thirty miles north of Jacksonville, which is home to NS Mayport and NAS Jacksonville among other naval commands.

SUBASE Kings Bay totals approximately 16,994 acres of land, including developed and undeveloped areas. This property was transferred from the Army to the Navy in the late 1970s, and the core facilities construction continued through the 1980s. Since that time, the base has been the primary catalyst for growth of the Camden County community, as the relocation of thousands of military personnel, civilian employees, and their families to the community has been directly due to the establishment and growth of the base.

Today, SUBASE Kings Bay is a vital component of the US strategic nuclear deterrence. SUBASE Kings Bay is the only east coast homeport to six of the TRIDENT (or Ohio-Class) submarines, the Atlantic Fleet's most modern ballistic missile (SSBN) and two nuclear powered guided missile (SSGN) submarines. In addition, the TRIDENT D-5 missile system is assembled on base and installed onto submarines at port. The base also supports British ballistic missile submarines that use the TRIDENT D-5 missile system.

SUBASE Kings Bay consists of six major tenant commands: Strategic Weapons Facility, Atlantic (SWFLANT); Commander, Submarine Group Ten; TRIDENT Refit Facility (TRF); TRIDENT Training Facility (TTF); Marine Corps Security Force Battalion (MCSFBN); and the US Coast Guard Maritime Force Protection Unit (MFPU).

## Figure 2.1 Site Location Map



SWFLANT maintains a workforce of approximately 100 military personnel, 178 government employees, 900 Security Force Personnel, and more than 604 contractors. SWFLANT personnel are responsible for assembling D-5 missiles and processing missile guidance and launcher subsystem components.

Commander, Submarine Group Ten is the senior commander at SUBASE Kings Bay. Its command oversees specific duties to integrate and coordinate the facilities dedicated to training support of the Trident system. The Submarine Group Ten command has a work force of approximately 55 with 50 active duty military and 5 civilian personnel.

TRIDENT Refit Facility (TRF) workforce totals approximately 1,500 including 200 military and 1,300 civilian men and women who work in a variety of trades that support submarine and ship repair and maintenance.

TRIDENT Training Facility (TTF) has over 52,000 square feet of classroom and office space used to adequately train Navy personnel in the skills that are necessary to operate TRIDENT ballistic missile submarines and guided missiles submarines and systems. TTF provides the first training that sailors receive after completing Basic Enlisted Submarine Training.

The Marine Corps Security Force Battalion (MCSFBN) provides security for strategic assets and facilities on SUBASE Kings Bay. The force numbers approximately 1,000 active duty personnel on the installation.

MFPU is a force of approximately 160 Coast Guard personnel that is responsible for providing additional security measures when Trident submarines are operating on the surface during transit to and from Kings Bay. There are also 80 Coast Guard personnel off base.

In addition to the six major commands, there are more than 60 supporting commands and tenants at SUBASE Kings Bay at the present time. Due to the existing resources of SUBASE Kings Bay and the capacity of the installation to accommodate growth, there are frequent discussions about, and evaluations of, opportunities for new tenants and missions to locate at SUBASE Kings Bay.

## 2.2. Study Area Profile and Growth Trends

***Study Area Overview***

SUBASE Kings Bay is located in Camden County in the southeast corner of Georgia; the base is adjacent to the City of St. Marys (to the south and west of Crooked River State Park and to the north and east of Kings Bay, the Intracoastal Waterway and Cumberland Island) and approximately eight miles north of Florida. The study area, as represented in JLUS mapping, includes the area surrounding the base, with boundaries formed by natural and man-made features. On the north, the Crooked River forms a substantial natural boundary that is not bridged east of I-95. To the west, I-95 is the dominant transportation corridor in the County that also is a boundary with only a few crossings. To the south, the St. Marys River is the Georgia-Florida border, and to the east, the Cumberland Sound and Intracoastal Waterway are the eastern edge of the SUBASE, though consideration is given to Cumberland Island. For statistical purposes, data in this section are at the geographic levels of Camden County and municipal limits, with comparisons to statewide trends.

## ***Study Area Trends***

### Population Growth Trends

In January 2012, Camden County's estimated population was 51,402 people, an increase of 17percent over the 2000 population of 43,664. Camden County's growth rate was slightly less than the State of Georgia growth rate (21percent) during the same timeframe. Camden County, Kingsland, St. Marys and Woodbine all experienced far more explosive growth between 1980 and 1990. This is due in large part to and the massive construction effort and staffing for Navy buildup and operations at SUBASE Kings Bay, which quickly became the largest employer in the area during the 1980s. Growth rates remained high between 1990 and 2000, despite local impacts such as the closure of the Gilman Paper Mill (largest privately owned paper mill in the US). Table 2.1 shows historic population growth trends as well as the forecasted population estimates for the State of Georgia, Camden County, Kingsland, St. Marys, and Woodbine.

**Table 2.1 Historic Population Growth Trends and Forecasted Population Estimates**

| Historic Populations and Long Range Population Forecasts, 1980-2030 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Jurisdiction** | **1960** | **1970** | **1980** | **1990** | **2000** | **2010** | **2020** | **2030** |
| **Georgia** | 3,943,116 | 4,589,575 | 5,463,105 | 6,478,216 | 8,186,453 | 9,687,653 | 11,326,787 | 13,154,530 |
| % Change from Previous Date | N/A | 16% | 19% | 19% | 26% | 18% | 17% | 16% |
| **Camden County** | 9,975 | 11,334 | 13,371 | 30,167 | 43,664 | 50,513 | 65,453 | 70,997 |
| % Change from Previous Date | N/A | 14% | 18% | 126% | 45% | 16% | 30% | 8% |
| **Kingsland** | 1,536 | 1,831 | 2,008 | 4,699 | 10,506 | 15,946 | 17,513 | 18,996 |
| % Change from Previous Date | N/A | 19% | 10% | 134% | 124% | 52% | 10% | 8% |
| **St. Marys** | 3,272 | 3,408 | 3,956 | 8,187 | 13,761 | 17,121 | 20,825 | 22,589 |
| % Change from Previous Date | N/A | 4% | 16% | 107% | 68% | 24% | 22% | 8% |
| **Woodbine** | 845 | 1,002 | 910 | 1,212 | 1,218 | 1,412 | 1,826 | 1,980 |
| % Change from Previous Date | N/A | 19% | -9% | 33% | <1% | 16% | 29% | 8% |

Sources: U.S. Census Bureau
Camden County Joint Comprehensive Plan 2007-2027
Governor's Office of Planning and Budget

**Figure 2.2 Annual Percent Population Change by Decade**

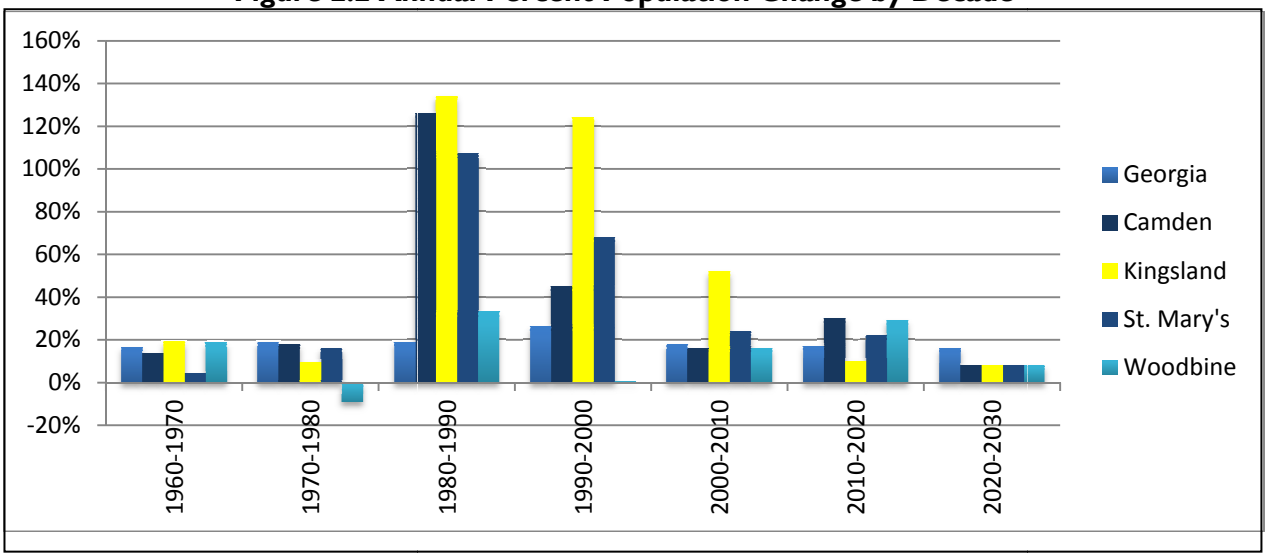
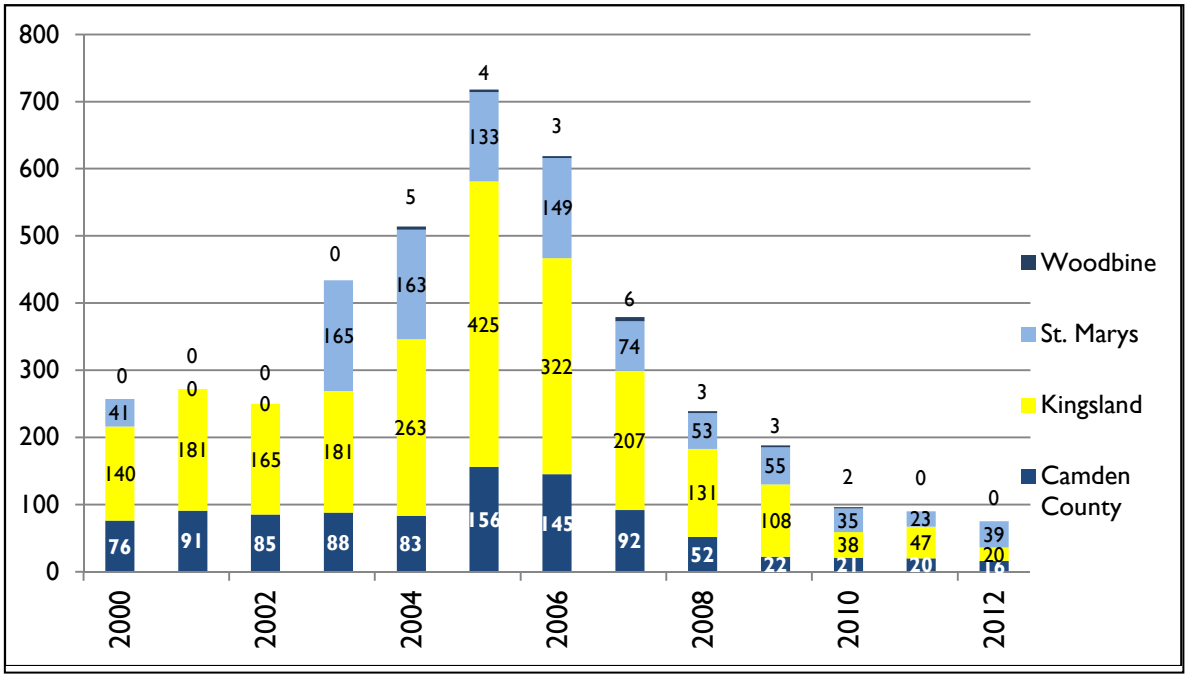



Figure 2.1 provides a graphical representation of the historic population trends, identifying the annual percentage change in population. Similar to a bell curve, the community's population growth trend that was dramatically impacted by SUBASE Kings Bay development in the 1980-2000 timeframe is projected to return to a relatively low rate of growth in the future, similar to decennial growth rates prior to 1980.

## Residential Building Permit Trends

Analyzing building trends within the study area communities provides additional insight into the amount of growth that is taking place. Figure 2.2 illustrates the trends for building permits issued for residential units in Camden County, Kingsland, St. Marys, and Woodbine for the years 2000 to 2010. For Camden County, there was a steady increase in building permits issued from 2000 to 2005. Beginning in 2006, housing construction experienced significant decline consistent with national and regional economic trends that impacted housing construction. Housing construction has remained at a low level through 2013, though a rebound in the housing construction market is anticipated due to national trends and the reduction of excess housing inventory.

**Figure 2.3 Building Permit Trends for Camden County, Kingsland, St. Marys, and Woodbine**




## Housing Values

Housing values significantly increased within the JLUS study area communities between 2000 and 2010. Table 2.2 shows the numerical and percentage changes in housing values. St. Marys saw the largest percentage increase in housing value at just over 100%. Camden County and Kingsland housing values increased at nearly the same rate. Comparatively, statewide average values increased approximately 40%.

**Table 2.2 Housing Values**

| Median Housing Values | | | | |
|---|---|---|---|---|
| **Jurisdiction** | **2000** | **2010** | **Percent Change** | **Value Change** |
| **Georgia** | $111,200 | $156,200 | 40% | $45,000 |
| **Camden County** | $85,300 | $166,500 | 95% | $81,200 |
| **Kingsland** | $81,100 | $157,600 | 94% | $76,500 |
| **St. Marys** | $85,300 | $171,100 | 101% | $85,800 |
| **Woodbine** | $68,800 | $118,600 | 72% | $49,800 |

Source: U.S. Census Bureau
American Community Survey 1-Year Estimate (2010)
American Community Survey 3-Year Estimate (2008-2010)
American Community Survey 5-Year Estimate (2006-2010)

## Median Household Income

Table 3.3 lists median household income data as reported by the US Census. With the exception of Woodbine, Camden County and municipalities experienced higher levels of income growth than the state average. As of 2010 the median household income level in Kingsland was approximately equal to

the statewide level, and income levels in unincorporated Camden County and St. Marys exceeded the state median household income.

**Table 2.3 Median Household Income**

| Median Household Income | | | | |
|---|---|---|---|---|
| **Jurisdiction** | **2000** | **2010** | **Percent Change** | **Value Change** |
| **Georgia** | $42,433 | $46,430 | 9.4% | $3,997 |
| **Camden County** | $41,056 | $50,636 | 23.3% | $9,580 |
| **Kingsland** | $41,303 | $46,331 | 12.2% | $5,028 |
| **St. Marys** | $42,087 | $52,526 | 24.8% | $10,439 |
| **Woodbine** | $34,632 | $28,864 | -16.5% | -$5,768 |

Source: U.S. Census Bureau
American Community Survey 1-Year Estimate (2010)
American Community Survey 3-Year Estimate (2008-2010)
American Community Survey 5-Year Estimate (2006-2010)

## 2.3. County and Municipal Profiles

The following short summaries provide a general profile of the development history and present day characteristics of Camden County, St. Marys, Kingsland and Woodbine.

***Camden County***

Camden County was established on February 5, 1777 and is the seventh largest county in Georgia, consisting of 630 square miles of land. Several major rivers traverse the county, including the Little Satilla River, Big Satilla River, Crooked River, Cumberland River, and the St. Marys River. Camden County has three incorporated cities. The City of Woodbine is the county seat, though Kingsland and St. Marys are the larger and more dynamic municipalities.

Employment in Camden County exceeded 14,300 on average in 2012, and the largest employers, according to the Camden County Joint Development Authority, include:

- Kings Bay Naval Submarine Base (8,979)
- Camden County School System (1,462)
- Express Scripts (500)
- Camden County Government (404)
- Wal-Mart Supercenter (366)
- Southeast Georgia Health System, Camden Campus (330)
- Winn Dixie (107)
- Publix Supermarket (105)

***St. Marys***

St. Marys was established in 1787 as Buttermilk Bluff, and was incorporated in 1802. The city was once a trade and paper production hub, but around the 1970s local focus began to shift to the tourism industry. Today, the community's economy ties strongly to its heritage and to ecotourism. St. Marys is a gateway community for the Cumberland Island National Seashore, and home to the National Park Service ferry terminal which provides the public a means to access Cumberland Island and attracts more than 40,000 visitors per year.

***Kingsland***

In 1788, the King family bought land to the west of St. Marys and named it Woodlawn. The great-grandson of John King, William King, later built a home on this property and named it "King's Land." In 1893, the Florida Central and Peninsular Railroad (today CSX) extended into Camden County across the King's property. Because William King's house was the only house on the property, the railroad named the area "King's Land." After the coming of the railroad, William King mapped out the town to be located on his property and named the town in his honor. The City of Kingsland was incorporated in 1908 and remained a small rural town into the 1980s. In recent decades, Kingsland has grown dramatically in terms of population and economy, and has expanded significantly to the east, where development has been heavily influenced by I-95, and to the west.

***Woodbine***

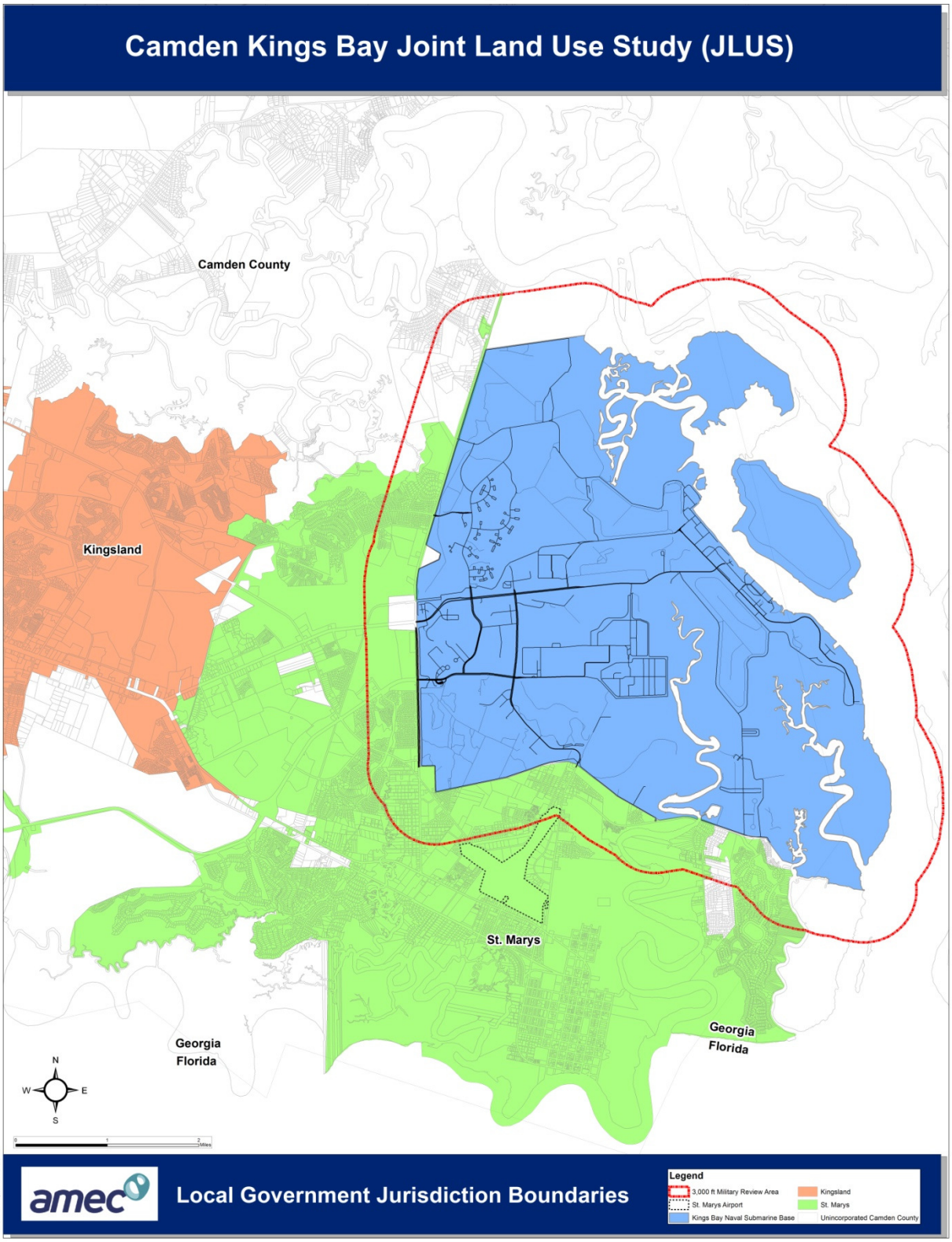
The present day location of Woodbine is believed to have been a plantation in the early 1800's. The railroad was extended into the Woodbine area in the late 1800's, leading to development prior to Woodbine's incorporation in 1908. The Atlantic Coastal Highway was built in 1927 which caused more businesses and residents to start moving to Woodbine around 1928. In 1953, the town was re-incorporated as the City of Woodbine. Woodbine has remained a small town with rural character while serving as the seat of Camden County.

## 2.4. Current Development Overview Within the Study Area

***Jurisdictions***

SUBASE Kings Bay is located within unincorporated Camden County and is adjacent to the jurisdiction of the City of St. Marys to the south and west. Through annexation, the City of Kingsland has expanded eastward to reach within less than two miles of the SUBASE boundaries. Additionally, Crooked River State Park, property owned by the State of Georgia, borders the SUBASE on the north. To the east of SUBASE is Kings Bay and the Intracoastal Waterway and Cumberland Island which is a designated National Seashore and within Camden County.

## Figure 2.4 Local Government Jurisdiction Boundaries



## ***Existing Land Use***

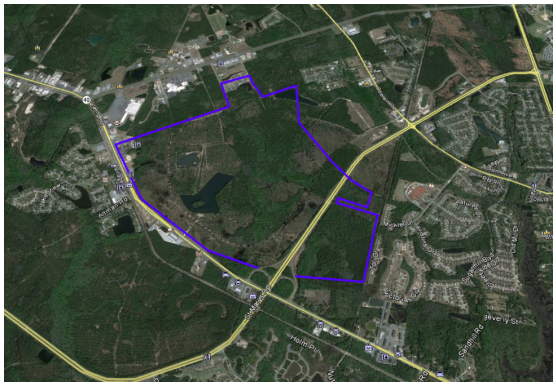
SUBASE Kings Bay is surrounded by a variety of different land uses. Description of general land use character is organized with respect to the north, south, east and west boundaries of the installation.

