Final

ENVIRONMENTAL ASSESSMENT
ADDRESSING THE
EMERALD BREEZE RESORT,
SANTA ROSA ISLAND, FORT WALTON BEACH, FLORIDA

96TH AIR BASE WING
EGLIN AIR FORCE BASE, FLORIDA

RCS 07-874

AUGUST 2009

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
11 SEP 2009	**Environmental Assessment**	**00-00-2006 to 00-00-2009**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Final Environmental Assessment Addressing the Emerald Breeze Resort, Santa Rosa Island, Fort Walton Beach, Florida	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **United States Air Force,Eglin Air Force Base,Okaloosa,FL,32542**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT
Final Environmental Assessment Addressing the Emerald Breeze Resort, Santa Rosa Island, Fort Walton Beach, Florida

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**244**	

FINDING OF NO SIGNIFICANT IMPACT/ FINDING OF NO PRACTICABLE ALTERNATIVE FOR THE EMERALD BREEZE RESORT, SANTA ROSA ISLAND, FORT WALTON BEACH, FLORIDA

Pursuant to the Council on Environmental Quality regulations for implementing procedural provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1500–1508), 32 CFR Part 989 and Department of Defense Directive 6050.1, the U.S. Air Force (USAF), 96th Air Base wing, prepared an Environmental Assessment (EA) to identify and evaluate potential effects associated with constructing and operating the Emerald Breeze Resort on USAF property on Santa Rosa Island, Fort Walton Beach, Florida. This EA is incorporated by reference into this finding.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Eglin Air Force Base (AFB) proposes to enter into a long-term lease of Eglin real property under Enhanced Use Lease (EUL) authority for the purpose of constructing and operating a resort hotel and conference center on underutilized, high-value beachfront USAF property that could provide a steady income stream to Eglin AFB. Under the Proposed Action, the USAF would enter into a long-term EUL with a private developer, chosen through a competitive selection process, with the intent that the developer construct and operate the resort. Eglin AFB would have considerable flexibility ensuring the best use of the asset, and would realize the potential cash or in-kind consideration that the proposed site would generate as a commercial beachfront development.

Alternatives Considered but Eliminated from Detailed Analysis

The option of selling the proposed site outright to a developer or transferring ownership to another Federal agency was raised. Eglin AFB does not have the authority to sell property or transfer ownership. Furthermore, the proposed site continues to be needed to support the Eglin AFB test mission and it would no longer be available for this purpose if it were to leave the USAF real property inventory. Therefore, this alternative was eliminated from further detailed analysis in the EA. The prospect of implementing a long-term lease of Eglin real property under EUL authority at another location was considered. Due to the high level of development that has occurred in the Santa Rosa Island area already, there is little land remaining that is developable. To the east and west of the strip of development on Santa Rosa Island is land owned by Eglin AFB (see Figure 1-1, page 1-3 of the EA), which is undeveloped at the moment and there are no current plans for development. Further along Santa Rosa Island is the Gulf Islands National Seashore Park, which would not be developed. Due to the distance from the existing strip of development and the presence of the Gulf Islands National Seashore Park, the additional areas on Santa Rosa Island owned by Eglin AFB were not considered as potential locations for the proposed resort and are therefore not carried forward for detailed analysis. In addition, the proposed site would continue to remain an underutilized USAF property. Currently, the parcel is bordered by resort development on both sides, which significantly restricts potential use.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The Proposed Action, identified in the EA as the preferred alternative, consists of constructing a resort complex consisting of hotel facilities (e.g., parking, lodging, lobby, and conference areas), restaurants, bars, swimming pools, and light retail. The resort complex would be similar in size and facilities to resorts along U.S. Highway 98. Although the EUL developer could propose more or fewer guest rooms in the resort, the Proposed Action assumes 250 guest rooms. The existing Test Site

A-5 facility, an asphalt driveway and parking lots, foundations, and utility infrastructure would be demolished in order to make space for the proposed development.

A portion of the roof will be made available for Eglin AFB range instrumentation with dedicated offices for range personnel and equipment. The USAF would require this instrumentation, offices, and equipment to maintain its Test Site A-5 mission. Most of the rooms at the resort will be for public use with a select number of room blocks dedicated for DOD and USAF personnel. All utilities will originate from city and county infrastructure availability.

No Action Alternative: Under the No Action Alternative, the USAF would not lease the property to construct a resort complex on Santa Rosa Island. A resort complex would not be constructed, and the high-value USAF real property asset would continue to be underutilized. A significant potential source of income to Eglin AFB would not be realized.

ENVIRONMENTAL CONSEQUENCES

Proposed Action—Preferred Alternative

Acoustical Environment: Short-term minor adverse effects are anticipated as a result of construction activities under the Preferred Alternative. Noise from construction activities varies depending on the type of construction being done, the area that the project would occur in, and the distance from the source. Noise effects from increased traffic due to construction vehicles would also be temporary in nature. Long-term minor adverse effects on the ambient environment are anticipated as a result of the increase in vehicular traffic under the Preferred Alternative. The proposed site is 1.9 miles from the 65 decibel noise contour, which is outside of the current Eglin AFB aircraft operations.