North of SUBASE Kings Bay there is residential housing, marsh land, and the Crooked River State Park. Located to the south is the Cumberland Harbor residential community (partially developed), the former Gilman Paper mill site, historic St. Marys, the St. Marys Airport, and several neighborhoods that surround the base and airport. To the east of Kings Bay are the Intracoastal Waterway, Cumberland Sound and Cumberland Island, which is primarily conservation use and federally protected land. To the west of the SUBASE, in unincorporated Camden County, land use consists of multiple neighborhoods and open space as well as the State Highway 40 Spur corridor.

## ***Land with Development Potential***

In close proximity to SUBASE Kings Bay are multiple undeveloped, or vacant, developable properties. Though significantly impacted by wetlands in many cases, most of these properties have development potential, and many have had development proposals put forth in the past. At present, the real estate market in Camden County is not yet fully supportive of new development, though real estate development potential is improved in comparison with recent years, and local planning officials are seeing increases in development activity.

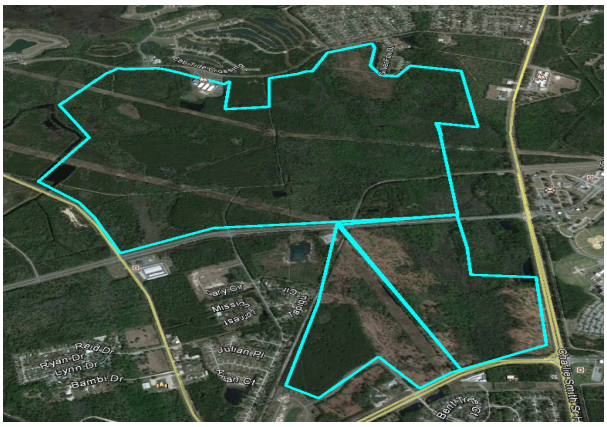
The Durango-Gilman Paper site is a 720-acre parcel with extensive frontage along the North River and connectivity to the St. Marys River and Cumberland Sound and is located approximately 1.5 miles south from SUBASE Kings Bay and within the city of St. Marys. The site is a former paper mill, is considered to be a brownfield, and was previously planned and zoned for mixed-use development. A careful approach to redevelopment is required to realize the economic benefits of redevelopment while preserving the unique coastal environment.[4]



The undeveloped property in the vicinity of E. King Ave. and St. Marys Rd. has a variety of zoning within the site. The western portion is zoned as planned development (including some conservation zoning) and is impacted by wetlands. There is commercial zoning on the eastern side of St. Marys Rd. Though access limitations associated with St. Marys Rd. pose a constraint, other surrounding roadways and some roads through the site provide potential access to support development. The total area of undeveloped property is approximately 430 acres and is approximately 1.5 miles west of SUBASE Kings Bay.

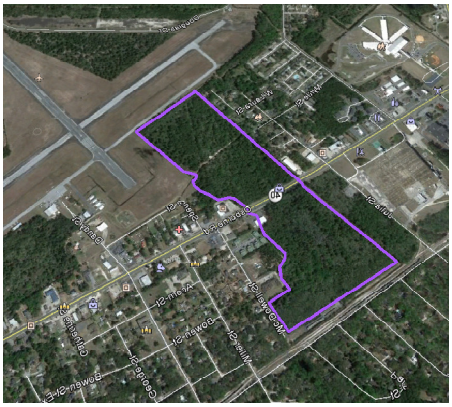
[4] Georgia Department of Natural Resources

Property adjacent to the west of SUBASE Kings Bay in the vicinity of Colerain Rd., Kings Bay Rd. and Charlie Smith Sr. Hwy. is mostly zoned as planned development, with the exception of an area of industrial zoning. Surrounding existing zoning is planned development, residential, commercial, and agriculture. Within this general area, there are existing neighborhoods and parcels of undevelopable land. Immediately to the north are wetlands. Many roads provide access, including Colerain Rd., Kings Bay Rd., and St. Marys Rd. The St. Marys Railroad tracks extend through the area of undeveloped land, which totals approximately 875 acres and is located approximately half a mile from SUBASE Kings Bay.



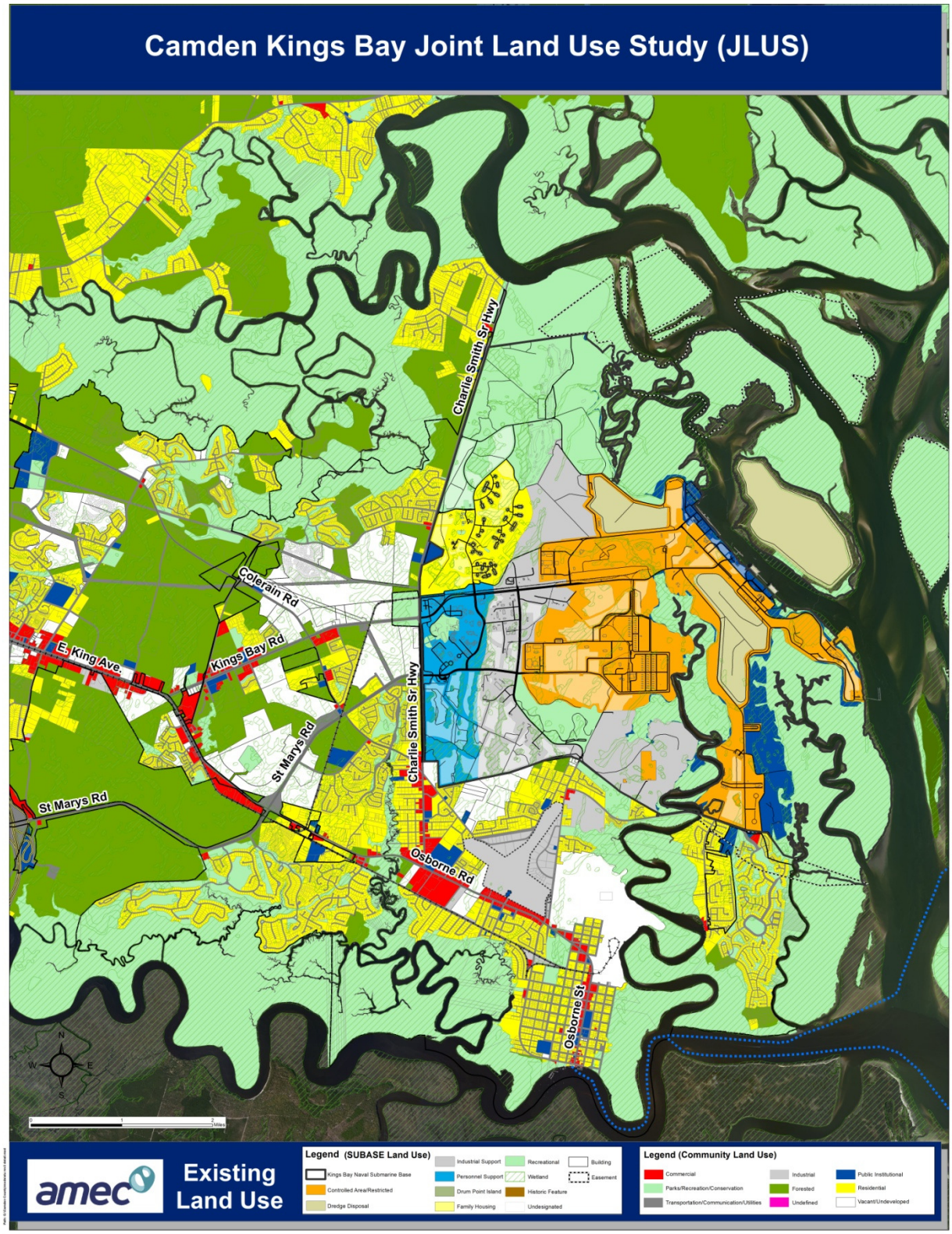
Approximately 130 acres of undeveloped land are located between SUBASE Kings Bay and the St. Marys Airport. This location is zoned as residential and contains some areas of wetlands that are undevelopable. Adjacent land inside the SUBASE fence is undeveloped. Land to the south is primarily residential existing use. Douglas Dr. is the closest access road; the remaining roads surrounding are neighborhood streets that provide access to adjacent housing.

Undeveloped property at the southwest corner of SUBASE Kings Bay, adjacent to Charlie Smith Sr. Hwy. and Douglas Dr. is residential zoned. There is a small portion of this site that is impacted by wetlands. The area surrounding this site is zoned for commercial development. Directly to the north and east is the SUBASE Kings Bay boundary. The St. Marys airport is in close proximity to the east. The property area is approximately 16 acres.



Approximately one mile from SUBASE Kings Bay is 50 acres of undeveloped land located on either side of Osborne Rd. to the south of St. Marys Airport. Property is zoned residential to the north of Osborne Rd. and industrial on the south side. There are areas of wetland that will restrict development to some degree on both sides of Osborne Rd. Wetlands are more prevalent south of Osborne Rd. Surrounding this area is existing development with a mixture of commercial zoning, residential zoning, and conservation zoning. Property is accessible from Osborne Rd. and Borrell Blvd. to the south.

## Figure 2.5 Existing Land Use



## 2.5 Regional Assessment

***Transportation***

In Camden County, as in most communities, transportation is both a local and regional issue. Locally, Camden County, Kingsland, St. Marys and Woodbine manage a local road network and provide maintenance and development of the transportation system in coordination with regional, state and federal agencies. Supporting local efforts within the region, the Coastal Regional Commission (CRC) consistently works with the Georgia Department of Transportation (GDOT) to act as a liaison and facilitator with local governments for certain GDOT programs. Historically, these programs include scenic byways, bicycle and pedestrian planning, transportation enhancement, safe routes to school, and historic resource support.

***Roadways***

The most prominent transportation route through Camden County is I-95. The interstate divides Camden County into east and west areas and has affected growth and development within the cities of Kingsland and St. Marys as well as unincorporated Camden County. The most significant I-95 congestion generally occurs at the Exit 3 interchange at State Highway 40 where commercial and services development has been most concentrated.

Prior to development of I-95, the main transportation route through Camden County was US Highway 17. Located to the west of I-95, US 17 passes through the downtowns of Woodbine and Kingsland. US Highway 17 intersects with State Highways 40, 110, and 252.

Major roadways in the immediate vicinity of SUBASE Kings Bay provide critical access to the installation. The key roadways that provide access to gates are, importantly, controlled by access limitations. These include Charlie Smith Sr. Hwy. (Spur 40), Kings Bay Rd., Colerain Rd., St. Marys Rd., and Osborne Rd. (S.R. 40). St. Marys Rd. is a National Defense Highway jointly administered by the City of St. Marys, US Navy and GDOT. Spur 40 is a limited access highway with respect to parcels across from the SUBASE perimeter.

The Coastal Georgia Regional Transportation Assessment was prepared in 2009 in order to provide an inventory of all previous transportation studies and assessment of the extent to which the current and planned transportation system adequately addresses the existing and future regional mobility needs of the region.

The CRC has also assisted with specific local planning efforts. In 2005, the CRC prepared the Camden County Bicycle and Pedestrian Plan with funding from GDOT and the Department of Community Affairs (DCA). The plan recommends a network of bicycle and pedestrian facilities that allow a safe place for cyclists and pedestrians as part of an ongoing program to improve bicycling and walking conditions and safety.

According to the 2005 Infrastructure Management Report for Camden County, there are four primary issues with transportation infrastructure within Camden County. First, residential expansion within Camden County has not been balanced with the level of economic development. This issue presents the problem of increased long-distance travel to work as more residents commute outside of the county for employment. Second, the current transportation system has limited connectivity and provides few transportation options. The current road patterns limit walking, bicycling, and potential for transit, which in turn limits future quality of life in Camden County. Thirdly, the growth of the exclusively auto-

oriented transportation system in Camden County threatens future business, tourism, and residential investors due to the potential for congestion to detract from the community's economic attractiveness. Finally, there is not sufficient coordination between transportation and land-use planning.

Currently, some roadways do not meet local transportation needs due to the fact that existing roads were not designed for the level of traffic they are experiencing. It is anticipated that the rate of deterioration of the County's roads will increase. Some transportation improvement projects are planned to address this issue. The Georgia Department of Transportation's (GDOT) State Transportation Improvement Program (STIP) lists the projects in Camden County that are currently funded and scheduled. According to the STIP, Camden County has six projects in process that are relevant to the JLUS study area.

Table 2.3 below lists the proposed recommendations and current transportation projects from the Infrastructure Management Report, STIP, and the Camden County Joint Comprehensive Plan to address local transportation needs.

**Table 2.4 Proposed Transportation Recommendations and Current Projects**

| Plan/Report | Proposed Recommendations |
|---|---|
| **Infrastructure Management Report (Georgia Institute of Technology's Center for Quality Growth and Regional Development)** | Attempt to match residential growth with job growth |
| | Investigate the provision of a commuter bus service (there is currently no public transportation system in Camden County). |
| | Encourage mixed-use development |
| | Provide walking/bicycle access from residences to short-distance destinations such as schools. |
| | Design and retrofit roadways to accommodate all uses |
| **Camden County Joint Comprehensive Plan 2007-2027 (Coastal Georgia Regional Commission)** | Rest Area: Reconstruct the North Bound Welcome Center on I-95 |
| | Interchange: Add left turning lane on SR 40 at I-95 interchange, and new interchange on I-95 at Horse Stamp Church Road; and rebuild exits 1 and 3 for future development |
| | Railroad Crossing: Add a railroad crossing warning device on Lakes Boulevard |
| | Signals: Upgrade traffic signals on several highways on SR 25; SR 40; Spur 40 |
| | Pavement Rehabilitation: St. Marys Road project |
| | Widening: Widen SR 40 from west of St. Marys Road to US 17 |
| **Statewide Transportation Improvement Program* (STIP) (GDOT)** | Widen SR 40 East of St. Marys. There are currently two existing lanes, this project will widen to four lines |
| | Widen CR 90/Colerain Road West of I-95 to East of Kings Bay Road. This project would widen the existing two lanes into four lanes |
| | Widen Kingsland Bypass from CR 61 to I-95 to four lanes |
| | Add Railroad warning device on SR 40 at SMR #861077N in St Marys |
| | Add Bike/Pedestrian facility on SR 40 from CS 456/West Street to CS 457/ East Street |
| | Add Bike/Pedestrian facility in St. Marys from Ready St. to Waterfront Multi-use Trail |

*Plans are currently in progress

## Figure 2.6 Major Roads and Transportation Features

### *Water-Based Transportation*

*Waterways Description*

The St. Marys entrance channel is located between Cumberland Island, Georgia and Amelia Island, Florida. It provides vessel access to Cumberland Sound, the Atlantic Intracoastal Waterway (AIWW), and the channels leading to the Port of Fernandina and SUBASE Kings Bay. The St. Marys entrance channel is overlaid by the Navy entrance channel (46 feet depth). The AIWW is overlaid by the Navy Inner Channel (42 feet depth) to the north and the Port of Fernandina (38 feet depth) to the south. The AIWW channel is designed to have 12 feet depth, but lack of Federal Civil Works funds has caused severe deterioration of depths within Georgia.

The Cumberland Sound area provides habitat for endangered species including North Atlantic right whales and manatees. From November through April, the St. Marys River entrance is part of the calving ground for the whales; restrictions are in effect limiting proximity of vessels to whales and also establishing two-way Whale Avoidance Routes in the Cumberland Sound to reduce the likelihood of ship strikes of North Atlantic right whales.

*Commercial Port Facilities*

Although St. Marys remains one of the three Atlantic seaports authorized by the State of Georgia[5], the Port of Fernandina is the only active commercial port in the Cumberland Sound area. The Port of Fernandina has existed in some capacity since the American Revolution. It was controlled by Spain until 1817 when the United States took control of Amelia Island, including the Port of Fernandina. During the 1850s, railroad infrastructure expansion also provided connectivity from the Port of Fernandina to northern cities. Around the end of the 19th century, the Port of Fernandina greatly stimulated the local economy with import and export activity; however this prosperity only lasted approximately 20 years before decline. In 1985, the Port of Fernandina began a revitalization effort when the US Navy and the Ocean and Highway and Port Authority (OHPA) issued bonds to finance the construction of a modern seaport terminal in order to capitalize on a new, deeper entrance channel. The improvements allowed the Port Authority to bring the Port of Fernandina back to life as a major contributor to the economy of Nassau County, Florida. Today, the principal exports from the port are forest products, machinery, treated lumber, steel billets, rebar, and coils while the primary imports are wood, pulp, lumber, and hardwoods[6].

The Port of Fernandina is operated by Nassau Terminals, LLC under a long term contract with OHPA. The port consists of two berths and handled less than150 vessels during the 2013 fiscal year. The port's current capacity is 300 vessels per year. With a proposed berthing area expansion, the port has potential to accommodate an additional 75 vessels per year. Completion of the proposed berth expansion would also require a multi-million dollar investment in gantry cranes and yard equipment in order to increase productivity and expand density. In addition to these investments, the port plans to expand on-port warehousing to accommodate more kraft linerboarder exports and lumber imports. This expansion would increase forest product warehousing by 12.5 % by adding 25,000 square feet to the existing 200,000 square foot footprint.[7]

[5] The three Atlantic seaports authorized by the State of Georgia are Brunswick, Savannah and St. Marys.
[6] Ocean Highway and Port Authority
[7] Florida Ports Council

In 2013, the US Army Corps of Engineers announced plans to undertake maintenance dredging of existing navigation channels as requested by SUBASE Kings Bay. The joint effort of Jacksonville and Savannah Districts of the Corps of Engineers will cover maintenance dredging in the Kings Bay Inner Channel and portions of the Kings Bay Entrance Channel, the shipping route from the Cumberland Sound to the Atlantic Ocean. The regular channel dredging is critical to Navy activity at Kings Bay, and is mutually beneficial to commercial cargo transiting to and from the Port of Fernandina, as it maintains the channel and returns the entrance to its authorized dimensions. Channel dredging has consistently occurred since SUBASE Kings Bay was developed in order to maintain the channel at authorized standards.

*Recreational Activity and Private Marinas*

Because SUBASE Kings Bay is located near prime water frontage, recreational boating activity regularly occurs in the vicinity and has the potential to affect the efficiency of Naval operations and impinge on the security buffer between submarine escorts and civilian watercraft. Proposed marinas have potential combined capacity to dock hundreds of boats and increase recreational boating traffic[8]. Specifically, the US Army Corps of Engineers permit associated with the Cumberland Harbor development would allow marina construction adequate to support an estimated capacity of 400 or more boats. The ACOE permit was issued in 2012 and will expire in 2017. Phased construction by the developer will be under the control of GADNR per restrictions and monitoring requirements contained in the Supplemental Conservation Measures Plan. Phase 1 construction may begin as early as summer 2014, contingent upon GADNR approval of developer's proposed marsh construction method.

*Public Boat Ramps and Marinas*

Existing boat ramps and marinas are located in Woodbine (Satilla River and Harriett's Bluff), St. Marys (St. Marys River Boat Ramp and City Boat Ramp), Kingsland (Browntown), and Camden County (White Oak). Improvements are currently underway to the marina area in St. Marys.

## ***Air Transportation***

*Airport Facilities*

There is one public airport in Camden County: the St. Marys Airport. The St. Marys Airport is located near State Highway 40 in St. Marys, and is positioned approximately one half mile from the SUBASE fenceline, fifteen miles from the Florida border and 44 miles south of Brunswick. It has access from I-95 via State Highway 40. The airport is classified as a Level II facility in the Georgia Aviation System Plan (GASP). Level II facilities allow for small recreational, agricultural spraying, corporate/business jets, police/law enforcement, forest fire fighting, ultra lights, and experimental aircraft. The airport has a combined Fixed Base Operator/Terminal building, several small hangars, and two runways, 13/31 and 04/22. Runway 13/31 measures 4,000' by 75', is served by a full length parallel taxiway, and is unlighted. Runway 04/22 measures 5,000' by 100' and has medium intensity lighting. Though it is the shorter runway and, due to a displaced threshold, has an available landing distance of approximately 3,300', runway 13/31 has been designated the airport's primary runway due to concerns about the orientation of runway 04/22 with respect to (perpendicular to) prohibited airspace (P-50) over SUBASE Kings Bay. Airport property is located approximately one mile from this prohibited airspace. According to reported statistics for calendar year 2012, St. Marys Airport averages 5 civilian aircraft operations per day (total of 1,985 flights) with an additional 30 military operations in 2012.

[8] City of St. Marys

*Airspace*

Camden County's airspace and the aircraft that operate under instrument flight rules (IFR) are controlled by Jacksonville Terminal Radar Approach Control and Jacksonville Air Route Traffic Control Center. There are four victors associated with Camden County: Victor 3 (V-3), Victor 37 (V-37), Victor 441(V-441) and Victor 267 (V-267). A "victor" airway is an invisible three-dimensional network of "roads" within controlled airspace and used for air navigation purposes. V-3 is eight miles to the east of St. Marys Airport and runs in a predominant north/south direction. V-37 is five miles to the east of St. Marys Airport and runs in a predominant north/south direction. Victor V-267 and V-441 are eight and ten miles northeast and southwest respectively of the St. Marys Airport. V-267 runs in a predominant northwest/southeast direction while V-441 runs in a predominant northeast/southwest direction. The airspace that immediately surrounds St. Marys is class E airspace.[9] Class E airspace is uncontrolled airspace that extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. Class E airspace begins at 14,500 MSL over the US including waters within 12 nautical miles of the coast.

[9] Airport Feasibility and Site Selection Study

**Figure 2.7 Aeronautical Chart – Vicinity of St. Marys, Georgia and SUBASE Kings Bay**

Immediately after September 11, 2001 the airspace around the St. Marys Airport was closed, restricting any flights to or from the airport. Afterwards, a restricted airspace zone extending up to 2,999 feet was established over SUBASE Kings Bay, first as a temporary flight restriction, then as permanent prohibited airspace (identified as P-50 on aeronautical charts). Due to heighted security requirements since September 11, 2001 and the proximity of the airport to sensitive facilities on SUBASE Kings Bay, The Georgia Aviation System Plan, prepared by GDOT, concluded that the airport is not capable of meeting its recommended system role due to its current location. Its operation has been unduly constrained, and a relocation of the airport is recommended by the Georgia Aviation System Plan[10]. Additionally, it is the official policy of the City of St. Marys to relocate the airport per a voter referendum of July 2008. Environmental approval for relocation to a specified site has been secured (through an Environmental Assessment, scheduled to expire in 2014).

### *Railroad*

Railroad infrastructure serves the southeastern portion of Camden County, extending into SUBASE Kings Bay and the site of the former Durango-Georgia Paper Company. CSX maintains the rail main line along US 17 from Florida to Kingsland. The tracks that run to the north of Kingsland have been abandoned and are in consideration for Rails-to-Trails conversion.

The St. Marys Railroad, a short line, operates the rail lines to the east of Kingsland. St. Mary's Railroad began operating in 1865 and was originally known as the St. Marys and Kingsland Railroad, then became the St. Marys Railroad when it was bought in 1918 by Southern Fertilizer and Chemical Company in Savannah. The railroad has been owned by the Boatright Companies since 2007. It is an eleven mile short line run from Kingsland to St. Marys that primarily transports deliveries to SUBASE Kings Bay and serves other minor customers. The St. Marys Railroad, beginning in 2013, began operating as a tourist amenity. The rail line offers a short train ride that tours through historic St. Marys, allowing tourists and residents to experience St. Marys' history, nature, and views from a different perspective. The rail line is part of the Strategic Rail Corridor Network (STRACNET) which is critical transportation infrastructure supporting the base and more than 130 military installations nationwide.

### *Utilities and Telecommunications Infrastructure*

TDS Telecom provides telephone cable and internet for all of Camden County. Additionally, it provides services for both residential and commercial customers. Comcast provides telephone, cable, and internet for all of Camden County, as well. Comcast provides services for both residential and commercial customers.

There are two electric utility providers in Camden County: Okefenokee Rural Electric Membership Company (OREMC) and Georgia Power. Because of the deregulation of gas providers, there are no designated gas providers for Camden County. Camden County residents can choose other companies doing business in Georgia.

## Environmental Resources

The landscape of Camden County includes a wide variety of natural habitats. This habitat diversity supports a rich variety of wildlife, including many recreationally and commercially targeted species. The county's inland aquatic habitats contain many species of fish and waterfowl and a number of migratory bird species.

[10] GDOT Georgia Aviation Systems Plan (GASP)

Cumberland Island, Georgia's largest and southernmost barrier island, has unique, pristine maritime forests, undeveloped beaches and wide marshes. Cumberland Island is home to over 9,800 acres of congressionally designated Wilderness and supports a rich diversity of animals and plants.

### *Threatened and Endangered Species*

There are several federally listed threatened, rare and endangered species found within the JLUS study area. An endangered species is any species that is in danger of becoming extinct throughout all of its range or a significant portion of it. A threatened species is any species that is likely to become an endangered species within the foreseeable future.[11] Rare species are species that are at risk but are not legally protected.[12]The listing below includes protected animals that can be found in Camden County and/or throughout the Coastal Georgia region. These animals are classified as protected by the State of Georgia and/or the Federal Government.

**Table 2.5 Threatened, Rare and Endangered Species**

| Name | Habitat | Endangered, Threatened or Rare | Description |
|---|---|---|---|
| Fish | | | |
| Bluefin Killfish *(Lucania Goodei)* | Water | Endangered | The bluefin killfish is approximately five centimeters long. Their native range is sporadically along the Atlantic Coast. The males have bright blue marks on the dorsal fins, whereas females have no color at all. |
| Short Nose Sturgeon (*Acipenser Brevirostrum)* | Water | Endangered | Listed as endangered on March 11, 1967 under the Endangered Species Preservation Act of 1966, the short nose sturgeon lives in coastal rivers and prefer the nearshore marine, estuarine, and riverine habitat of large river systems. They grow up to 4.7 feet and weigh up to 50.7 pounds. Females spawn every three years,males spawn yeary. |
| Altamaha Spiny (*Elliptio Spinosa)* | Water | Endangered | First proposed for federal protection in 2001, the Altamaha spinymussel is regionally and federally listed as endangered. The Altamaha spinymussel has one to five spikes called spines, no longer than one inch. They are typically palm-sized and seemingly limited to swift-flowing water. They are usually found in stable, coarse to fine sandy sediments. |
| Bird | | | |
| American Oystercatcher (*Haematopus Palliates)* | Air | Rare | The American oystercatcher is about 16 to 17 inches long. They have long pick legs and a long orange bill. Their feathers are black with white on its underside. This species exists on marine coastal environments rarely straying from saltwater |

[11] U.S. Fish and Wildlife Service (www.fws.gov)
[12] Georgia Department of Natural Resources – Wildlife Resources Division (www.georgiawildlife.com/rare_species_profiles)

| Name | Habitat | Endangered, Threatened or Rare | Description |
|---|---|---|---|
| Bachman's Sparrow (*Aimophila Aestivalis)* | Air | Rare | Listed as a rare in Georgia, the Bachman's sparrow is about fifteen centimeters in length and has alternating reddish-brown and gray vertical strips. They live in open pinewoods, utility rights-of-way, and old pastures. |
| Bald Eagle *(Haliaeetus Leucocephalus*) | Air | Threatened | The bald eagle is about 30inches in length, and has a wingspan of six to seven feet. It is dark brown with a white tail and white head. The bald eagle habitat includes lakes, rivers, marshes, or anywhere it can find fish. |
| Black Skimmer (*Rynchops Niger)* | Air | Rare | The black skimmer is about eighteen inches in length and has a wingspan of about 44 inches. The top of the black skimmer is black while the underparts are white. They have an orange and black bill with a compressed lower mandible that extends beyond the upper mandible. This allows for the bird to skim small fish and other food. |
| Black-necked Silt (*Himantopus Mexicanus)* | Air | Endangered | The black-necked stilt has very long, thin, and red legs while its feathers are black and white. They are found along the edges of shallow water around ponds, flooded lowlands, or shallow lagoons. |
| Gull-billed Tern(*Sterna Nilotica)* | Air | Threatened | The gull-billed tern is about fourteen inches in length; its face and underparts are white but the gull-billed tern has a black cap that starts at its bill and continues on to the nape of its neck. Unlike other terns, the gull-billed tern feeds over dunes, marshes, mudflats, and coastal scrub vegetation. |
| Least Tern (*Sterna Antillarum)* | Air | Rare | The least tern is the smallest tern in Georgia. It is nine inches in length with a wingspan of twenty inches. The body and wings are white with gray on the back of the upper surface of the wings. Its head is white with a black cap. Historically, these birds nested on vegetated barrier island beaches, but due to human disturbance have relocated to agricultural fields, parking lots, sand/ gravel pits, and soil spots. |
| Piping Plover (*Charadrius Melodus)* | Air | Threatened | The piper plover is a small, sparrow-sized short bird. It is about seven inches in length. They can be found on beaches on the coast and in dry, sandy areas inland. |
| Swallow-tailed Kite (*Elanoides Forficatus)* | Air | Rare | The swallow-tailed kite is black and white with long pointed wings and a strongly forked tail. They can grow between 48 to 61 centimeters in length. Their nesting and habitats consists of pine forest, savannas, cypress and swamps. |
| Wilson's Plover | Air | Threatened | The Wilson's plover is small to medium |

| Name | Habitat | Endangered, Threatened or Rare | Description |
|---|---|---|---|
| (*Charadrius Wilsonia)* | | | sized with long, heavy, black bills, single broad breast band, and pinkish-gray legs. These plovers inhabit sandy beaches, tidal flats, and spoil islands. |
| Wood stork (*Mycteria Americana)* | Air | Endangered | The wood stork is 33 to 44 inches in height and has a wingspan of 59 to 65 inches. It has a black head, white body, and a curved black bill. The wood stork is the only stork in North America and can be found in coastal areas, tidal waters, swamps, and streams. |
| Amphibian | | | |
| Flatwoods Salamander (*Ambystoma Cingulatum)* | Land/Water | Threatened | Listed as a federally threatened species with the destruction of habitat being the primary threat, the Flatwoods salamander is four and a half to six inches in length. These salamanders occur throughout the Atlantic and Gulf Coastal Plains of Alabama, Georgia, South Carolina, and Northern Florida. |
| Gopher Frog *(Rana Capito)* | Land/Water | Rare | The gopher frog is a medium sized frog that is approximately two and a half to four and a half inches in length. These frogs color variant between brown, gray, white, reddish brown or dark brown and have warts on its dorsum. In Georgia, the gopher frog lives in drained, longleaf pine, wiregrass pine, and poorly drained longleaf pine flatwoods. |
| Reptile | | | |
| Eastern Indigo Snake (*Drymarchon Couperi)* | Land | Threatened | The eastern indigo snake is a large, stout bodied, shiny black snake that reaches eight feet long. Habitat ranges from scrub and sandhill to wet prairies and mangrove swamps. |
| Eastern Milk Snake *(Lampropeltis Triangulum Triangulum)* | Land | Endangered | The eastern milk snake is approximately 24 to 36 inches in length with tan or gray color and rows of reddish-brown blotches. Their habitats occur along hillsides, wooded areas, open fields, and stream and river floodplains. |
| Gopher Tortoise *(Gopherus Polyphemus)* | Land | Threatened | The gopher tortoise is approximately 10 to 12 inches long and can weigh up to 10 pounds. They occur in sandhills and inner coastal plains. The gopher tortoise is known for burrowing homes that can be up to 40 feet long and as wide of the tortoise. |
| Leatherback Turtle (*Dermochelys Coriacea)* | Land/Water | Endangered | The leatherback turtle can weigh up to 2,000 pounds and is six and a half feet long. They primarily have black shells with pinkish, white coloring on their belly. |
| Loggerhead Sea Turtle (*Caretta Caretta)* | Land/Water | Threatened | The Loggerhead sea turtle is on average 250 pounds and about three feet in length. They are reddish-brown and have large heads. |

| Name | Habitat | Endangered, Threatened or Rare | Description |
|---|---|---|---|
| | | | During their lifespan, loggerheads occupy three different ecosystems: beaches, water, and near shore coastal areas. |
| Mimic Glass Lizard (*Ophisaurus Mimicus)* | Land | Rare | The mimic glass lizard is a long, slender, and limbless lizard that reaches seven and a fourth inches in length. Although this lizard looks like a snake, it has tiny plates known as osteoderms which makes them more rigid than snakes. Mimic glass lizards inhabit pine flatwoods, savannas, and pitcher-plant bogs. |
| Mammals | | | |
| Big-eared Bat (*Corynorhinus Rafinesquii)* | Air | Rare | The big-eared bat is approximately four inches in length with a wingspan of about eleven inches. They inhabit forests and streamside areas throughout the southeastern US. |
| Manatee (*Trichechus Manatus)* | Water | Endangered | Manatees can reach thirteen feet long and weigh up to one and a half tons. They are typically gray to light brown and are often covered in algae. Their tail is rounded and horizontally flatted to aid in swimming and steering. These mammals inhabit tropical and sub tropical coastal waters and rivers of Florida and Georgia. |
| North Atlantic Right Whale (*Eubalaena Glacialis)* | Water | Endangered | The North Atlantic Right Whale can weigh up to 70 tons and reach approximately 50 feet. They have a stocky body with black coloration. |

### ***Water Resources and Water/Sewer Infrastructure***

In Coastal Georgia, there are five major surface water resources: the Savannah, Ogeechee, Altamaha, Satilla, and St. Marys rivers. These rivers are critical environmental, economic and recreational assets of Coastal Georgia. Also critical to coastal Georgia are groundwater resources. Coastal Georgia has three major aquifers: the surficial aquifer, Brunswick aquifer, and Floridan aquifer. Due to the salinity of the brackish tidal rivers, coastal communities primarily rely on groundwater for potable water. According to the Water Development and Conservation Plan, approximately 99 % of groundwater supplied in the Georgia coastal region is from the Floridan aquifer system.

### ***Camden County***

Unincorporated Camden County has continued to experience residential growth. Currently, there is not a public water and sewage service provided to its residents. The growing population has caused Camden County officials to explore the feasibility of water and sewer service in the unincorporated county. It has been estimated that the cost of providing public water services to new development would exceed the revenues received. In 2006, the County attempted to create a utility authority to oversee a new water and wastewater system; however, the project failed to receive adequate support for implementation. SUBASE Kings Bay has one water treatment plant and two wastewater treatment plants that only serve the installation and function independently from county and municipal systems.

### *St. Marys*

The St. Marys Water Department serves a population of over 17,000 residents. St. Marys water is drawn from three wells to the Floridian Aquifer, one of the most productive aquifers in the world. St. Marys currently has three water plants and one pressure booster station. The transmission and distribution system has 127 miles of water mains with pipes up to twelve inches in diameter, and the water treatment plants have approved capacity of approximately six million gallons per day (MGD). St. Marys sewer system is at approximately 45% of capacity.

### *Kingsland*

Kingsland's water supply is provided by three community groundwater wells. In 2006, Kingsland's water supply system served approximately 6,000 households. The distribution system consists of approximately 350 miles of water mains with pipes up to twelve inches in diameter. Kingsland's water service infrastructure is aging and the existing wastewater treatment facility is at 82 % capacity. Because there is residential development planned on the west side of the city, there will need to be expansions to water storage capacity, treatment facilities, and wastewater treatment capacity.

### *Woodbine*

Woodbine's water system serves approximately 500 households. The City has two wells and two water storage tanks. There are 12 miles of main lines in the Woodbine water distribution system. The City is expected to seek permits for new water supply wells in the near future. The wastewater treatment plant is operating at 41 % of capacity.

## ***Cultural Resources***

Areas of historic, archaeological or cultural significance; barrier islands; marsh hammocks; aquifer resources; public access open spaces; freshwater wetlands; navigational channels; beaches and dunes; rivers and adjacent wetland systems; and shore bird nesting areas are among the many natural and cultural resources in Coastal Georgia.[13]

### *Camden County*

The decades of rapid population growth in Camden County has impacted the natural and cultural resources in the county. It was recommended by the Georgia Tech Economic Diversification study that a green infrastructure network should be created in order to connect community amenities for environmental and social benefits, providing paths and open spaces in strategic locations.

Crooked River State Park is located in Camden County, adjacent to the north of SUBASE Kings Bay. Visitors enjoy the Intracoastal Waterway and maritime forest. The park has a nature trail that goes through the forest and salt marshes where hikers have opportunity to see wildlife, including rare, threatened and endangered species.

### *Cumberland Island*

Cumberland Island, located in unincorporated Camden County, is a national seashore and the largest of Georgia's barrier islands, approximately seventeen and a half miles long and over 36,000 acres. The island is mostly wilderness and undeveloped beach with wild horses, ancient sea turtles, wild turkey, armadillos, sand dunes, maritime forests, and salt marshes. The National seashore is operated by the National Park Service. There are a small number of privately-owned residences on Cumberland Island,

[13] Coastal Regional Commission Regional Resource Plan

including the Greyfield Inn. Also on Cumberland Island is The Dungeness, a historic ruin of a mansion built by Thomas Carnegie in the 1880s.

### *St. Marys*

St. Marys is one of the oldest towns in the United States, and its historic district includes many 19th century structures. The City maintains and administers a vibrant and active National Register Historic District via a Historic Preservation Commission and related ordinance. The City also has recently passed a Maritime Heritage Overlay District to enhance the long historic connection to the water, celebrated by an elegant waterfront park that hosts many regional festivals, most notably, the St. Marys Mardi Gras Festival which is rated one of the top 20 festivals in the US. The City also supports a Submarine Museum which features components of many WWII and later era submarines. The museum is attended to by active duty and retired US Navy submariners. St. Marys is the embarkation point for public access to Cumberland Island. The National Park Service has offices in St. Marys, as well.

### *Kingsland*

Kingsland's historic downtown is listed on the National Register of Historic Places and rich in history. The downtown area resembles a 1920s and 1930s downtown with bricked sidewalks. Each Labor Day weekend, the City hosts the annual Catfish Festival.

### *Woodbine*

The Satilla River is a big part of Woodbine's culture. This river provides the city with beautiful views and the perfect setting for their Annual Crawfish Festival.

CHAPTER
3

# Existing Plans and Programs

## 3.1 Naval Support Activity Camden County

***The Camden Partnership***

The Camden Partnership is a non-profit organization that promotes community support for SUBASE Kings Bay and military missions in Camden County. The Partnership sponsors community programs and events, fosters discussion about the economic importance of the base, and welcomes anyone who has a stake in the future of Camden County and SUBASE Kings Bay to join them and express their voices.

## 3.2 Local Jurisdictions and Planning Tools

***Camden County and the Cities of Kingsland, St. Marys, and Woodbine Joint Comprehensive Plan***

In 1989, the Georgia General Assembly passed the Georgia Planning Act which requires that each county and city in Georgia prepare and adopt a local Comprehensive Plan. The local Comprehensive Plan has three main components: The Community Assessment, Community Participation Program, and Community Agenda. The current Joint Comprehensive Plan was adopted in 2008. Subsequently, Camden County prepared and adopted a land use plan for the unincorporated areas of the county that adds specificity. Camden County, Kingsland, St. Marys, and Woodbine each have adopted zoning ordinances and associated zoning maps which serve as key planning tools.

## 3.3 State/Regional Entities, Tools and Legislation

***Georgia Department of Community Affairs (DCA)***

DCA works to help Georgia's communities, families, and businesses succeed. In 1996 the state merged the Georgia Housing and Finance Authority and the Department of Community Affairs. Today the DCA:

- Establishes and administers guidelines for comprehensive planning
- Operates a host of state and federal grant programs
- Serves as the state's lead agency in housing finance and development
- Promotes zoning and building codes to be adopted by local governments
- Serves as the lead agency for the state's solid waste reduction efforts

***Coastal Regional Commission (CRC)***

The CRC provides local and regional comprehensive planning services with specialized planning services in transportation, water resources, and historic preservation. In addition to comprehensive planning, the CRC manages transportation services such as Coastal Regional Coaches and the Regional Vanpool Program. The CRC coordinated the process to prepare the Coastal Regional Plan, and CRC staff is involved in maintenance of the plan in many ways. The CRC also completed and adopted the Regionally Important Resources (RIR) Plan. The purpose of the RIR plan is to enhance the focus on protection and

management of important natural and cultural resources in the Coastal Georgia region, provide for careful consideration of impacts of new development on these important resources, and improve coordination of agencies involved in the protection and management of identified resources.

***Georgia Department of Natural Resources (DNR)***

Georgia DNR is responsible for the management and conservation of Georgia's natural and cultural resources. There are six operating divisions with DNR: Coastal Resources Division, Environmental Protection Division, Historic Preservation Division, Sustainability Division, Parks, Recreation and Historic Sites Division, and Wildlife Resources Division.

The Georgia Environmental Protection Division (GAEPD) works to protect and restore Georgia's environment by ensuring clean air, water, and land. GAEPD and partners work together in order to pursue sustainability and a foundation for a healthy economy and community. In order to correct serious environmental problems and make sure all businesses, government entities, and individuals are in compliance with the laws, GAEPD uses enforcement actions such as consent orders and administrative orders.

GAEPD has a Watershed Protection Branch that manages water resources in Georgia through permits. The Watershed Protection Branch monitors Georgia's water systems to make sure they are operating properly and conducts water quality monitoring and modeling of Georgia's waterways.
The Georgia Coastal Management Program seeks to balance economic development in coastal zones while preserving natural, environmental, historic, archeological, and recreational resources.

***The Georgia Land Conservation Program (GLCP)***

The GLCP is dedicated to preserving a statewide network of land and water resources for future generations. The program promotes collaboration between cities and counties in Georgia, state and federal agencies, landowners, and private sector partners in order to protect Georgia's natural resources. The GLCP provides funding options to achieve permanent conservation of land, such as grants, low interests loans, and tax incentives.

***Military Installation Land Use Notification Area (O.C.G.A § 36-66-6)***

Georgia state law O.C.G.A. § 36-66-6 was established in response to investigations and recommendations of planning departments regarding land near military installations. Per state requirement, any planning department's recommendations concerning a proposed zoning decision that involves land adjacent to or within 3,000 feet of any military installation or base, or within the 3,000 foot Clear Zone and Accident Prevention Zones Numbers I and II, must be made with respect to the matters enumerated in the law. The planning department must request from the commander of the military base, military installation, or military airport a written recommendation and supporting facts relating to the use of the land being considered in the proposed zoning at least 30 days prior to the required public hearing. If no response to the request is submitted by the date of the public hearing, then there is a presumption that the proposed zoning decision will not have adverse effects on the matters specified in the law. In each case where the military entity wishes to provide a response, the following criteria for evaluation apply:[14]

1. Whether the zoning proposal will permit a use that is suitable in view of the use of adjacent or nearby property within 3,000 feet of a military base, military installation, or military airport;

[14] The Official Code of Georgia Annotated

2. Whether the zoning proposal will adversely affect the existing use or usability of nearby property within 3,000 feet of a military base, military installation, or military airport;
3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;
4. Whether the zoning proposal will result in a use which will or could cause a safety concern with respect to excessive or burdensome use of existing streets, transportation facilities, utilities, or schools due to the use of nearby property as a military base, military installation, or military airport;
5. If the local government has an adopted land use plan, whether the zoning proposal is in conformity with the policy and intent of the land use plan; and
6. Whether there are other existing or changing conditions affecting the use of the nearby property as a military base, military installation, or military airport which give supporting grounds for either approval or disapproval of the zoning proposal

Local planning departments must include military responses in the process of evaluation by staff, planning/zoning boards and local elected bodies.