Land Use: No adverse effects on land use would be anticipated by implementing the Preferred Alternative. Under the Preferred Alternative, land would be used for commercial purposes, which would be consistent with the surrounding commercial uses. The Proposed Action would not preclude the viability of existing adjacent land uses or future plans since it is compatible with the land use on the current site. Noise is not anticipated to impact adjacent populations due to the activities of the resort. The Preferred Alternative would result in temporary minor adverse impacts due to an increased presence of construction vehicles and disturbances related to construction activities. These activities are not expected to result in incompatible land use.

Air Quality: The Preferred Alternative would have short-term and long-term minor adverse effects on air quality. The estimated emissions from the Preferred Alternative would represent a minor percentage of the air emissions inventory locally in Okaloosa County and would represent a negligible percentage of the air emissions inventory regionally within the MPPCSMI AQCR. The Preferred Alternative would contribute directly to emissions of greenhouse gases from the combustion of fossil fuels from construction equipment and commuter vehicles. Construction activities and operations would have minor adverse contributions to greenhouse gas emissions locally. The Preferred Alternative would have a negligible contribution towards statewide greenhouse gas inventories.

Safety: Short-term, minor direct adverse effects would be expected from the Preferred Alternative during construction and demolition activities. No long-term operational safety impacts would be expected. Implementation of the Preferred Alternative would slightly increase the short-term risks associated with construction contractors performing work at the proposed site during the normal workday because the level of such activity would increase. Contractors would be required to establish and maintain safety programs.

Geological Resources: Negligible to minor impacts would be expected from implementation of the Preferred Alternative. No geologic hazards exist for the proposed site. Each soil unit was analyzed to determine any construction and operational limitations according to the Natural Resources Conservation Service Web Soil Survey. Construction of the resort and related infrastructure would be somewhat limited by the Newhan-Corolla complex due to slope and flooding potential. As these soil units could pose construction issues, best management practices (BMPs) should be implemented to aid in the design and construction processes for mitigation purposes. A site-specific Storm Water Pollution Prevention Plan would be required that identifies appropriate erosion and sediment control and storm water management measures.

Removal or alteration of dunes can be detrimental and could result in minor adverse impacts. A plan for the restoration of altered dunes must first be approved by the Board of County Commissioners if construction activities would alter or degrade the dune system.

Water Resources: Implementation of the Preferred Alternative has the potential to result in short- and long-term adverse effects on water resources. Implementation of BMPs, appropriate management of storm water during and following construction, and adherence to all required permits would reduce the potential for adverse effects such that only minor effects would be expected.

Two small, jurisdictional wetlands are located within the Preferred Alternative. Because they were probably created to provide fill material for construction of U.S. Highway 98, their overall quality is considered low. If during construction these wetlands cannot be avoided and must be removed, the developer would be required to mitigate by compensating their loss (i.e. enhancing other remaining wetlands on Santa Rosa Island). The type(s) of mitigations required will be determined by the United States Army Corps of Engineers once the developer submits the required Clean Water Act Section 404 permits and Section 401(a) water quality certifications. By incorporating these mitigations into the construction process, overall impacts to wetlands will be minimized.

Biological Resources: Implementation of the Preferred Alternative would likely have only minor adverse effects on existing natural vegetation and land cover on the proposed site. Implementation of the Preferred Alternative would likely have only minor adverse effects on the existing wildlife habitat and populations on the proposed site. Implementation of the Preferred Alternative is not likely to adversely affect any Federal-listed or state-listed species. The U.S. Fish and Wildlife Service (USFWS) has agreed with Eglin AFB natural resources staff in a determination of "*not likely to adversely affect*" with the inclusion of the following conditions. The biological assessment (BA), signed by USFWS, is contained in an appendix to the EA. The conditions in the BA that must be met include:

1. Lighting in the facility and parking areas will be kept to a minimum and will be sea turtle friendly.
2. Boardwalks will be considered to preserve existing and future dune systems.
3. As much as possible, the existing dune systems and vegetation will be kept intact.
4. Predator control measures will be implemented (i.e., predator-proof trash cans).
5. The USFWS will review the final design for site layout and construction of the facility.

To avoid and minimize the potential for adverse impacts, sea turtle monitoring would include Eglin AFB's routine monitoring protocol, which is discussed in detail in the BA specific to this Proposed Action. The chosen developer would be responsible for implementing all conditions listed in the BA and other operational procedures listed in an appendix to the EA addressing BMPs.

Socioeconomic Resources and Environmental Justice: The Preferred Alternative would result in minor to moderate beneficial effects on socioeconomic resources. The resort would result in short- and long-term increases in civilian employment opportunities. The region of influence does not have a

disproportionate number of minority or low-income populations; therefore, no environmental justice issues would be expected. It is not anticipated that construction of the proposed facility would require unusual procedures, materials, or equipment. Therefore, there are no anticipated environmental effects of the Preferred Alternative that would disproportionately affect children.