## 3.4 Federal Entities, Tools and Legislation

***United States Army Corps of Engineers (USACE)***
The USACE's mission is to "Deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters." The Department of the Army Regulatory Program is committed to protecting the nation's aquatic resources by maintaining balance between protection of resources and reasonable development and permit decisions. The Corps evaluates permit applications for all construction activities that occur in the water, including wetlands.

***National Marine Fisheries Service (NMFS)***
The NMFS is a federal agency that is responsible for the management, protection, and conservation of living marine resources and their habitat. Under the Marine Mammal Protection Act and the Endangered Species Act, the NMFS is able to recover protected marine species without unnecessarily impeding economic opportunity. The NMFS works with the USACE by making recommendations during the permit process for activities that require a section 10 or section 404 permit. The USACE is able to deny a permit if the NMFS finds that the action could cause adverse impacts.

***United States Fish and Wildlife Services (USFWS)***
The NMFS and USFWS work together to administer the Marine Mammal Protection Act. This act protects the marine animals within the waters of the US. This act prohibits people from taking marine mammals without a permit, including harassment, feeding, hunting, capturing, collecting, or killing. The USACE, NMFS, and USFWS are key players involved in dredge/fill activities and permitting the construction of new structures in SUBASE Kings Bay.

***United States Coast Guard (USCG)***
The USCG is one of five armed forces in the US. The Coast Guard has been safeguarding our nation's maritime interests and environment around the world since 1790. There are two USCG units in Camden County, the Maritime Safety and Security Team (MSST) located in St. Marys and Maritime Force Protection Unit (MFPU) at SUBASE Kings Bay. The USCG Marine Force Protection Unit (MFPU) began operations at SUBASE Kings Bay in 2007 with funding from the Navy and under the jurisdiction of

the Department of Defense. MFPU protects submarines in transit with consistent, continuous protection. There are160 USCG MFPU personnel on base and MSST has 80 personnel off base in the city of St. Marys.

***National Oceanic and Atmospheric Administration (NOAA)***

NOAA is traditionally recognized as the nation's authority on weather forecasting, but the NOAA Office of Coast Survey, within the National Ocean Service of NOAA, provides the nation with nautical charts. The production of the nautical charts for all coastal waters in the US and its territories includes updates to nautical charts that identify US Navy training areas. NOAA aircraft satellites and ships also collect survey data and climate change data to facilitate land use planning, coastal mapping, fisheries management and storm response.

***National Environmental Policy Act (NEPA)***

NEPA requires all Federal agencies to file an Environmental Assessment (EA) or, when necessary, an Environmental Impact Statement (EIS) for Federal actions that have an environmental impact. The EA and EIS processes are public processes that require participation of the community. NEPA requires the military to analyze its operations to determine effects on the environment and surrounding communities. Part of this analysis includes an exploration of methods to reduce any adverse environmental impact.

An EIS or EA is a valuable document for determining the potential impact of changing military actions or operations on their policies, plans, and programs. If an EIS or EA document is released by the military, a public hearing is required based on guidelines placed by NEPA. A Finding of No Significant Impact (FONSI) under an EA or EIS that considers alternatives to the proposed military actions or operations is required and is subject to public scrutiny.

***Department of Defense (DOD) Readiness and Environmental Protection Integration (REPI)***

In 2002-2003, Congress amended the National Defense Authorization Act to include REPI. This amendment gave the DOD authority to partner with other federal agencies, states, local governments, and private conservation groups/non-governmental organizations to cost share the acquisition of easements and other real property interests concerning land near military bases for conservation purposes and to prevent incompatible development to interfere with military operations.

CHAPTER
4

# Compatibility Evaluation

Military installations play a key role in national defense and serve as major economic engines by providing thousands of jobs and billions of dollars in economic activity. Incompatibility between civilian development and military operations, however, can lead to restrictions on military activities and can threaten public safety by exposing civilian populations to the potential impacts of military activities. *Incompatible civilian development* and *incompatibility* are two issues that the Department of Defense (DOD) works to mitigate with respect to military installations close to civilian populations. The DOD defines *incompatible civilian development* as land use activity and civilian development activity that adversely affects the utility of training and readiness missions of a military installation. *Incompatibility* is defined as external influences threatening or constraining to range and operating area activities required for force readiness and weapons research development, testing and evaluation. Incompatibility can include, but is not limited to, influences associated with endangered species and critical habitat, unexploded ordnance and munitions, electronic frequency spectrum, maritime restrictions, airspace restrictions, air quality, airborne noise, and urban growth.[15]

SUBASE Kings Bay is significantly different from the majority of military installations that have collaborated with communities through joint land use planning in that it does not have a military airport or a training range that is a source of noise which impacts the surrounding community. Conversely there is a nearby local airport that poses adverse impact to the base due to its proximity. Historically, the majority of JLUS efforts have addressed the impacts of noise associated with military jets and airplanes or training ranges. Though activities at SUBASE Kings Bay do not produce noise pollution that impacts the surrounding community, other compatibility factors have been identified. The topics that are of most concern to this study involve existing and potential land uses in the community, as well as the waterway that provides maritime access to the base. The categories of compatibility factors identified through the JLUS process include the following:

A. Land Use
B. Safety and Antiterrorism/Force Protection
C. Waterway Access and Capacity
D. Potential for Public Trespassing
E. Interagency Coordination
F. Community Housing and Economy
G. Potential for Noise/Vibration/Dust/Emissions
H. Community Infrastructure Capacity
I. Traffic and Transportation System
J. Legislative Initiatives
K. Education/Training Capacity
L. Threatened and Endangered Species
M. Natural Hazard Mitigation
N. Frequency Spectrum Capacity

[15] Department of Defense Office of Economic Adjustment

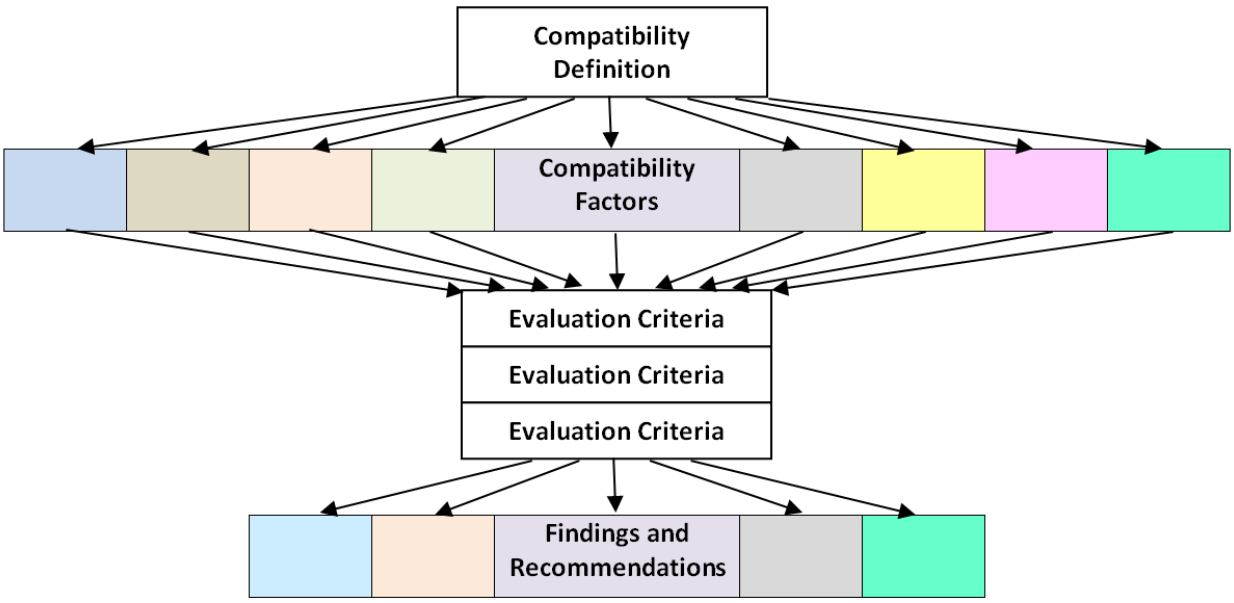
## 4.1. Methodology of Evaluation

A straightforward methodology was developed and confirmed early in the JLUS process for identification and for evaluation of compatibility factors. The following definition of compatibility informs the entire process.

> **Definition** – Compatibility involves the balance between community needs and interests and military needs and interests. From the military standpoint, incompatible civilian development is defined as land use activity and civilian development activity that adversely affects the utility or training and readiness missions of a military installation.
>
> *Reference: DOD Instruction 3030*

A wide range of potential compatibility factors was identified through the JLUS process of analysis and public involvement. Evaluation of each potential compatibility factor leads to determination of appropriate recommendations.

**Figure 4.1 Methodology of Evaluation**




In order to accurately evaluate the various potential compatibility factors, evaluation criteria must be determined and consistently applied. The evaluation criteria should be used to evaluate each compatibility factor help to determine whether there is a significant impact. The criteria used for evaluation of potential compatibility issues are described as follows:

- *Present/Current Impact* - The current significant impact of a compatibility factor on SUBASE Kings Bay or the surrounding communities with respect to sustainability of the base or the communities.

- *Location/Proximity* - The proximity of a compatibility factor to activities on the base or in the community. Issues that are near the base or near community activity areas are given high priority due to proximity, while factors that are more remote or distant are given low priority.

- *Potential for Future Impact* - The potential for future significant impact from a compatibility factor that does not pose a current issue and does not presently have proximity to wither the base or community activity.

## 4.2. Compatibility Factors

Compatibility factors were identified as those that either currently pose issues that should be addressed in the interest of compatibility, or factors that have potential to pose such issues in the future. Many of these factors are conditions that are a result of community development that interferes with military activity, or alternatively military activities that interfere with the surrounding community. These factors adversely affect military readiness and the community's quality of life.[16]

This section includes descriptions of potential compatibility factors and associated evaluation.

### *A. Land Use*

*Definition: Land use planning is implemented by local governments in order to protect the public safety, health, and welfare. One of the best ways to avoid compatibility issues in an area is through effective land use plans and zoning ordinances. These tools guide the logical development of the community, for example, separating industrial uses from residential uses in order to avoid impacts related to noise, traffic, and lighting.*

Decades of growth in Camden County, Kingsland and St. Marys has created development pressure on tracts of vacant land. A large number of vacant parcels within St. Marys and the county are in close proximity to SUBASE Kings Bay, or are entirely or partially within the 3,000 foot Georgia State Land Use Notification area. These vacant tracts require deliberate consideration by local governments when determining the type of development that is best suited. For example, the former Durango-Gilman Paper Mill site is currently vacant, and proposals put forth as potential plans for redevelopment have included a variety of uses and components. Some proposals have included port and shipping-related functions. This use would have the potential to increase maritime traffic in the waterway that also serves the installation. This is one example of many where development or redevelopment in close proximity to SUBASE Kings Bay has potential to adversely impact military mission and/or operations.

Collaborative land use planning enables Camden County's local governments to work closely together with the public and stakeholder entities, including the military, to establish policies that will preserve and protect the health, safety, and welfare of the community, including those living in close proximity to SUBASE Kings Bay. Additionally, smart land use planning principles and practices can achieve a balance among competing interests and, in the process, mutual support leading to desired outcomes.

According to the Camden County Joint Comprehensive Plan, the purpose of land use planning is to enhance the community's understanding of the geographic distribution of different land uses and determine the direction in which Camden and the cities should grow. The plan includes analysis of

[16] Practical Guide to Compatible Civilian Development Near Military Installations

existing land use patterns and current and future available public services and facilities. The analysis then explores the environmental issues and opportunities that are related to land development, resulting in a plan that serves as the blueprint for long range growth and development in Camden County and the cities. [17]

A key land use factor is the 3,000 foot Land Use Notification Area that was established by state law to mitigate incompatible land uses. There are a wide range of existing land uses inside the 3,000 foot Land Use Notification Area, including Agricultural Farmland, Commercial/Retail, Conservation Preservation, Residential, Planned Development, and Industrial.

## Developable Property Within 3,000 Feet of SUBASE Kings Bay

While the Land Use Notification Area and associated policies and procedures mandated by State Law provide for military review in cases where property is proposed for rezoning or similar action requiring local elected body review, there are circumstances in which development activity can occur within 3,000 feet of the SUBASE boundaries without requirement for coordination between the local government and SUBASE. This is the case with regards to building permits where rezoning or variance is not required. Also, there is no requirement for coordination and review when a new business is proposed to occupy either an existing or new building in the area by means of Occupational Tax License application. An enhanced process of coordination between local governments (specifically St. Marys and Camden County) and SUBASE Kings Bay does exist in an informal sense, as it is currently the practice of the respective planning departments of the City and County to notify and then consult with SUBASE Kings Bay, as needed, whenever it is considered a proposed development or infrastructure project may adversely impact or pose a risk to base operations. Expanding the scope of review and maintaining a high level of coordination is considered, by both SUBASE personnel and local government staff, to be mutually beneficial.

## Developable Property Outside 3,000 Feet of SUBASE Kings Bay

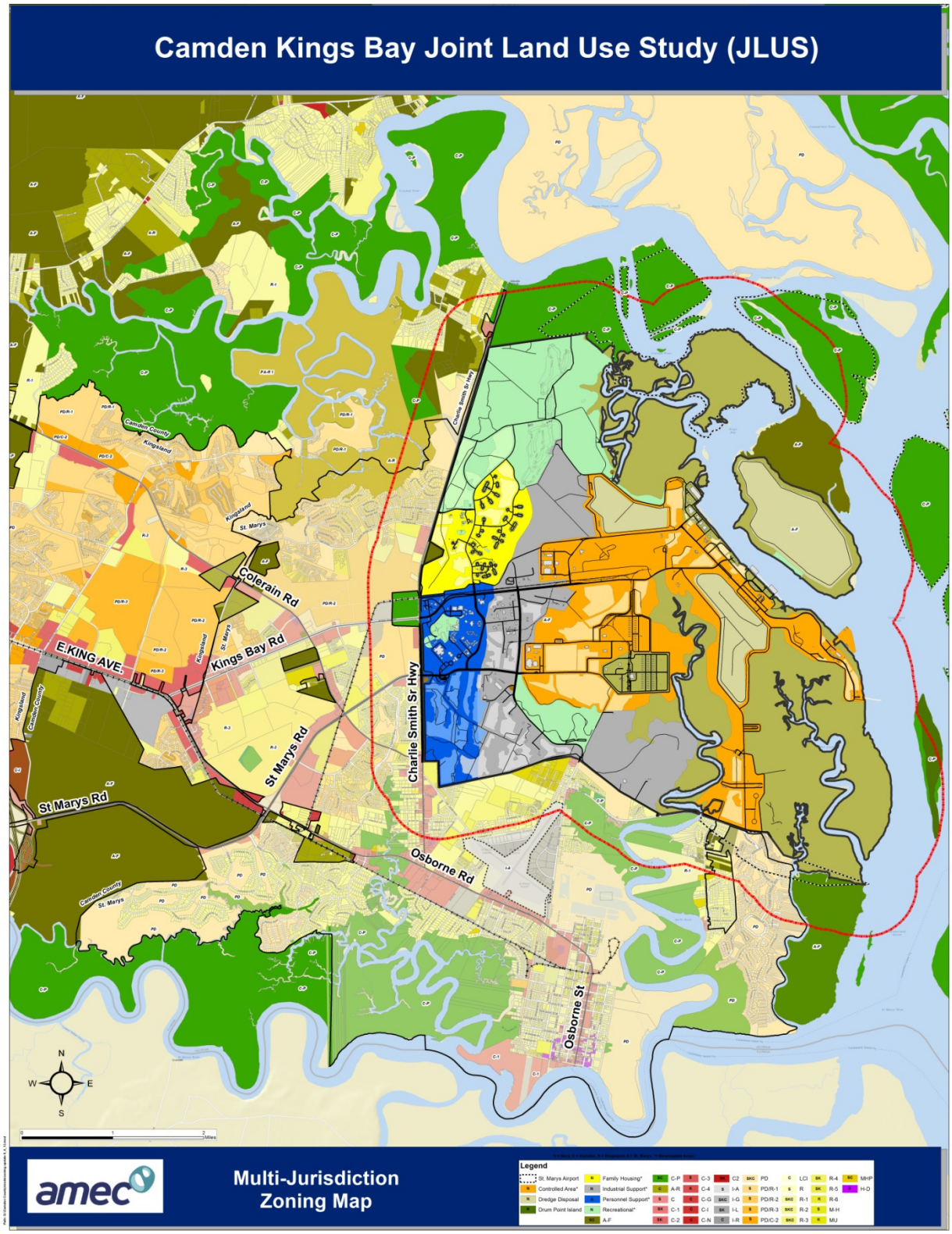
As described in Chapter 2 there are several large areas of undeveloped property in the vicinity of SUBASE Kings Bay. Development (or redevelopment in some cases) of any one of these properties has the potential of compatibility implications. In some cases, these properties (all or part) are within the 3,000 foot Land Use Notification Area. However, others are not, and the development/redevelopment options for these are significant.

The site of the former Durango-Gilman Paper Company remains vacant and is being actively marketed for redevelopment. This site is in close proximity to SUBASE Kings Bay and has waterfront access, therefore the type of development, land uses, use of the waterway and nature of structures that result from redevelopment are of significance to compatibility. The northern edge of the site located just beyond 3,000 feet from the SUBASE boundary.

Relocation of the St. Marys Airport is an official policy of the City of St. Marys. Detailed discussion of airport relocation is included in the next section under the heading of Safety and Anti-Terrorism/Force Protection. With regards to land use, however, it is a fact that at the point in time when the airport property is no longer used for airport purposes, it will effectively be a large redevelopment site in a favorable location. Similar to the Durango-Gilman site, redevelopment of this property has potential compatibility implications. Only a few acres of airport property at the northern most edge are located within 3,000 feet of the SUBASE boundary.

[17] Camden County Joint Comprehensive Plan

## Figure 4.2 Multi-jurisdictional Zoning Map



## Figure 4.3 Natural and Environmental Conditions

## Figure 4.4 Large Vacant/Undeveloped Properties

### B. *Safety and Anti-Terrorism/Force Protection*

*Definition: Safety refers to the potential for accidents with damaging consequences. Anti-Terrorism/Force Protection refers to defensive measures that reduce the vulnerability of individuals and terrorist attacks and the preventive measures taken to mitigate harmful actions against DOD personnel, resources, facilities, and critical information. (Department of Defense)*

***St. Marys Airport***

The St. Marys Airport was constructed by the federal government during World War II as a Navy Flight training facility. At that time, the airport had three runways in a triangle configuration co-located on a 462-acre piece of property. After World War II, the ownership and airport improvements were given to the City, and federal government leases were terminated. A portion of the airport land was determined a surplus for airport needs and was released by the FAA.

Today the St. Marys Airport property is located approximately one-half mile of the southern boundary of SUBASE Kings Bay. Immediately after September 11, 2001, the airspace around the airport was closed for three months as a safety precaution. Once the airspace was re-opened, Temporary Flight Restrictions (TFR) were implemented over SUBASE Kings Bay. These restrictions severely impaired airport operations and have effectively eliminated any future expansion opportunity. The Department of Defense made a formal request to turn the TFR into a permanent Prohibited Area which was formally approved.[18]

The St. Mary's Airport presents a security concern to SUBASE Kings Bay. In addition to the general concern of the very close proximity of the airport to the military installation, runway 04-22 is oriented SW-NE such that the normal approach glide path from the NE extends directly over sensitive areas of SUBASE Kings Bay. Since September 11th, security has been heighted in order to prevent planes from flying over the base. There is a 3,000 foot prohibited airspace zone over a large portion of SUBASE Kings Bay, and there are documented instances of violations linked to the St. Marys airport. Over the last ten years, there have been airspace intrusions (as recently as March 28, 2014) as well as plane crashes in the vicinity. Due to the sensitive nature of security at SUBASE Kings Bay, not only are intrusions dangerous, they also have the potential to compromise military operations. As an example, there were documented incidences of skydivers associated with a business formerly based at the St. Marys Airport accidentally landing on SUBASE property. These skydivers were at great risk, and the circumstance heightened safety concerns at SUBASE Kings Bay. These concerns have been communicated to the City of St. Marys in several official letters over the course of many years.

Safety issues associated with the airport's current conditions are not only an issue for SUBASE Kings Bay, but also for the civilians who use the airport. The current conditions of the runways require upgrades and renovations in order to adequately serve pilots for more than the minimal level of air traffic currently experienced. Trees outside of the airport property have grown to heights that impact approach patterns and require displaced thresholds. And the level of security at the airport is also an issue of concern. The lack of security enabled vandals to damage runway lights in 2013. Current proposals to upgrade security by adding fencing to the airport include only partial fencing due to associated cost and terrain.

[18] City of St. Marys Environmental Assessment

Relocation of the St. Marys Airport is the official policy of the City (with the caveat that the relocation must be at no cost to the City) and the intent for airport relocation has been documented in the Georgia Aviation System Plan and the National Plan of Integrated Airport Systems. Following completion of an airport relocation study, the City of St. Marys worked with GDOT and FAA to complete an Environmental Assessment (EA) to support airport relocation. The EA was approved in 2007 and has been subsequently extended, though the current EA is scheduled to expire in 2014. According to the EA, there are three potential relocation sites for the St. Marys Airport. Site One, the preferred site, is located approximately three miles south of Woodbine and 6.5 miles north of Kingsland. This site has easy access to both US 17 and I-95 and is in close proximity to the Seaboard Coast Line main railway. Site Two is located approximately one-quarter mile east of I-95 and north of Harriet's Bluff Road. The majority of site two is bordered by pine forest with little development. This site is currently owned by multiple property owners and is vastly larger than the amount of land required for airport relocation. Site Three is located approximately three miles west of US 17, five miles west of I-95, and one mile south of SR 40. Pine forest and forested wetlands primary border the site, and sparse residential and commercial development exist in close proximity to the site. Listed below are the major elements associated with implementing the Proposed Action Plan in the EA[19]:

- Acquisition of approximately 525 acres of property for airport development
- Associated site clearing and grading for construction of improvements
- Construction of approximately 1,500 square feet of public use space including restrooms, conference area, and pilot's lounge
- Construction of a primary runway measuring 6,000 feet in length by 100 feet in width, with associated 20-foot asphalt paved shoulders
- Construction of a full length parallel taxiway to the primary runway
- Installation of medium intensity runway lights and medium intensity taxiway lights for the proposed airfield
- Installation of Runway End Identification Lights (REILS), rotating beacon, Precision Approach Path Indicator (PAPIs), segmented circle, and other navigational aids as required
- Installation of runway exiting, taxiway hold position signage, and runway/taxiway markings
- Installation of all required erosion and sedimentation control measures
- Apply sod and seed to affected areas
- Environmental permitting and mitigation, as required
- Installation and/or relocation of associated utilities

An alternative option for airport relocation is being explored by the City of St. Marys in conjunction with study of potential development of a Spaceport north of the Crooked River in Camden County. Camden County is currently working with the FAA and other partners to prepare the Environmental Impact Statement (EIS) that will be required prior to Spaceport development. While the Spaceport development (vertical launch) may ultimately include a runway which could accommodate general aviation traffic (horizontal launch), it is yet uncertain whether, in fact, relocation of the St. Marys Airport to the proposed Spaceport site is a feasible alternative.

***Line of Sight Issues***

In the context of compatibility with regards to safety and anti-terrorism/force protection, "line of sight" refers to the potential for an individual located on a tall structure in the vicinity of SUBASE to obtain a vantage point or direct view into the base in such a way that a security threat may result. There are several tower structures in St. Marys and Camden County in the general vicinity of SUBASE Kings Bay,

[19] Replacement St. Marys Airport Environmental Assessment

some of which are in close proximity to the base boundaries. At this time, only one existing tower structure is considered to be of potential concern/threat to security. The Cumberland Harbour water tower, located at the northern edge of the Cumberland Harbour development, is directly adjacent to the base fence line. Though there are no sensitive facilities located on SUBASE property near the tower, there is potential for the tower platform to provide a vantage point with line of sight deeper into the base, particularly given the potential for the tree canopy on the base to be impacted by storm.

There are several physical and procedural security measures in place for the Cumberland Harbour water tower. The tower site is fenced and is located adjacent to a St. Marys fire station. Additionally, it is the practice of the City of St. Marys staff to notify SUBASE Kings Bay security personnel when there is need for authorized personnel to access the tower for maintenance or other reason. These physical and procedural factors do not preclude unauthorized access of the tower's vantage point nor eliminate security and compatibility risks.

### *C. Waterway Access and Capacity*

*Definition: The accessibility of waterways and the quantity of maritime traffic that waterways are able to accommodate.*

The Cumberland Sound is the means of egress for submarines transiting between SUBASE Kings Bay and the Atlantic Ocean. The Army Corps of Engineers performs frequent dredging projects in the Cumberland Sound to maintain the channel's authorized dimensions, with a new dredging effort planned as recently as 2013. The Kings Bay SUBASE Navigation channel cuts through Cumberland Sound and the St. Marys entrance channel. The Navy contracts through the Army Corps of Engineers for annual maintenance dredging of the channel. Continuation of annual maintenance dredging is a critical need to maintain ocean access for SUBASE Kings Bay to achieve mission objectives.
The Port of Fernandina realizes great benefit from Navy dredging efforts that maintain the channel for SUBASE requirements. The Navy requirements for channel dimensions exceed the requirements for commercial shipping vessels transiting to and from the port. And at present the port has excess capacity compared with recent levels of shipping activity (approximately 150 vessels per year). With planned investments to expand Port of Fernandina capacity by expanding berth and warehousing capacity, the port's capacity is projected to reach 375 vessels per year, which compares with current capacity of 300 vessels per year.

In terms of combined use of the channel for military and commercial shipping use, it is estimated that the channel is occupied for approximately 1 percent of its availability. Commercial vessels yield to Navy and Coast Guard vessels without negative impact on either Navy mission or on the efficiency of port operations. And from the standpoint of security, the Military Force Protection Unit (MFPU) of the USCG, responsible for escorting submarines, does not consider the current level of maritime traffic in the waterway to be problematic.

Recreational boating is prominent in the Cumberland Sound, St. Marys River, and broader Intracoastal Waterway. Area marinas, boat launches and homes with water frontage facilitate frequent recreational boating activity in locations near SUBASE Kings Bay. The recreational boating activity has potential to interfere with military security and operations. Though the MFPU does not consider the present level or nature of recreational boating activity to be problematic, it is in the best interest of SUBASE Kings Bay mission and operations to monitor the level of recreational boating in the waterway, and the development of marinas and other facilities expected to increase boating levels. Specifically, this includes the currently permitted plans of the Cumberland Harbour developer to construct two marinas and one

## Figure 4.5 Waterways Cumberland Area

dry boat storage facility with total estimated capacity for boats. This marina development effort, the largest identified in the vicinity, would ultimately impact the level of maritime traffic in the waterway, but is anticipated to be a phased development over many years that may not reach full capacity, depending on market support for the marinas.

Use of the waterway in the vicinity of Cumberland Island has the potential to affect natural resources through the physical effects of grounding, anchoring, and wake damage. Traffic near Cumberland Island consists mainly of naval traffic to and from SUBASE Kings Bay, vessels using the commercial shipping lanes, and recreational craft. Channel management through dredging activities has environmental implications which are assessed on a regular basis. And maritime traffic of all types (military, commercial and recreational) is linked to fuel discharge and other spills. As an example, approximately 80% of spills associated with SUBASE Kings Bay involved fuel oil, gasoline, or hydraulic fluid according to Georgia EPD in 2004. [20] Long-term management of the Cumberland Sound should address environmental conditions and impacts as well as management of channel dimensions and capacity.

In order to reach the Atlantic Ocean from Kings Bay, vessels must use the only exiting route through the Cumberland Sound. An alternate route to the Atlantic north from Kings Bay has not been considered viable in the past due to the distance and extensive dredging requirements, among other factors, such as cost. However, it remains the case that a blockage of the existing channel to the Atlantic could disrupt military and commercial shipping traffic, and that an alternate route is not available. Consideration should be given to effective contingency planning.

### *D. Potential for Public Trespassing*

*Definition: Unauthorized unintentional trespassing onto SUBASE Kings Bay property where access is restricted.*

There is not a potential for accidental public trespassing onto SUBASE Kings Bay due to sign posting, effective fencing, and security patrols along much of the base perimeter. SUBASE Kings Bay security and military forces employ a variety of measures to ensure trespass onto the installation is precluded.

### *E. Interagency Coordination*

*Definition: Relates to the frequency of communication, coordination, and collaboration among local jurisdictions, the military, state and regional agencies, and other entities to resolve compatibility issues.*

Camden County and the Camden County Joint Development Authority are studying the potential for development of a Spaceport on property located north of the Crooked River on a parcel formerly owned by Union Carbide Corporation. This location would serve as a functioning spaceport and has also been discussed as a potential relocation site for the St. Marys Airport (though is not one of the alternative sites considered in the St. Marys Airport Relocation Environmental Assessment). The site includes more than 4,000 acres of land, a small private airfield, and various other existing facilities.

[20] Assessment of Coastal Water Resources and Watershed Conditions at Cumberland Island National Seashore, Georgia

Proactive economic development is vital to the future of the Camden County community. Coordinated economic development initiatives that result in expansion and diversification of the local economy are important for sustainable future of the local community and SUBASE Kings Bay. However, it is critical to ensure that proposed economic development initiatives such as the Spaceport do not pose compatibility concerns with respect to SUBASE Kings Bay. A high level of interagency coordination in the early stages of the Spaceport initiative, as in any similar initiative, can help to identify and address potential compatibility issues when appropriate.

### *F. Community Housing and Economy*

*Definition: The ability of the local housing stock, in terms of availability and affordability, and the local economy, in terms of employment opportunities, to support the needs of military personnel in the community.*

Currently, Camden County has adequate housing opportunities for the civilian and military populations. According to the United States Census Bureau, over 55% of owner occupied housing in Camden County has monthly housing cost less than $1,500. Calculated monthly housing cost is derived by from a distribution of "selected monthly owner costs" and "gross rent." Monthly owner costs are a calculation from the sum of payment for mortgages, real estate taxes, various insurances, utilities, fuels, mobile home costs, and condominium fees. Gross rent includes the cost of the contract rent plus the estimated average monthly cost of utilities and fuels. Based on the median income of the civilian and military population, and factoring in the availability of some on-base housing, the availability of convenient and affordable housing is not a serious issue at this time. However, the local housing situation can change due to the fluctuations in the real estate market and other factors. For example, the potential for changes in the cost of flood insurance through the National Flood Insurance Program (NFIP) has fluctuated as the 2012 Biggert-Waters Flood Insurance Reform Act (Biggert-Waters) was expected to have a significant impact on the cost of housing in Camden County for homeowners in identified flood hazard areas, then subsequently the Homeowner Flood Insurance Affordability Act of 2014 repealed and modified portions of Biggert-Waters in the interest of helping families maintain affordable flood insurance. The future of flood insurance affordability remains uncertain, and strategies to address this issue and its potential impact on housing cost are being pursued by St. Marys and Camden County through the FEMA Community Rating System (CRS). Other strategies to lower housing costs for military families should be explored as well.

There is potential in Camden County to recruit new businesses to benefit the local community and SUBASE Kings Bay by enhancing economic diversity and providing local jobs. Many military families rely on a second income from the private sector to balance household budgets. Increasing opportunities in the Camden County economy will enhance the sustainability of both the community and SUBASE.

### *G. Potential for Noise/Vibration/Dust/Emissions*

*Definition: Military actions and operations that have potential to create adverse affects through noise, vibration, dust, and emissions.*

Prescribed burnings are organized to allow base personnel to keep up with the management of timber and underbrush on SUBASE Kings Bay and reduce risk of wildfires. Prescribed burning allows the base

to remove undesirable trees and underbrush while allowing the desirable tree species to continue to grow.

In the civilian environment, prescribed burning is a priority in the implementation of the State Wildlife Action Plan to improve wildlife habitat, and is a valuable tool used by land managers, timber growers, and the Georgia Forestry Commission. The Right to Burn Act defines prescribed burning as "controlled application of fire to existing vegetative fuels under specific environmental conditions and following appropriate precautionary measures, which causes the fire to be confined to a pre-determined area and accomplishes one or more planned land management objectives or to mitigate catastrophic wildfires."

Prescribed burning on SUBASE Kings Bay is performed in accordance with the installation's Integrated Natural Resources Management Plan (INRMP). The SUBASE Kings Bay INRMP guides base personnel to implement an ecosystem-based conservation program that provides for conservation and rehabilitation of natural resources without conflict of military missions.

While prescribed burning is a beneficial management tool, there are some issues that should be addressed when using this management tool. Smoke from burning on the installation can carry into residential areas on and near the base, depending on wind conditions. It is important to continue to inform the public and on-base personnel in advance of prescribed burns and communicate the fact that timber stands on SUBASE Kings Bay require periodic maintenance, and that neglect of periodic maintenance is a threat to military missions and to the sustainability to the forest and wildlife resources.

### *H. Community Infrastructure Capacity*

*Definition: The availability and capacity of local infrastructure that serves the military installation and improvements and investments needed to meet projected demand and needs.*

There are many aspects of local community infrastructure that extend to SUBASE Kings Bay. In addition to the local transportation system, electrical power transmission lines, telecommunications transmission lines and railroad extends into SUBASE from the community. Other infrastructure systems, such as water and wastewater treatment, are self-contained on the installation. SUBASE has capability to operate independent from utility systems that extend from the community for a substantial amount of time due to backup systems, including capacity for on-base backup power generation. The exception to this capability is railroad infrastructure and roadways, in which case SUBASE relies on non-military infrastructure.

The St. Marys railroad is a privately owned railroad that connects to mainline rail that extends north-south through Camden County parallel to US Highway 17. St. Marys railroad has historically served the industrial businesses in St. Marys, notably including the Durango-Gilman paper mill which no longer exists. Now that majority of those industries are closed, the St. Marys railroad's largest customer by far is SUBASE Kings Bay. The reduction in customer base has coincided with escalation of cost for SUBASE to use the St. Marys railroad. Today, the railroad use is highly expensive to SUBASE, and the trajectory of rail cost is not economically sustainable. This short rail is part of STRACNET, Strategic Rail Corridor Network, which is a nationwide, interconnected continuous rail line network serving more than 130 defense installations (SUBASE Kings Bay being one of those). A disruption in rail service has the potential to affect the SUBASE mission.

### *I. Traffic and Transportation System*

*Definition: Land transportation infrastructure that provides critical connectivity between community and military installation.*

In order to prepare for future transportation infrastructure needs across Camden County, an acceptable local roadway Level of Service (LOS) needs to be maintained. Currently, the primary roadways in the vicinity of SUBASE Kings Bay have adequate traffic flow and acceptable LOS. The preservation of LOS is aided by the access limitations that apply to major roadways such as St. Marys Road, Charlie Smith Sr. Highway and Kings Bay Road. There is, however, potential for an increase in traffic congestion to result from community growth in the future. Growth management and planned maintenance and enhancement of the transportation system can play a major role in maintaining acceptable LOS well into the future.

As Camden County is located on the coast of Georgia, the potential for hurricanes poses a serious potential threat to the community. State Route 40 is one of the major routes used during an emergency evacuation. This poses a problem due to its low capacity level, particularly west of Kingsland. Additionally, during an emergency evacuation, there may be requirement for military personnel to quickly reach the base from the surrounding community using the same routes on which civilians evacuate. Major congestion during an evacuation event would hinder both military personnel and civilians. Changes to evacuation routes are forthcoming as a result of cooperative efforts of Camden County and GDOT.

At the level of immediate access to SUBASE Kings Bay, there are five gates to the base from the community road system, four of which are open. As a result of the south gate closure, accessibility to downtown St. Marys businesses and neighborhoods has been reduced. Consideration of reopening this gate involves financial and security factors, but is an interest of the City of St. Marys due to potential to help local business and shorten commutes.

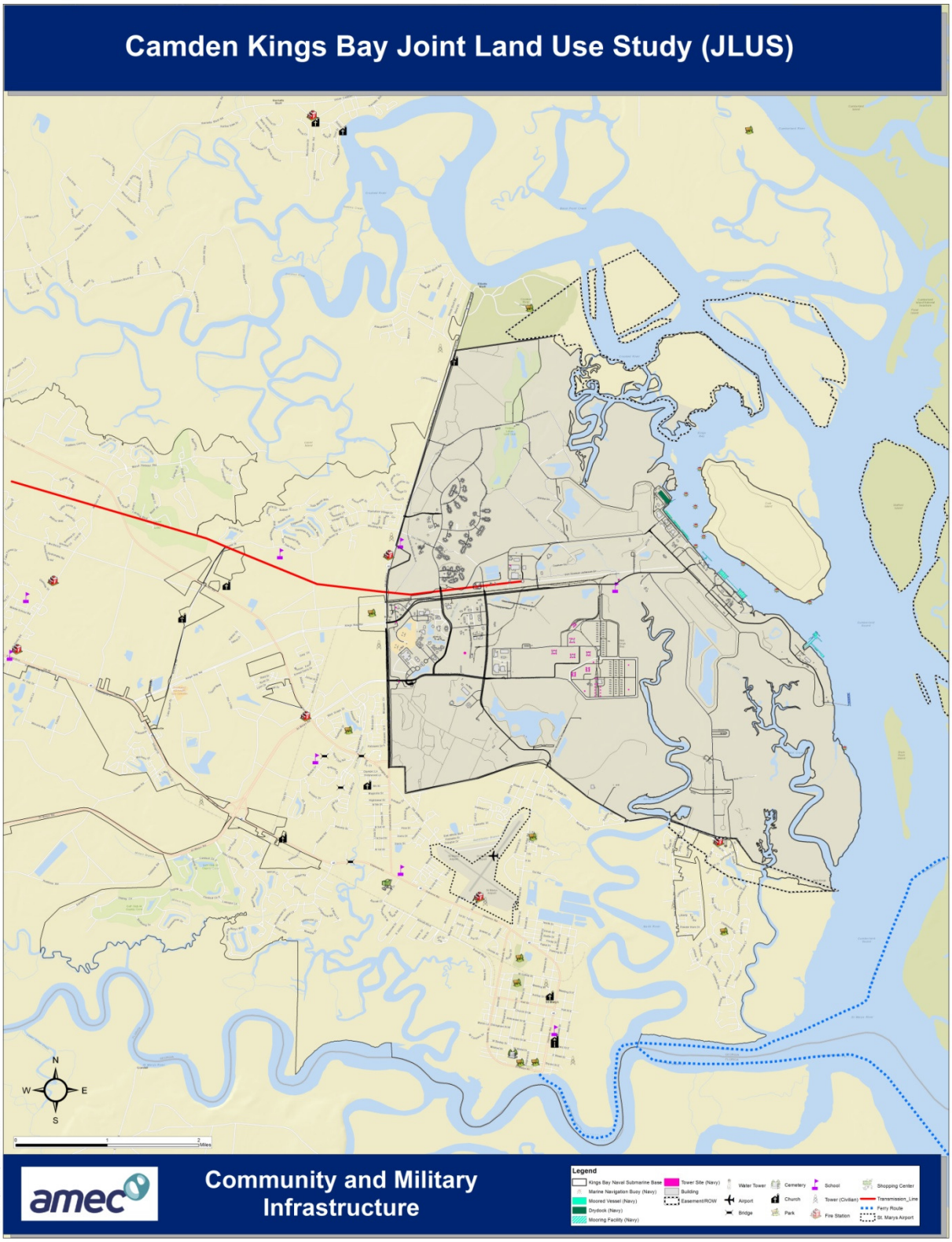
### *J. Legislative Initiatives*

*Definition: Legislation by the federal or state government intended to address compatibility.*

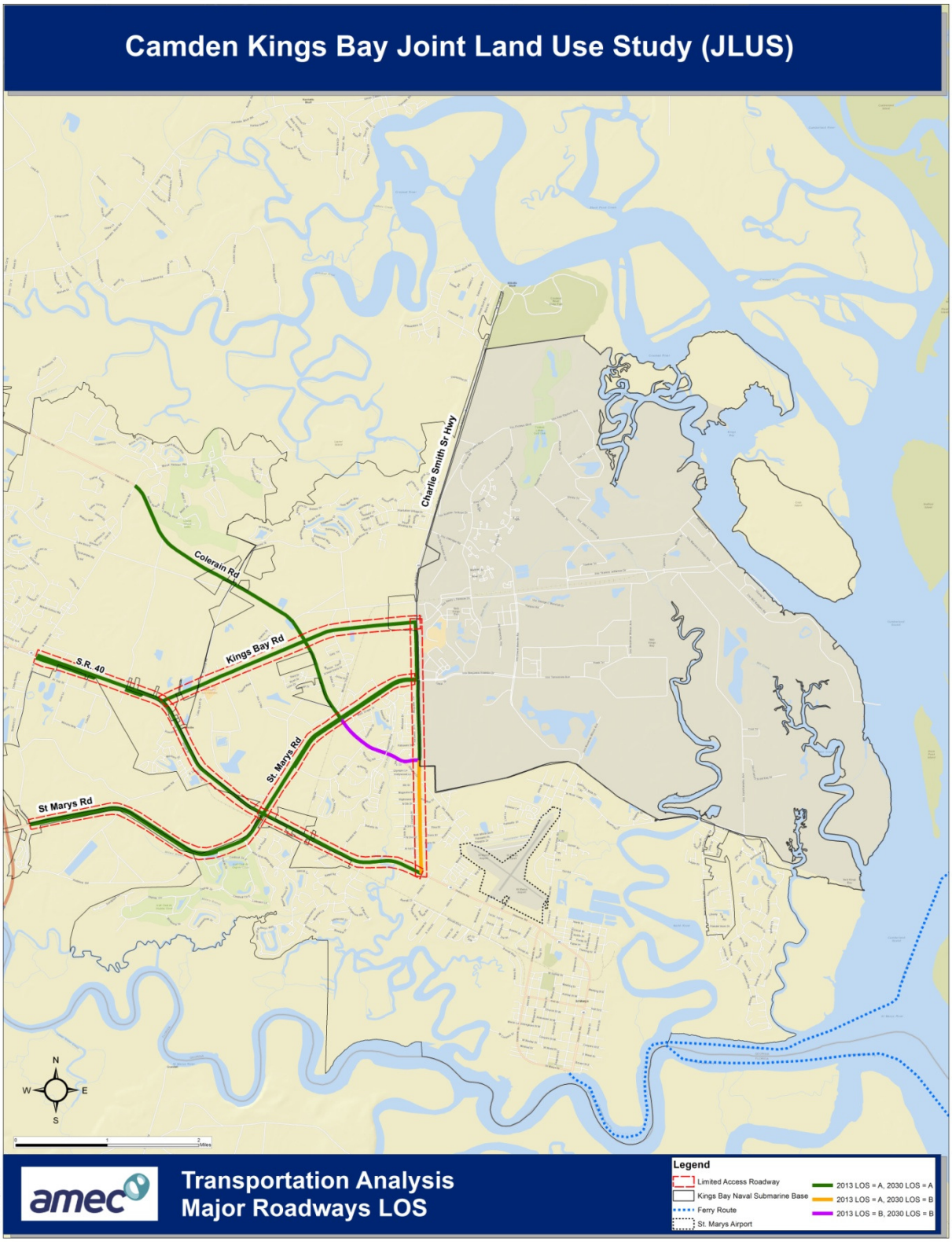
The most prominent state-level legislative initiative that pertains to the JLUS analysis for compatibility of community development and SUBASE Kings Bay is the Military Land Use Notification Area that is documented as Official Code of Georgia Annotated (OCGA) §36-66-6. This state requirement created a requirement for local communities to seek military review of land use and zoning actions in response to identified needs to address land use issues near military installations in Georgia. This review coordination is required within a defined perimeter surrounding military installations, specifically 3000 feet from SUBASE Kings Bay boundary.

As applied to SUBASE Kings Bay, proposals for eligible land use or zoning actions that involves land within 3,000 feet of SUBASE boundaries must receive review by SUBASE prior to local government action. This includes properties in St. Marys and unincorporated Camden County. Procedurally, St. Marys and Camden County planning directors provide notification and information to the SUBASE Kings Bay CO and allow the required amount of time for review, prior to proceeding with local review. SUBASE Kings Bay has the option to either not comment on the proposal or to provide a written response/recommendation with supporting facts relating to the use of land being considered. It is the consensus of community officials in St. Marys, Camden County and of executive officers and staff at SUBASE that the process associated with the Military Land Use Notification Area effectively promotes coordination and addresses land use compatibility issues within 3,000 feet from SUBASE boundaries. Additionally, it has become standard practice for planners in St. Marys and Camden County to seek SUBASE input about land use related issues beyond the 3,000 foot perimeter.

## Figure 4.6 Community and Military Infrastructure



## Figure 4.7 Transportation Analysis



### K. Education/Training Capacity

*Definition: The capacity of education and training institutions to adequately serve Camden County's population and needs of military personnel and families.*

Camden County currently is home to an Altamaha Technical College (ATC) satellite campus. ATC offers more than 80 Associates degree, diploma and certificate programs, as well as fifteen Adult Support Centers which helped more than 700 people earn their GED last year. Additionally, ATC offers economic development support by helping employers hire employees that meet identified needs.

It is the opinion of a wide range of community leaders, with strong interest from SUBASE Kings Bay, that expansion of post-secondary education opportunities in Camden County is both a significant need and a key opportunity. Due to the highly technical nature of much of the activity at SUBASE Kings Bay and the aging civilian workforce, enhanced capacity to provide technical education locally will greatly benefit the community and military.

### L. Threatened and Endangered Species

*Definition: Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined to constitute a pest.*

Of the many threatened and endangered species known to inhabit the Coastal Georgia region, three species are known to have habitat on SUBASE Kings Bay or in the immediate vicinity: the West Indian Manatee, the North Atlantic Right Whale and the Gopher Tortoise.

***West Indian Manatee***

The West Indian Manatees are protected by the Endangered Species Act and Marine Mammal Protection Act. Human-caused threats pose the greatest threat to this species. [21] Manatees are found in coastal marine, brackish, and freshwater habitats. The selection of habitat by Manatees is based on different factors such as food, water, temperatures, and freshwater resources. Manatees congregate near sources of warm water and sometimes in groups numbering as many as one hundred.

The West Indian Manatee is divided into two subspecies: the Florida and the Antillean. The Florida subspecies are found throughout the southeastern US and within close proximity to SUBASE Kings Bay. The exact population for the West Indian manatee is unknown; however, a count of 5,076 Florida manatees was recorded in a January 2010 synoptic survey of warm-water refuges by the Florida Fish and Wildlife Conservation Commission.

When aquatic construction takes place, there are ten conditions and procedures that the permittee should comply with when there are manatees known to be present in the construction area. These extensive procedures and additional procedures are followed by Navy personnel at SUBASE Kings Bay on a routine basis. Also, SUBASE Kings Bay has manatee prop guards on boat outboard motors, stern drive units and sea tractor thrusters. Other manatee protection measures at SUBASE Kings Bay include personnel turnover training and dive watches during dewatering of drydock.

[21] US Fish and Wildlife Service

### ***North Atlantic Right Whale***

The North Atlantic Right Whale is the most critically endangered large whale species in the world, with an estimate total population of 300 to 400 whales remaining in the wild. Currently, there is a recovery plan for right whales in effect. The primary sources of injury and mortality in right whales include entanglement in fishing gear and ship strikes. Research has shown that over 85 percent of strikes occur at vessel speeds of 10 knots or greater, and this percentage increases as speed increases.

The North Atlantic Right Whale habitat ranges from southeastern US coastal waters to the feeding grounds in New England waters and the Canadian Bay of Fundy, Scotian Shelf, and Gulf of St. Lawrence. The coastal waters of the southeastern US, off the coasts of Georgia and northeastern Florida, are the only calving grounds in the world for the North Atlantic Right Whale.

### ***Gopher Tortoise***

The Gopher Tortoise is the land-based endangered species with habitat in the Camden County area. In July, September, and October 1996, gopher tortoise surveys were conducted by the Columbus State University through a cooperative agreement with the Georgia Natural Heritage Program (GNHP). This survey determined that there were 21 locations with 315 gopher tortoise burrows on SUBASE Kings Bay. The DOD and the USFWS developed a *Memorandum of Agreement for the Conservation of the Gopher Tortoise in its Eastern Distribution.*[22] The Candidate Conservation Agreement (CCA) for the gopher tortoise was developed as a cooperative effort among state, federal, non-governmental, and private organizations. The goal of this CCA is range-wide conservation and management and cooperation and collaboration. [23] It is reported that Gopher Tortoise habitat is also found on the St. Marys Airport property, but studies have not been performed to provide confirmation.

## ***M. Natural Hazards Mitigation***

*Definition: Hazard mitigation is the broad scope of planning, policies and procedures intended to reduce the negative impact of natural disasters on communities and people.*

Both Camden County and SUBASE Kings Bay have engaged in hazard mitigation planning to anticipate the potential impacts of natural hazards, such as hurricanes, and to identify measures to improve resiliency. A wide range of potential natural hazards are addressed in these plans, and recommendations for implementation are provided. A key aspect of effective hazard mitigation is inter-agency coordination, and future updates to hazard mitigation plans will provide opportunities for Camden County (and municipalities) to involve SUBASE Kings Bay in coordinate planning efforts. It is anticipated that Camden County will update the countywide hazard mitigation plan in the near future to meet the 2015 deadline for plan update established by FEMA and GEMA. In this update, specific attention should be paid to the resilience of communications systems in emergency situations. Interviews with SUBASE Kings Bay IT/Communications specialists identified a concern that though SUBASE communications infrastructure and systems are resilient, community communications infrastructure may not be adequately resilient, suggesting risk of communications failures in the event of an emergency that could negatively impact SUBASE personnel as well as the general public.

Due to the general low topographic elevation of much of Camden County, the issue of sea level rise is of great importance. The City of St. Marys is currently in the early stage of a major study of the potential impacts of projected sea level rise on the community and flood hazard risks and mitigation

[22] Integrated Natural Resources Management Plan Naval Submarine Base Kings Bay Kings Bay, Georgia
[23] Candidate Conservation Agreement for the Gopher Tortoise Eastern Population

measures, working in coordination with the University of Georgia and funded by the National Oceanic and Atmospheric Administration (NOAA) Sea Grant program. The results of this two-year study are expected in 2015 in which a flood resiliency plan will be developed for St. Marys.

### *N. Frequency Spectrum Capacity*

*Definition: Frequency spectrum impedance and interference refers to the interruption of electronic signals by a structure (impedance) or the inability to distribute or receive a particular frequency because of similar frequency competition (interference).*

Frequency spectrum impedance refers to an interruption of electronic signals by one or more structures. Frequency spectrum interference refers to an inability to distribute and/or receive a specific frequency due to similar frequency competition. In either case, with regards to a military installation and its mission, reduced access to the frequency spectrum has the potential to limit the effectiveness of military communications.

Some bases with different missions, physical circumstances and surroundings have encountered spectrum interference issues. These commonly involve the impact of military or major civilian airport communication activities, with other factors contributing. The types and extents of spectrum interference that have posed issues at other military installations have not been an issue at SUBASE Kings Bay. In the past, there were microwave communications transmitters and receivers on SUBASE Kings Bay at approximately 220-feet height that required a clear, direct line to distant microwave receivers and transmitters. These microwaves have been retired, however, and will not be reactivated.

SUBASE Kings Bay does not currently have concerns about frequency spectrum impedance or interference. The frequency spectrum issues to be addressed from time to time by SUBASE Kings Bay are those that pertain to easement requests from commercial communication providers. The technology of communication, however, changes over time and ongoing monitoring of the effectiveness of essential communications infrastructure is important.

CHAPTER
5

# Findings and Recommendations

The Findings and Recommendations section, including the JLUS Implementation Plan, has been developed through a cooperative effort of local jurisdictions, SUBASE Kings Bay, local stakeholders and citizens. The narrative description of findings and recommendations is organized in a manner consistent with the compatibility evaluation in Chapter 4. The table of findings, recommendations, and action strategies at the end of this chapter is the JLUS Implementation Plan.

Recommended strategies are suggestions for appropriate actions to ensure compatibility and support of the mission and operations of SUBASE Kings Bay. Additionally, the recommendations are intended to aid in the economic and community development efforts of Camden County and its municipalities.

## 5.1 Findings and Recommendations

This summary description of findings and recommendations is organized by headings of compatibility factors categories that are consistent with section 4.2. Most categories include multiple compatibility factors, each of which is described with related summary of findings and associated recommendations, as well as indications of advantages and potential disadvantages of recommendations.

Each recommendation in the implementation plan is also categorized by type of action (SCORE):

**S**: Study or plan that would need to be developed
**C**: Communication or coordination
**O**: Ordinance or legal requirement that would need to be formulated
**R**: Resume or continue existing methods or procedures
**E**: Entity, group or body responsible for monitoring or future planning/compatibility reviews

### A. Land Use

Consideration of land use-related compatibility factors recognizes the importance of land use planning, land use regulations (e.g. zoning), and associated policies and procedures that guide the regular activities of local government staff who are engaged in planning and zoning administration. Findings and recommendations pertaining to land use as described below have a specific relationship to the Georgia state-mandated Military Land Use Notification Area (all land within 3,000 feet from the SUBASE Kings Bay boundary), which is currently a key driver for coordination between local governments (specifically Camden County and St. Marys) and SUBASE Kings Bay.

## ***Developable Property inside Land Use Notification Area (3,000' of SUBASE Kings Bay Boundary)***

### ***Summary of Findings***

Peripheral property outside of the SUBASE Kings Bay boundary (property line/fenceline) is either within the jurisdiction of the City of St. Marys or Camden County. Proposed changes to zoning within 3,000 feet of the SUBASE boundary (Military Land Use Notification Area) requires coordination with SUBASE per Georgia state law. This has established an effective process to address compatibility issues that can arise from development proposals that are inconsistent with existing zoning. There is, however, potential for local property development actions that do not require notification or review to result in compatibility issues. While existing zoning within 3,000 feet of SUBASE is generally compatible, compatibility issues might result from permitted development of land due to existing zoning regulations (e.g. land use, line of sight related to structure/building height, and cell tower standards). Modifications to local ordinances and expanded coordination can address these potential compatibility issues.

### ***Summary of Recommendations***

*A-1. Amend St. Marys Zoning Ordinance and Camden County UDC to similarly address "Wireless Telecommunications Facilities"* – Both jurisdictions need to use consistent terminology, provide consistent definition(s), and set security requirements (e.g. fencing and anti-climbing devices). Currently, "public utility installations", "cable television towers/satellite dishes" and "radio and/or television station transmission or receptions" are allowed in different zoning districts. In addition to modifications to ordinances, St. Marys and Camden County should consider establishing a local procedural requirement to forward tower applications to SUBASE for comment regarding proximal (line of sight) and functional impact to (interference with) base security and mission. Advantages of implementing these recommendations include improved coordination and reduced potential for an incompatible tower. A potential disadvantage is an increase in time required for tower permitting.

*A-2. Include occupation tax license application review by SUBASE* – For parcels within the 3,000 foot Military Land Use Notification Area, establishing a local procedural requirement to seek SUBASE review of occupation tax license applications (a.k.a. business licenses) is recommended to facilitate joint determination of whether proposed uses would be incompatible with or have adverse impacts on base security and mission. Advantages of this additional level of coordinated review include reduced potential for a business to locate near the SUBASE and subsequently pose a compatibility concern that might not have been recognized during the licensing process. A potential disadvantage is an increase in time required to secure a new license.

*A-3. Amend local ordinances to apply consideration of line-of-sight related height restrictions* – To address the potential for development within the Military Land Use Notification Area to inadvertently provide line-of-sight into SUBASE sensitive areas, add provisions to local zoning ordinances in St. Marys and Camden County with standoff distances and height restrictions that are comparable to existing DOD AT/FP (Anti-Terrorism/Force Protection) requirements (e.g. UFC 4-010-01, DOD Minimum Anti-Terrorism Standards for Buildings, 9 Feb. 2012; UFC 4-010-02, DOD Minimum Anti-Terrorism Standoff Distances, 8 Oct. 2003). Advantages of enhanced height restrictions include greater assurance that entitled construction does not inadvertently result in a line of sight into the SUBASE. The potential to impact the scale of development very close to SUBASE boundaries is a possible disadvantage.

*A-4. Amend Adult Entertainment location requirements in St. Marys zoning* – To preclude establishment of adult entertainment businesses within 1,000 feet of the base, a text amendment is recommended to modify local zoning ordinance. Specifically, modify text to prohibit adult entertainment "Within 1,000 feet of any parcel of land upon which a church, school, governmental building, <u>federal military installation</u>, library, licensed day care facility, civic center, public park or playground is located." The advantages of the simple ordinance modification are greater legal clarity and protection of the business

environment near SUBASE Kings Bay gates. Disadvantages to such ordinances modifications are negligible.

*A-5. Evaluate options and employ tools to create a permanent buffer along the west side of Spur 40* – Evaluate options (such as those offered through REPI, the DOD Readiness and Environmental Protection Integration program) and employ the most feasible tools to create a permanent buffer adjacent to SUBASE, specifically along the west side of Spur 40 where land remains largely undeveloped. Potential tools include zoning setbacks (zoning adjustments), real property acquisition (i.e. land bank or greenspace acquisition program), or development rights acquisition (conservation easement acquisition program). Advantages of permanent buffer creation include long-term protection against potential incompatible development adjacent to SUBASE Kings Bay boundaries as well as environmental preservation. Potential disadvantages include removal of certain properties from taxable status in the case of land acquisition for buffering.

*A-6. Modify the Camden County, St. Marys and Kingsland zoning ordinances for procedural consistency* – Modify the Camden County UDC and St. Marys and Kingsland zoning ordinances and procedures as required to establish consistency for zoning and development review timeframes among all jurisdictions and with SUBASE (with regards to review per Georgia Military Land Use Notification Area). Advantages of minor modifications to procedures include enhanced coordination and clarity of expectations to which property owners and developers must adhere.

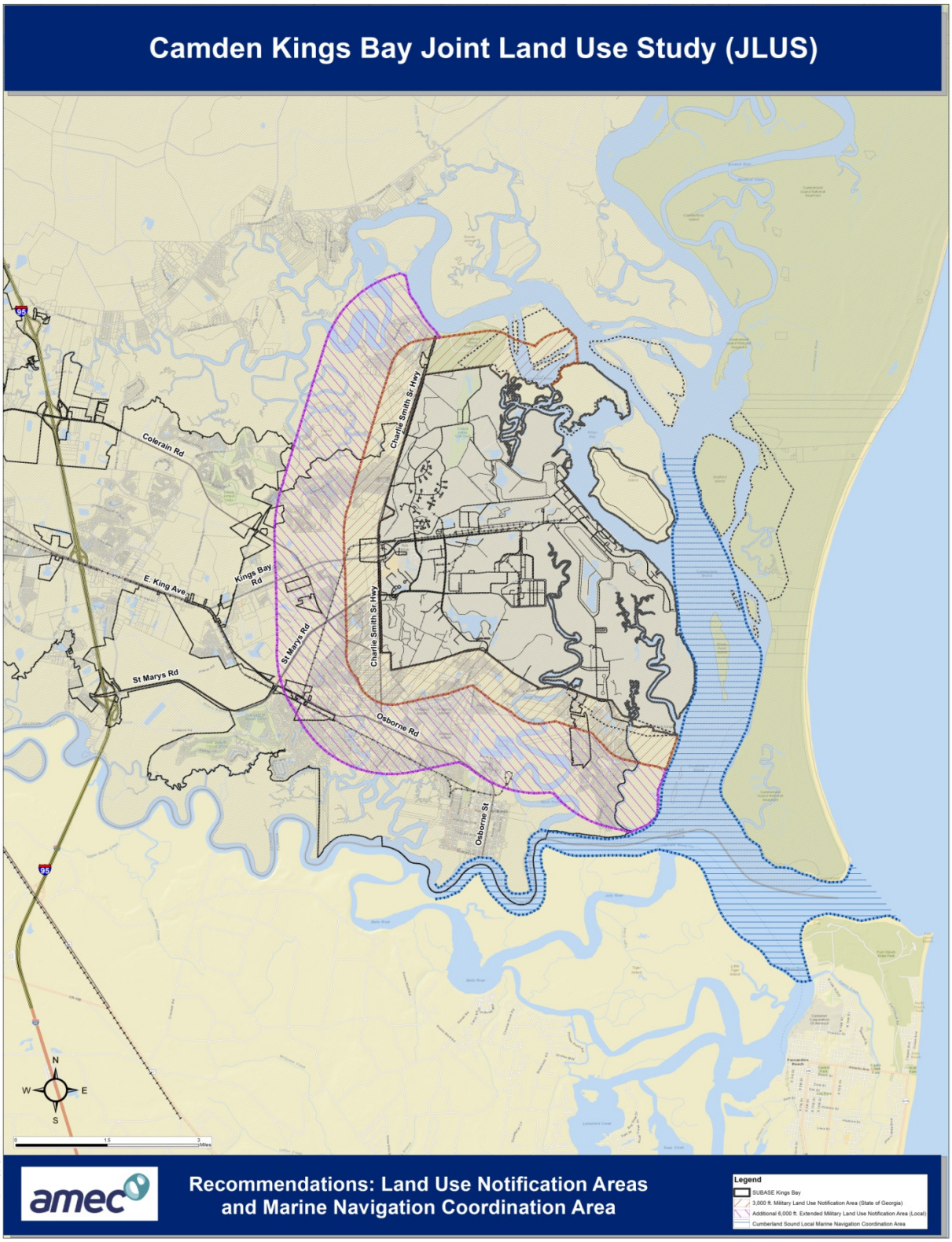
*A-7. Comprehensively update St. Marys zoning ordinance to address identified zoning issues* – A comprehensive update to the St. Marys zoning ordinance will address potential compatibility issues identified through the JLUS process (e.g. compatibility with base mission, line-of-sight restrictions, review processes and timelines, limited access corridors, etc.) and other issues pertaining to the organization, internal consistency and applicability of the ordinance to current conditions and trends in St. Marys. The advantages of a comprehensive approach to zoning ordinance update include accomplishing the modernization of the zoning code overall, as well as modifications to address compatibility. A potential disadvantage is the fact that comprehensive zoning ordinance updates typically require more time and resources than individual zoning amendments.

***Developable Property between 3,000' and 9,000' distance from SUBASE Kings Bay Boundary***

***Summary of Findings***

Beyond the distance of 3,000 feet outside of the SUBASE boundary, the State of Georgia-mandated Military Land Use Notification Area does not apply. However, City of St. Marys and Camden County planning staff routinely seek SUBASE input on land use and development proposals affecting properties more than 3,000 feet from the base. An expanded review area can be formalized by local-level agreement between St. Marys and Camden County, in coordination with SUBASE. The resulting extension of the Military Land Use Notification Area by local agreement and associated expanded coordination can help to achieve reduction in the potential for incompatible development in the area between 3,000 feet and 9,000 feet distance from the SUBASE boundary. This is a zone in which there are large tracts of land with development/redevelopment potential that are of significance to future compatibility, as well as critical infrastructure, evacuation routes, defense highways and strategic rail.

## Figure 5.1 Recommendations: Land Use Notification Areas and Marine Navigation Area



***Summary of Recommendations***

*A-8. Expand the Military Land Use Notification Area by local agreement* - Establish a formal policy (and intergovernmental agreement, as needed) to expand the Military Land Use Notification Area beyond 3,000 feet per local agreement (applicable to Camden County and the City of St. Marys). This recommendation is for expansion of the area by 6,000 feet to establish notification/review area that extends a total of 9,000 feet from SUBASE boundaries, inclusive of the state-mandated zone. Advantages include enhancement of coordination between SUBASE Kings Bay and the two planning jurisdictions in closest proximity, providing additional assurance that future development will not pose compatibility issues. An additional advantage is the fact that the recommended coordination process is already in practice for the existing notification area (formally) and beyond (informally). Potential disadvantages of formal review area expansion include additional review time associated with proposed developments in the expanded area, in comparison to the current requirements, as well as additional workload on reviews staff at the City of St. Marys, Camden County, and SUBASE.

*A-9. Include occupation tax license application review by SUBASE Kings Bay* – Inclusion of occupation tax license (a.k.a. business license) application review by SUBASE Kings Bay (for parcels within the additional 6,000 ft. review area) is recommended to facilitate joint determination of whether proposed uses would have adverse impacts on base security and mission. Advantages of this additional level of coordinated review include reduced potential for a business to locate in the vicinity of SUBASE Kings Bay and subsequently pose a compatibility concern that might not have been recognized during the licensing process. A potential disadvantage is an increase in time required to secure a new license.

*A-10. Coordinate with SUBASE Kings Bay to ensure compatible redevelopment of former Durango-Gilman property* –St. Marys City Council should consider requests for use and zoning of the former Durango-Gilman property and coordinate with SUBASE Kings Bay for compatible future land use. The advantages of coordinated review to ensure compatibility are significant, as this is the largest redevelopment site in close proximity to SUBASE Kings Bay. A potential disadvantage is adding a level of complexity to an already complex site.

*A-11. Prepare a zoning master plan for City-owned airport property* – St. Marys City Council should prepare a zoning master plan for City-owned airport property in anticipation of future redevelopment, and coordinate with SUBASE Kings Bay with regards to compatible future land uses and economic development opportunities. The advantages of early, advanced planning and zoning for redevelopment are establishment of clear expectations and the potential to expedite redevelopment that is compatible with City-defined objectives. Potential disadvantages of City-initiated redevelopment master planning and zoning include the possibility for changing real estate market dynamics to impact the feasibility of a master plan if significant time passes between planning and the property becoming available for development.

*A-12. Establish a coordinated marketing plan* – Pertaining to the economic benefits of redevelopment projects and the existence of major redevelopment sites in the community, the local economic development agencies should establish a coordinated marketing plan for all to use to promote redevelopment. The advantages of coordinated marketing of the redevelopment potential of key sites include enhanced attractiveness to investment and improved competitiveness. A potential disadvantage is the possibility of one or more entities not being adequately involved and, as a result, not achieving a truly coordinated effort.

## B. SAFETY AND ANTI-TERRORISM AND FORCE PROTECTION (ATFP)

Consideration of safety and Anti-Terrorism Force Protection (ATFP) compatibility factors recognizes the potential for negative impacts due to accidents or intentional, harmful actions. Findings and

recommendations pertain to the St. Marys Airport, the Cumberland Harbour Water Tower, and the existing tree canopy that limits visibility into the SUBASE for much of its perimeter.

## ***St. Marys Airport***

### ***Summary of Findings***

The St. Marys Airport presents a safety and security threat due to its configuration and close proximity to SUBASE and associated prohibited airspace. Airport operations are limited due to the Prohibited Area (P-50) over SUBASE and other factors, and actual operations at the airport in recent years are far fewer than past projections anticipated. There is well-documented concern about the airport from the standpoint of the US Navy, and airport relocation is a policy of the City of St. Marys (by resolution and voter-approved referendum supporting airport relocation) and the Georgia Department of Transportation (GDOT). Due to its orientation, prior analysis suggested that runway 04-22 poses a greater concern (re: risk factor of accidental crash into a critical facility on SUBASE) and as a result GDOT has recognized that runway 13-31 should be the primary runway. While additional flight restrictions can be imposed on the airport, and runway 04-22 could even be closed, the extent to which the airport is a safety and security concern is most substantially associated with its proximity to the SUBASE. Therefore it is recommended that the airport be closed and relocated.

### ***Summary of Recommendations***

*B-1. Relocate the airport to a new location, close all airport functions and redevelop the airport property* – Relocate the airport to a new location, close all airport functions at its current location and redevelop the airport property in accordance with a master plan and coordinated zoning to provide for a mix of residential development and industrial park expansion. Include building height restrictions to mitigate potential for line of sight into SUBASE Kings Bay (compatible with DOD ATFP line of sight limitations).

If immediate relocation of the airport is not possible, implement phased closure/relocation of the airport. Immediately restrict the use of runway 04-22 to emergency use only, and operate the airport at limited capacity with runway 13-31 as the primary runway. Maintain airport facilities and infrastructure in safe and secure condition with procedural measures such as local police department patrols, regular inspections of the airport perimeter by the FBO, and regular safety coordination meetings involving airport management, local officials, and SUBASE Kings Bay representatives. At the earliest opportunity, relocate the airport and redevelop the property for compatible use.

The advantages of airport relocation are clear: elimination of the identified safety/security concerns and potential to foster redevelopment of the City-owned property for economic development. While airport relocation is in the mutual interest of the City of St. Marys and SUBASE Kings Bay, there are also advantages to intermediate steps that can be taken while the airport remains operational in its current location. This primarily includes improving the safety of operations on runway 13-31. These interim measures, however, are also potentially disadvantageous to the extent that expenditures of FAA funds may further obligate St. Marys.

*B-2. Extend the environmental approval for airport relocation* – The previously approved Environmental Assessment (EA) is set to expire in 2014. The City of St. Marys should request extension of this EA to maintain the option of airport relocation in accordance with the EA. Advantages of EA extension include maintaining the authorization to proceed with relocation consistent with the EA if advantageous. This does not obligate the City to proceed in accordance with the EA, but maintains flexibility.

*B-3. Multi-agency cooperation for airport relocation* – The City of St. Marys should work cooperatively with SUBASE Kings Bay and associated agencies to jointly, and with technical assistance from DOD OEA, accomplish closure/relocation of the airport, including coordination with GDOT and FAA to research

financial mechanisms in order to relieve obligations from the City's previous use of FAA grant funds. It is advantageous for the City to build a broad coalition to address these complex challenges.

## ***Cumberland Harbour Water Tower***

### ***Summary of Findings***

The Cumberland Harbour water tower poses a potential line-of-sight related security threat due to its height (137 feet) and location in close proximity to the SUBASE Kings Bay fenceline. Although the tree canopy between the tower and restricted areas on SUBASE Kings Bay provides some visual buffer, there is potential for storm damage to the tree canopy that could reduce the existing visual buffer. DOD ATFP minimum stand-off distance requirements for structures (as measured from fence line) do not technically apply off-base, but by those standards the water tower would be considered non-compliant. The City of St. Marys has an informal agreement to notify SUBASE Kings Bay when personnel will ascend the tower for authorized reasons. SUBASE Kings Bay has documented security concerns with the tower since 2004.

### ***Summary of Recommendations***

*B-4. Continue current procedures for notification* – The current procedure should continue, whereby the City of St. Marys provides notification to the SUBASE Security Officer in advance when authorized personnel will be on the Cumberland Harbour water tower or when any tower-related work is planned. Based on the City's notification to SUBASE Kings Bay, additional on-base, in-house notifications occur. Base personnel also conduct routine vehicular patrols to maintain fenceline security in the area.

*B-5. Install surveillance cameras* – SUBASE Kings Bay should revisit previous efforts to install surveillance cameras between the North River floating fence and the east fenceline in vicinity of the tower (contingent on US Navy authorization and funding).

*B-6. Study feasibility of fence line relocation water tower relocation, or water tower modification* – A technical feasibility study with financial analysis is recommended to assess the potential for SUBASE Kings Bay fenceline relocation (to bring the water tower within the SUBASE Kings Bay fence), water tower relocation, and/or lowering the water tower height with assistance of booster pumps. Implementation of any option is dependent on feasibility study results and contingent on funding availability.

## ***Tree Canopy (on SUBASE property)***

### ***Summary of Findings***

The tree canopy at the base fence line limits visibility into base, both from the ground level and from most structures near the base. Should all or portions of the tree canopy be removed in the future, either intentionally or as a result of wildfire or storm damage, issues with line of sight into the base may result. Potential line of sight issues would be greater at the southern end of the base if part, or all, of the tree canopy in that vicinity was removed or destroyed by storm.

### ***Summary of Recommendations***

*B-7. Practice effective forestry management on SUBASE Kings Bay property* - Continue forest management practices in coordination with the US Forest Service and GA Forestry Commission, and develop a SUBASE Kings Bay Arbor Plan, associated with the base Integrated Natural Resources Management Plan (INRMP), to plan for appropriate tree thinning and planting over time (to ensure screening remains adequate for line of sight obstruction purposes).

## C. Waterway Access and Capacity

Access from the Cumberland Sound to the Atlantic Ocean is critical to SUBASE Kings Bay and to commercial shipping at the Port of Fernandina. Continued dredging of the channel is required to maintain this means of egress. The capacity of the waterway, however, far exceeds the combined level of its use by the US Navy, commercial and recreational vessels. A coordinated approach to the future management and patrol of the waterway can ensure that it effectively serves the needs of the military and civilians into the foreseeable future.

### ***Port of Fernandina***

#### ***Summary of Findings***

The capacity of the Port of Fernandina is approximately 300 vessels per year, with current level of use at less than half of capacity. Planned expansion at the port has potential to increase its capacity to approximately 375 vessels per year, and thus potential to increase shipping traffic in the long term. The continuity of channel dredging by the US Army Corps of Engineers is critical to the Port of Fernandina as well as the US Navy.

#### ***Summary of Recommendations***

*C-1. Foster interagency coordination for channel management* – SUBASE Kings Bay, local governments, and the Ocean Highway and Port Authority (Fernandina Port Authority) should foster interagency coordination to proactively address any increase in traffic that could affect SUBASE and USCG use of the channel. As appropriate, include a reactivated St. Marys port authority.

### ***Cumberland Harbour Marinas***

#### ***Summary of Findings***

The development of additional marinas is a potential compatibility issue due to addition of recreational boat traffic in the North River, St. Marys River and Cumberland Sound. The US Army Corps of Engineers permit issued in 2012 allows construction of two marinas, per supplemental conservation measures plan, three community docks, and a dry boat storage facility associated with Cumberland Harbour. Phased construction, at this time not including community docks, is being monitored via Georgia Department of Natural Resources supplemental conservation permit.

#### ***Summary of Recommendations***

*C-2. Multi-agency coordination to monitor progress on marinas development* – Establish and maintain communication among SUBASE Kings Bay, the City of St. Marys and the Cumberland Harbour developer regarding marina construction and minimizing impacts to military waterway operations and egress. Additionally, City of St. Marys and SUBASE Kings Bay should regularly communicate with permit enforcement authorities to stay apprised of permitting status and future permit applications or modifications. Consider enhancement of boater education and signage/warnings to inform public and recreational boaters about requirements to maintain distance from US Navy and USCG vessels.

### ***Cumberland Sound Marine Traffic***

#### ***Summary of Findings***

Marine traffic in the Cumberland Sound poses a potential compatibility issue due to the importance of the waterway and proximity to base operations. However, current estimates suggest that the combined use of the Cumberland Sound channel by the US Navy and Port of Fernandina is approximately 1% of the time of availability. Therefore, capacity is not a current or imminent issue but is a factor to be addressed from a long term standpoint due to the critical importance of the waterway.

***Summary of Recommendations***

*C-3. Establish a Multi-Agency Coordination Committee and boundaries for a Cumberland Sound Local Marine Navigation Coordination Area* - Establish a Multi-Agency Coordination Committee (MACC) to include representatives from the SUBASE Kings Bay, USCG, Port of Fernandina, City of St. Marys, Camden County, Georgia Department of Natural Resources and Florida Department of Natural Resources and designate boundaries for a Cumberland Sound Local Marine Navigation Coordination Area. Convene an initial meeting of the Multi-Agency Coordination Committee and set a schedule for the Committee to engage in a regular/periodic review process to address marine traffic, coordinated use of the sound and channel, and other maritime issues within the defined area. While a modest commitment of time will be required from the leadership of the entities included on the Committee, the advantages of coordination that will allow issues that may arise in the future to be addressed proactively outweigh the required level of investment.

***Only One Exit from Cumberland Sound into Atlantic Ocean***

***Summary of Findings***

Dredging is critical to maintain access to the Atlantic Ocean for US Navy vessels via the Cumberland Sound. The passage to the Atlantic Ocean is less than one half mile wide and must be maintained clear.

***Summary of Recommendations***

*C-4. Continue local, state and federal partnership to maintain channel through regular dredging* – Coordinated support from all entities that rely on dredging will help to identify any channel problems well in advance and ensure that no complications arise with regards to future dredging.

*C-5. Explore potential for alternate route to Atlantic Ocean*– Though it is expected that the existing channel will continue to serve as the only route for US Navy and commercial vessels transiting from the Cumberland Sound to the Atlantic Ocean, it is recommended that consideration be given to analysis of the feasibility of a secondary route north from Kings Bay via the Intracoastal Waterway.

## D. Potential for Public Trespassing

There is not a potential for accidental public trespassing onto SUBASE Kings Bay due to sign posting, effective fencing, and security patrols along much of the base perimeter. SUBASE Kings Bay security and military forces employ a variety of measures to ensure trespass onto the installation is precluded.

## E. Interagency Coordination

Interagency coordination refers to the value and importance of a variety of agencies working together. Recommendations to address compatibility factors under this heading require multi-agency initiatives.

***Spaceport***

***Summary of Findings***

The proposed development of a Spaceport in Camden County north of the Crooked River is recognized as a potential compatibility issue at this time, pending assessment of to-be-determined details about Spaceport development and operations. The details that are unknown at this time will be identified and studied through pending further analysis as part of an Environmental Impact Study (EIS) and future conceptual planning.

***Summary of Recommendations***

*E-1. Ensure SUBASE Kings Bay and US Navy involvement in the Environmental Impact Statement (EIS)* - Ensure direct SUBASE Kings Bay and US Navy involvement as part of the interagency coordination

required for the EIS process, in collaboration with the community and all other stakeholders to be consulted for the Spaceport EIS and related studies.

***Economic Development***

***Summary of Findings***
Coordinated economic development initiatives are important for the sustainable future of the Camden community and SUBASE Kings Bay. Economic growth and diversification is needed to provide economic opportunities and support for military families, base workforce, and the entire community.

***Summary of Recommendations***
*E-2. Update and implement economic development plans* - Update recommendations of the *Economic Diversification of Camden County Strategic Report (2005)* and implement resulting updated recommendations. Consider development of a new *Comprehensive Economic Development Strategy* with involvement of local and federal partners. And establish cooperative agreements among agencies and implement co-location strategies, as appropriate, to maximize efficiency and effectiveness. A high level of economic development planning and coordination is advantageous to the entire Camden County community.

***JLUS Implementation***
***Summary of Findings***
During the JLUS process, the Technical Advisory Committee has provided a venue for significant coordination leading to JLUS recommendations. Continuation of this committee into the implementation phase can help to further coordination and expedite implementation.

***Summary of Recommendations***
*E-3. Establish JLUS Implementation Committee and meeting schedule* - Establish an interagency technical working group, based on the JLUS Technical Advisory Committee membership, for continued compatibility planning, communication, collaboration, and coordination and to facilitate implementation of JLUS recommendations. Continuation of this existing committee is easily achieved and potential benefits are great.

## F. COMMUNITY HOUSING AND ECONOMY

Compatibility factors concerning community housing and the local economy pertain to the importance of housing and economic opportunities to military families, as well as to the community as a whole. Findings and recommendations primarily concern the affordability of quality housing in the community and the availability of private sector jobs and services in the community.

***Convenient (Affordable) Housing***

***Summary of Findings***
The existing housing stock in the Camden County community is mixed and relatively affordable, but the potential exists to increase the availability of affordable housing by addressing the purchasing power of the US Navy housing allowance for E1-E4 personnel with dependents who live off base. Of potential impact to personnel at all levels, the possibility of rising flood insurance costs due to proposed changes in the policies of the National Flood Insurance Program (NFIP) may have a near-term impact on affordability of some housing.

***Summary of Recommendations***
*F-1. Coordinate local efforts to make quality housing in the nearby community available and affordable to military personnel* - Coordinate with the local real estate community, local governments, relevant

agencies and SUBASE Kings Bay/US Navy representatives to facilitate local housing options for military personnel.

*F-2. Create incentives to encourage development of affordable quality housing for military personnel* - Update local zoning/development codes and/or establish incentive mechanisms to create military housing zones that provide affordable quality housing for military personnel.

*F-3. Take local action to help homeowners facing potential of higher flood insurance rates* - Work cooperatively to lessen the impact of NFIP flood insurance rate increases through maximizing potential benefits of the FEMA Community Rating System (CRS) program, a system within which local governments (specifically Camden County and St. Marys) can get credit for local actions to reduce potential losses from flooding and benefit local homeowners/ property owners via reduced flood insurance rates.

These recommendations and other actions that can be taken to promote both quality and affordability of housing in the Camden County community will be advantageous to military families and the community as a whole, as more military families choose to live, work and play in Camden County as opposed to commuting from other areas of the region. As long as quality of housing is promoted along with affordability, there are few disadvantages.

***Business/Service Capacity***

***Summary of Findings***

Increasing employment opportunities and availability of services within the Camden County community will allow community residents and military families to be less reliant on distant economic centers and improve community economic sustainability. There is a need to recruit new businesses with the potential to benefit the local community and SUBASE Kings Bay by providing local jobs and services. Keep It in Camden (KIC) and EDICCIMAD (Every Day in Camden County is Military Appreciation Day) are current local economic development initiatives.

***Summary of Recommendations***

*F-4. Update local economic development plans* – Update the *Economic Diversification of Camden County Strategic Report* (2005) and implement resulting recommendations for economic development. Consider development of new Comprehensive Economic Development Strategy (CEDS).

*F-5. Incentivize job creation that benefits military families* – Establish an incentive-based program to create employment opportunities for military families in the local communities. Similar to housing, it is to the mutual advantage of military families and the broader community when Camden County can provide local homes, employment and amenities.

***Industrial Property and Expansion***

***Summary of Findings***

There is a need to develop and fill industrial space for economic development purposes, to benefit the community and SUBASE Kings Bay. There are some vacant older industrial buildings and some available properties for industrial development, but little that is marketable by current standards.

***Summary of Recommendations***

*F-6. Focus economic development efforts on recruiting Defense Industry companies* - Continue to market properties and explore military partnership potential for recruitment of DOD contractor industries to occupy vacant building space and/or build on available industrial-zoned property.

*F-7. Establish adequate inventory of industrial properties to support economic development and recruitment* - Prepare business and industrial park properties in appropriate locations to provide ready locations for new business locations and business expansions. It is an advantage to the Camden County community that SUBASE Kings Bay offers unique opportunity to recruit certain industries that would not be attracted to other communities. While investments in economic development infrastructure that support recruitment at the "speed of business" can be expensive, a planned approach can minimize exposure to risk and result in significant gains.

## G. Potential for Noise/vibration/Dust/Emissions

Unlike many military installations, there are very few activities on SUBASE Kings Bay that have potential to impact the community due to generation of noise, vibration, dust or emissions.

### ***Smoke from Prescribed Burns on SUBASE***

***Summary of Findings***
Smoke from prescribed burns on base have been occasionally noticed by residents near SUBASE Kings Bay boundaries. Prescribed burns on base are important for fire safety, but have generated some complaints from residents nearby, including a few claims of inadequate notification.

***Summary of Recommendations***
*G-1. Public outreach to notify residents of planned prescribed burns* - Continue to publicize the schedule for prescribed burning on base via local news outlets, local government websites, digital newsletters, email notifications and other effective outreach methods.

## H. Community Infrastructure Capacity

SUBASE Kings Bay is connected to and served by some community infrastructure systems, but is also capable of self-sufficiency for extended periods. One exception where there is reliance on a privately-owned infrastructure system for an important purpose is railroad connectivity.

### ***St. Marys Railroad***

***Summary of Findings***
The St. Marys Railroad currently has very little business outside of contract service to the US Navy. Any disruption in service has the potential to affect the SUBASE Kings Bay mission, as does continued escalation of costs associated with rail shipments.

***Summary of Recommendations***
*H-1. Coordinate economic development efforts to enhance the economic viability of the St. Marys Railroad* - Continue to coordinate economic development efforts among local agencies and the St. Marys Railroad to recruit industries that will be rail customers, creating local jobs and enhancing the economic viability of the railroad. The economic advantages of rail service to development and redevelopment sites are many, and are complementary to the important role that the railroad has in support of the SUBASE Kings Bay mission.

## I. Traffic and Transportation system

Maintaining an effective transportation system is critical to the sustainability of SUBASE Kings Bay and the Camden County community. Factors important to compatibility are evacuation routes, general roadway level of service, gateways into the base and corridors adjacent to the base.

### ***Evacuation Routes: SR 40, Colerain Rd., St. Marys Rd., Scrubby Bluff***

#### ***Summary of Findings***

There is potential for problematic traffic congestion on existing routes to and from SUBASE Kings Bay during a hurricane-related evacuation event. Some road widening projects are in progress to improve the capacity of some corridors that serve as evacuation routes. Coordinated planning can maintain the effectiveness of evacuation routes.

#### ***Summary of Recommendations***

*I-1. Effective advance planning for evacuation events* – 1. Publicize preferred routes, recommend additional alternative routes (from Camden County EMA to GEMA); 2. Continue coordinated emergency management/response efforts with SUBASE Kings Bay, and address evacuation routes in the next Camden County Hazard Mitigation Plan update (2015) and the regional hazard plan underway by the Coastal Regional Commission (CRC).

*I-2. Plan and implement needed improvements to evacuation routes* - Secure funding for needed improvements to evacuation routes as identified in future transportation planning, comprehensive planning and hazard mitigation planning.

*I-3. Protect the integrity of evacuation routes* - Protect evacuation routes in general, and specifically routes that connect to SUBASE Kings Bay and peripheral residential areas, through zoning enforcement, transportation planning with traffic analysis, and application of long term planning strategies. . While these regulatory and strategic approaches may impact developments proposed for evacuation corridors, the advantages of preserving evacuation routes for adequate functionality in emergency events take precedence.

### ***Bike/Ped Trail***

#### ***Summary of Findings***

The developing bike/ped trail system in Camden County poses a very limited compatibility issue due to the existing fence infrastructure and distance from restricted base operations. The bike/ped trail system is a desired community enhancement, with potential to provide commuting options to SUBASE Kings Bay personnel.

#### ***Summary of Recommendations***

*I-4. Collaborate to expand bike/ped trails system according to master plan* - Collaborate on further compatible development of community bike/ped trails to facilitate options for community residents and base personnel to safely commute to/from SUBASE Kings Bay on bikes or walking, and also for recreation purposes.

### ***Local Road Level of Service (LOS)***

#### ***Summary of Findings***

The major roadways in the immediate vicinity of SUBASE Kings Bay currently have a Level of Service (LOS) with unimpeded traffic flow, and acceptable LOS is projected for these roadways based on evaluation of their capacity and projected traffic growth. The LOS of key roadways is aided by strict access limitations, but there is potential for increased traffic congestion with future development in community and growth on base.

***Summary of Recommendations***
*I-5. Prepare a multi-jurisdictional comprehensive Camden County Long Range Transportation Plan* – The long range transportation plan is an effective tool in many communities to guide strategic improvements to the transportation system that are needed to maintain effectiveness and LOS. Camden County has not previously prepared such a plan.

*I-6. Use access management techniques to maintain LOS on corridors* - Adopt access management techniques (e.g. inter-parcel access preferred over multiple curb cuts) to maintain LOS on corridors that do not currently have adequate access limitations.

Investments in transportation planning and access management approaches will require investments of time and resources, and new ideas about transportation system management and development may not be universally popular. But the advantage of a highly-functional transportation network that is built and managed in an efficient manner results from proactive planning.

***Closed St. Marys Gate***

***Summary of Findings***
The past closure of the St. Marys Gate has limited accessibility to downtown businesses for base personnel. Reopening this gate can shorten commutes and other trips by base personnel as well as provide time saving access to base operations for contractors assisting in base operations. Reopening can also help local businesses in St. Marys. However, reopening the gate would also create a need for additional security measures, and associated additional expense.

***Summary of Recommendations***
*I-7. Evaluate feasibility of reopening the St. Marys gate* - Evaluate and implement (if authorized) a partnership of the City of St. Marys and SUBASE Kings Bay to fund and initiate gate opening and operation.

***Limited Access Corridors: Base Perimeter, St. Marys Rd.***

***Summary of Findings***
Maintaining access limitations on key roadways in the vicinity of SUBASE Kings Bay is critical to preservation of acceptable traffic flow/Level of Service (LOS) in the long term.

***Summary of Recommendations***
*I-8. Maintain and enforce access limitations* - Strictly maintain access limitations of key roadways such as St. Marys Road, Kings Bay Road, Charlie Smith Highway, and Colerain Road.

## J. LEGISLATIVE INITIATIVES

One prior State of Georgia legislative initiative is of particular importance to compatibility in the vicinity of SUBASE Kings Bay – the Military Land Use Notification Area established within 3,000 feet of the installation.

***3,000 Feet Military Review/Land Use Notification Area***

***Summary of Findings***
Review by SUBASE of land use proposals (proposed rezonings) within 3,000 feet is mandated by Georgia State Law. This coordination process is respected by the City of St. Marys and Camden County and is working to address incompatible land uses. The process of coordination, area within which review is applicable, and scope of review could be expanded by local agreement.

***Summary of Recommendations***
*J-1. Expand review associated with Military Land Use Notification Area* - Expand the review area through local policy and intergovernmental agreement(s), and include additional opportunities for review such as cell tower applications and occupational tax license (a.k.a. business license) applications.

## K. EDUCATION/TRAINING CAPACITY

The extent to which educational opportunities in the community are supportive of the training needs of the military and Defense contractors is a contributing factor to the economic sustainability of the community and its compatibility with the military mission.

***Technical Schools***

***Summary of Findings***
There is a need to expand technical training/education opportunities for Camden County residents, including base personnel and the community in general.

***Summary of Recommendations***
*K-1. Continue to work cooperatively to bring a comprehensive technical college to Camden County* – Efforts are well underway to develop a technical college to augment existing higher education and training resources. A sustained, coordinated and concerted effort involving community and military leaders is needed. In addition to better meeting the needs of SUBASE, enhanced technical education offerings in the community will help to give Camden County a better trained workforce, a key advantage to economic competitiveness and community development.

***Local Schools (K-12)***

***Summary of Findings***
Local schools are supportive of SUBASE Kings Bay personnel, and SUBASE Kings Bay personnel provide volunteer support to local schools via the Personal Excellence Program, Adopt-A-School, and Science, Technology, Engineering and Math (STEM) initiatives.

***Summary of Recommendations***
*K-2. Continue to promote military and community cohesion through the local public school system.*

*K-3. Continue and expand collaboration on local STEM programs* – Promote STEM at local schools and post-secondary institutions with participation of SUBASE Kings Bay via on-base technical experts discussions and presentations to teachers/students.

*K-4. Continue and expand the SUBASE Kings Bay, tenant command and ship forces Adopt-a-School programs to benefit more local schools.*

## L. THREATENED AND ENDANGERED SPECIES

There are habitat areas for threatened and endangered species on SUBASE Kings Bay and in the surrounding community. Development restrictions associated with protected species can impact military operations and community development alike.

### ***Manatee Protection Area***

***Summary of Findings***
On-going mitigation measures in use by US Navy and USCG operations in the Cumberland Sound limit impacts on the base mission and benefit manatee habitat.

***Summary of Recommendations***
*L-1. Cooperate with ongoing US Navy manatee protection measures, habitat mitigation, and monitoring.*

*L-2. Continue local boater avoidance education initiatives and ensure compliance with protection signage requirements.*

*L-3. Continue to implement the SUBASE Kings Bay Integrated Natural Resources Management Plan (INRMP).*

### ***Gopher Tortoise Habitat***

***Summary of Findings***
Gopher tortoise habitat has potential to impact future development of property in the area. The St. Marys Airport property is reported to have a gopher tortoise population. This can impact redevelopment potential.

***Summary of Recommendations***
*L-4. Continue to implement gopher tortoise management practices (in INRMP) on SUBASE Kings Bay.*

*L-5. Update 1996 gopher tortoise survey or conduct another survey on-base.*

*L-6. In conjunction with Airport property redevelopment planning, complete a gopher tortoise evaluation.*

### ***Right Whale Habitat***

***Summary of Findings***
On-going mitigation measures limit impacts to the SUBASE Kings Bay mission and benefit Right Whale calving.

***Summary of Recommendations***
*L-7. Follow recommended mitigation measures* – The August 2013 Atlantic Fleet Training and Testing EIS identifies current and recommended mitigation measures (e.g. avoidance or minimization of conduct of specific activities seasonally; early warning system).

## M. NATURAL HAZARDS MITIGATION

There are a wide variety of potential natural hazards that can impact SUBASE Kings Bay and the surrounding community. Most of these are addressed through hazard mitigation planning by the community and the military. Of specific interest and the subject of a current study is the potential future impact of projected sea level rise, flood hazard risk reduction, and flood damage mitigation.

### **Sea Level Rise**

***Summary of Findings***
Future sea level rise has the potential to significantly impact the community and base mission. The most significant impact may be in the longer term, but the issue requires near term planning. A NOAA-funded study is currently underway.

***Summary of Recommendations***
*M-1. Use results of NOAA sea level rise study to adjust local plans* – When available, utilize NOAA sea level and flood hazard mitigation study findings in future required updates to the Comprehensive Plan (2018) and Hazard Mitigation Plan (2015); and to the extent possible, coordinate with DCA and GEMA to align plan updates to concurrently address land use planning and hazard mitigation planning in the community.

### N. Frequency Spectrum Capacity

***Frequency Spectrum Interference or Impedance***

***Summary of Findings***
Frequency spectrum interference and/or impedance are not currently issues of compatibility concern per SUBASE Kings Bay IT specialists. Unlike some other Navy installations, SUBASE Kings Bay communications are not impacted.

***Summary of Recommendations***
*N-1. Recognize potential for frequency spectrum issues to become a compatibility factor in the future* - If communications change in the future such that frequency spectrum interference or impedance may become an issue, SUBASE Kings Bay should inform the local communities and work cooperatively to address potential compatibility issues.

Municipalities and County should continue to notify SUBASE Kings Bay of proposed cell/transmission/communication tower construction, significant modification of structures, or frequency projects. While it is unlikely that such projects will have a negative impact in terms of frequency spectrum interference and/or impedance, the relatively nominal effort to coordinate and facilitate SUBASE review will have little impact in terms of added time to review processes relative to the benefit of reducing potential for incompatibility.

## 5.2 Implementation Plan

Based on the descriptions of findings and recommendations in Section 5.2 the following table lists Recommendations with Scaled Cost Implications, Key Participants involved in the execution of each recommendation, and the associated Implementation Timeframe for each. The table is organized by Compatibility Categories and Factors, with indication of the applicable Evaluation Criteria for each Compatibility Factor. The Action Category column uses the SCORE acronym to define the nature of each recommendation, as follows:

**S:** Study or plan that would need to be developed
**C:** Communication or coordination
**O:** Ordinance or legal requirement that would need to be formulated
**R:** Resume or continue existing methods or procedures
**E:** Entity, group or body responsible for monitoring or future planning/compatibility reviews

An indication of the cost implication for each recommendation is also provided, with a range of probable costs as follows:
$ - no to minor cost = $0 to $5,000 (est.)
$$ - moderate cost = $5,000 to $50,000 (est.)
$$$ - high cost = $50,000 to $250,000 (est.)
$$$$ - very high cost = greater than $250,000 (est.)

**Table 5.1 Summary of Recommendations**

| Compatibility Categories and Factors | Evaluation Criteria | | | Action Category | Summary of<br>($=no to minor cost, $$= |
|---|---|---|---|---|---|
| | Present/ Current Impact | Location/ Proximity | Potential for Future Impact | | |
| Land Use Compatibility Category | | | | | |
| Developable Property Within 3,000 Feet of SUBASE Kings Bay Boundary | | ✓ | ✓ | O<br>O<br>O<br>O<br>O<br>O | Amend St. Marys Zoning and Camden Cou<br>Both jurisdictions need to use consistent te<br>fencing and anti-climbing devices). Currentl<br>"radio and/or television station transmissio<br>procedural requirement that forwards tow<br>(line of sight) and functional impact to (inte<br><br>Include occupation tax license (a.k.a. busine<br>Military Land Use Notification Area) to faci<br>incompatible with or have adverse impacts<br><br>Amend local ordinances to apply considera<br>Use Notification Area comparable to existi<br>UFC 4-010-01, DOD Minimum Anti-Terro<br>Anti-Terrorism Standoff Distances, 8 Oct.<br><br>Amend Adult Entertainment location requi<br>feet of the base, specifically: "Within 1,000<br>building, federal military installation, library,<br>located." $<br><br>Evaluate options (such as those offered thr<br>program) and employ the most feasible too<br>where land remains undeveloped. Potential<br>acquisition (i.e. land bank or greenspace ac<br>easement acquisition program). $$ to $$$$<br>Modify the Camden County UDC and St. M<br>consistency among both jurisdictions and w<br>Area). $<br><br>Comprehensively update St. Marys zoning c<br>mission, line-of-sight restrictions, review pr<br>pertaining to the organization, internal cons |
| Developable Property Between 3,000 ft and 9,000 ft distance from SUBASE Kings Bay Boundary | | | ✓ | O<br>O<br>O | Establish a formal policy (and intergovernm<br>Area beyond 3,000 ft. per local agreement<br>expansion of boundary by 6,000 ft. to estab<br>zone. $$<br><br>Include occupation tax license (a.k.a. busine<br>the additional 6,000 ft. review area) to facil<br>impacts on base security and mission. $<br><br>St. Marys City Council should consider req<br>coordinate with SUBASE Kings Bay for com |

| Compatibility Categories and Factors | Evaluation Criteria | | | Action Category | Summary of<br>($=no to minor cost, $$= |
|---|---|---|---|---|---|
| | Present/ Current Impact | Location/ Proximity | Potential for Future Impact | | |
| | | | | **S**<br><br>**S** | St. Marys City Council should prepare a zo<br>redevelopment, and in coordination with SU<br>economic development opportunities. $$<br><br>Establish coordinated marketing plan for m |
| Safety and Anti-Terrorism/Force Protection Compatibility Category | | | | | |
| St. Marys Airport | ✓ | ✓ | ✓ | **C**<br><br>**C**<br><br>**C**<br><br>**C** | Relocate the airport to a new location, clos<br>property in accordance with a master plan<br>and industrial park expansion. Include build<br>limitations. $$$$<br><br>If immediate relocation of the airport is not<br>Immediately restrict the use of runway 04-2<br>runway 13-31 as the primary runway. Maint<br>procedural measures, such as local police d<br>FBO, and regular safety coordination meeti<br>representatives. At the earliest opportunity<br>$$$$<br><br>Extend the existing environmental approval<br>expire in 2014. $<br><br>City of St. Marys should work cooperativel<br>technical assistance from DOD OEA, accor<br>GDOT and FAA to research financial mech<br>FAA grant funds. $$ |
| Cumberland Harbour Water Tower | | ✓ | ✓ | **R**<br><br>**S**<br><br>**S** | Continue current procedures whereby the<br>when authorized personnel will be on the C<br>planned, then additional on-base in-house m<br>fence line security in the area. $<br><br>Revisit efforts to install surveillance camera<br>of the tower (contingent on USN authoriza<br><br>Study feasibility (technical and financial) of S<br>the SUBASE Kings Bay fence), water tower<br>pumps. Implementation dependent on feasi |
| Tree Canopy (on base) | | ✓ | ✓ | **R** | Continue forest management practices in c<br>develop a SUBASE Kings Bay Arbor Plan, as<br>Management Plan), to plan for appropriate<br>adequate for line of sight obstruction purpo |
| Interagency Coordination Compatibility Category | | | | | |
| Spaceport | | | ✓ | **C** | Ensure direct SUBASE Kings Bay and US N<br>process, in collaboration with the commun<br>related studies. $ |

| Compatibility Categories and Factors | Evaluation Criteria | | | Action Category | Summary of ($=no to minor cost, $$= |
|---|---|---|---|---|---|
| | Present/ Current Impact | Location/ Proximity | Potential for Future Impact | | |
| | | | | | |
| Economic Development | | ✓ | ✓ | **S** | Update recommendations of *Economic Dive* consider development of new Comprehens and implement co-location strategies. $$ |
| JLUS Implementation | ✓ | | ✓ | **E** | Establish an interagency technical working g continued compatibility planning, communic JLUS recommendations. |
| Waterway Access and Capacity Compatibility Category | | | | | |
| Port of Fernandina | | | ✓ | **C** | Foster intergovernmental/interagency coor Authority) to proactively address any incre channel. As appropriate, include a reactivat |
| Cumberland Harbour Marinas | | | ✓ | **C** | Establish and maintain communication betw developer regarding marina construction ar Additionally City of St. Marys and SUBASE authorities to stay apprised of permitting st education/signage/ warnings to inform publi US Navy and USCG vessels. $ |
| Cumberland Sound Marine Traffic | | ✓ | ✓ | **E** | Establish a Multi-Agency Coordination Con USCG, Ocean Highway and Port Authority boundaries for a Cumberland Sound Local to engage in a periodic review process to a other maritime issues within the defined ar |
| Only One Exit from Cumberland Sound into Atlantic Ocean | | | ✓ | **E**<br>**S** | Continue local, state and federal partnershi<br>Explore potential for alternate route to Atl |
| Community Housing and Economy Compatibility Category | | | | | |
| Convenient (Affordable) Housing | ✓ | ✓ | ✓ | **C**<br>**O**<br>**C** | Coordinate with the local real estate comm facilitate local housing options for military p<br>Update local zoning/development codes an provide affordable quality housing for milita<br>Work cooperatively to lessen the impact o benefits of the FEMA Community Rating Sy credit for local actions to reduce potential reduced insurance rates. $$ |
| Business/Service Capacity | | ✓ | ✓ | **S**<br>**C** | Update and implement recommendations c implement resulting recommendations for Economic Development Strategy (CEDS). $<br>Establish incentive-based program to create $ |
| Industrial Property and | | ✓ | ✓ | **C** | |

| Compatibility Categories and Factors | Evaluation Criteria | | | Action Category | Summary of ($=no to minor cost, $$= |
|---|---|---|---|---|---|
| | Present/ Current Impact | Location/ Proximity | Potential for Future Impact | | |
| Expansion | | | | **S** | Continue to market properties and explore industries to occupy vacant building space a<br><br>Prepare business and industrial park proper locations and business expansions. $$$ |
| Potential for Noise/Vibration/Dust/Emissions Compatibility Category | | | | | |
| Smoke from Prescribed Burns on SUBASE | ✓ | ✓ | ✓ | **C** | Continue to publicize the schedule for pres digital newsletters, email notifications and c |
| Community Infrastructure Capacity Compatibility Category | | | | | |
| St. Marys Railroad | | ✓ | ✓ | **R** | Continue to coordinate economic developr industries that will be rail customers, creati |
| Traffic and Transportation System Compatibility Category | | | | | |
| Evacuation Route: SR 40, | | ✓ | ✓ | **C** | Publicize preferred routes; recommend adc coordinated emergency management / resp |
| Evacuation Route: Colerain Rd | | ✓ | ✓ | **R** | Address in Hazard Mitigation Plan update ( |
| Evacuation Route: St. Marys Rd | | ✓ | ✓ | **S** | Secure funding for needed improvements t comprehensive planning and hazard mitigati |
| Evacuation Route: Scrubby Bluff | | ✓ | ✓ | **O** | Protect evacuation routes in general, and sp residential areas, through zoning enforceme term planning strategies. $$ |
| Bike/Ped Trail | | ✓ | ✓ | **C** | Collaborate to identify further compatible community residents and base personnel to recreation purposes. $$$ |
| Local Road Level of Service (LOS) | | ✓ | | **S**<br><br>**O** | Prepare a multi-jurisdictional comprehensiv<br><br>Adopt access management techniques (e.g. currently have adequate access limitations. |
| Closed St. Marys Base Access Gate | ✓ | ✓ | | **S** | Evaluate and implement (if authorized) a pa gate opening and operation. $$ |
| Limited Access Corridors | | ✓ | | **O** | Strictly maintain access limitations of key ro and Colerain Road. $ |

| Compatibility Categories and Factors | Evaluation Criteria | | | Action Category | Summary of<br>($=no to minor cost, $$= |
|---|---|---|---|---|---|
| | Present/ Current Impact | Location/ Proximity | Potential for Future Impact | | |
| Legislative Initiatives Compatibility Category | | | | | |
| 3,000 Feet Military Review/Land Use Notification Area | ✓ | ✓ | ✓ | **O** | Expand review area through local policy an<br>for review (e.g. cell tower applications, occ |
| Education/Training Capacity Compatibility Category | | | | | |
| Technical School | ✓ | ✓ | ✓ | **R** | Continue to work cooperatively to bring a |
| Local Schools (K-12) | | ✓ | | **R**<br>**R**<br>**R** | Continue to promote military and commur<br>Continue and expand collaboration on loca<br>schools and post-secondary institutions wit<br>presentations to teachers/students. $<br>Continue and expand the SUBASE Kings Ba<br>more local schools. $ |
| Threatened and Endangered Species Compatibility Category | | | | | |
| Manatee Protection Area | ✓ | ✓ | ✓ | **C**<br>**R**<br>**S** | Cooperate with ongoing US Navy manatee<br>Continue local boater avoidance education<br>Continue to implement SUBASE Kings Bay |
| Gopher Tortoise Habitat | ✓ | ✓ | ✓ | **R**<br>**S**<br>**S** | Continue to implement gopher tortoise ma<br>Update 1996 gopher tortoise study or con<br>In conjunction with Airport property redev |
| Right Whale Habitat | | ✓ | ✓ | **R** | August 2013 Atlantic Fleet Training and Te<br>avoidance or minimization of conduct of sp |
| Natural Hazards Mitigation Compatibility Category | | | | | |
| Sea Level Rise | | ✓ | ✓ | **S** | Use NOAA sea level study findings in futur<br>Plan (2015); Coordinate with DCA and GE<br>hazard mitigation planning in the communit |
| Frequency Spectrum Capacity Compatibility Category | | | | | |
| Frequency Spectrum Interference/Impedance | | | ✓ | **C** | If communications change in the future suc<br>issue, SUBASE Kings Bay should inform loc<br>issues. $ |

## 5.3 Conclusion

The participating entities in the Camden Kings Bay JLUS are well-coordinated, cooperative and mutually supportive of the long term sustainability of SUBASE Kings Bay and the broader Camden County community. The JLUS process has reinforced the importance of collaboration among military and community entities and has brought to light a wide range of factors to jointly address, including those anticipated at the outset of the JLUS process as well as many identified during the course of the process with assistance from participating citizens and stakeholders.

To effectively carry through with implementation of JLUS recommendations, it is important for focused multi-agency coordination forums to continue. Specifically, the Technical Committee, where key staff members from the communities and SUBASE Kings Bay have explored all issues through detailed discussions in the course of JLUS preparation, should be continued as a working group, and shift focus on initiating and tracking implementation. Similarly, the Policy Committee, where community elected officials representing each jurisdiction met regularly with SUBASE Kings Bay executive officers through the JLUS process, should be continued through periodic meetings, with input from the Technical Committee. In addition to the benefits of periodic review of JLUS implementation progress, this forum offers the simple but valuable opportunity for community leaders and SUBASE Kings Bay leaders to strengthen relationships.

Finally, for implementation of JLUS recommendations to be accomplished in an effective manner, it is incumbent on the local government bodies of Camden County, Kingsland, St. Marys and Woodbine to individually consider and approve the JLUS recommendations as applicable to their jurisdiction. Formal approval will provide the local government staff members with authorization to proceed with implementation through coordinated efforts.