Indirect effects from the proposed construction projects are expected to be both short- and long-term and beneficial on the local economy and employment. Indirect short-term moderate minor beneficial effects could include construction expenditures for building materials, construction workers wages and taxes, taxes created by the new retail outlets, and purchases of goods and services in the area. The long-term benefits include the addition of both new permanent and temporary construction jobs, and the increased tax base from the addition of new businesses to Santa Rosa Island and Fort Walton Beach. Therefore, short- and long-term beneficial effects are the expected results of the Proposed Action.

Cultural Resources: Cultural resource impacts are not subject to detailed analysis in the EA for the following reasons. Earlier archaeological surveys of the entire project area indicated that no archaeological resources are present at the proposed project location. State Historic Preservation Officer (SHPO) concurrence was received on 30 December 2005. A 2003 Programmatic Agreement (PA) among the Air Armament Center, Eglin AFB, The Advisory Council on Historic Preservation, and the Florida SHPO established a process that activities which do not affect historic properties shall, upon review by the Base Historic Preservation Officer (BHPO), be exempt from further consultation under Section 106 of the National Historic Preservation Act (NHPA).

Building 8502 is the only standing structure in the project area and it is to be demolished under the Proposed Action. The 96th Civil Engineer Group, Cultural Resources Branch notified the SHPO by telephone and received a response that the building was not eligible for listing in the National Register of Historic Places and, therefore, is not considered a historic property. A letter also was received from the SHPO (30 Jan 09) supporting the determination of no historic properties affected under the proposed project.

In planning efforts Eglin AFB consults five federally-recognized tribes: Miccosukee Tribe of Indians of Florida; Muskogee (Creek) Nation, Oklahoma; Poarch Band of Creek Indians of Alabama; Seminole Tribe of Florida; and Thlopthlocco Tribal Town, Oklahoma. In a meeting with four of these tribes on 17 Sep 08, the Eglin BHPO agreed verbally that consultation would be conducted anytime impact is likely to occur to a known site and anytime there is an inadvertent discovery. Since no historic properties are known to be present at this location, tribes were not contacted.

Should the Proposed Action require the use of fill material to be brought on site or the off-site disposal of excavated material, such plans must be communicated to the BHPO. The BHPO would make a determination whether or not the SHPO/tribes should be consulted under provisions of NHPA.

During construction and for the life of the project, any inadvertent findings (Section 106 "*Post-review Discoveries*") of archaeological materials, human remains, or other cultural resources findings of interest would be treated under provisions of Eglin AFB's Integrated Cultural Resources Management Plan. Construction and operation agreements (i.e., construction contracts, the Emerald Breeze Resort lease documents) would specify appropriate procedures for coordination between the 96th Air Base Wing and non-USAF parties associated with the proposed undertaking, should unexpected discoveries be made.

Traffic: Under the Preferred Alternative, construction of the proposed project is anticipated to have no adverse effects on the surrounding transportation system. Construction is assumed to utilize normal construction methods which will be confined to the boundaries of the site. The anticipated volume of

construction vehicles will be very low in comparison to existing traffic volumes. These combined factors result in there being no anticipated adverse effects related to construction activities on the site.

The full occupancy of the proposed resort is expected to have only long-term minor adverse effects on traffic operations in the vicinity of the site. The traffic operations assessment of the adjacent roadways and intersections show that although traffic exiting the site to travel west on U.S. Highway 98 will experience noticeable delays; this will have no adverse effects on traffic traveling on U.S. Highway 98.

Utilities and Infrastructure: Short-term and long-term, direct, minor adverse effects on water supply are expected as a result of the construction and operation of the Proposed Action. The additional infrastructure and population projected for the area would increase the county demand for potable water; however, there are alternative water source options that would absorb the additional needs. Water resource needs are also being addressed through the creation of regional wellfields and supply systems, special permitting requirements, and long-range planning.

Minor short-term and long-term impacts would be expected on solid waste management as a result of construction debris. Debris that is not recycled would be put in a landfill, which would be considered a minor long-term irreversible adverse effect. Minor short-term and long-term impacts would also be expected on solid waste management as a result of the generation of packaging debris and food waste that would be generated from retail stores and restaurants and common household trash generated by hotel guests.

Hazardous Materials and Wastes: Long-term minor adverse effects would be expected on pollution prevention goals as a result of constructing and operating the proposed resort. Long-term minor adverse effects would be expected as a result of the use of hazardous materials during the construction process. It is not anticipated that large volumes of hazardous materials would be used during operation of the Preferred Alternative; most hazardous materials use would be of small quantity and considered household hazardous materials (e.g., cleaning solutions, paint). Short-term minor adverse effects would be expected from the generation of hazardous wastes during the construction process. There are no Environmental Restoration Program-related sites on the proposed site and, therefore, no effects would be expected from implementation of the preferred alternative.

Cumulative Effects: Construction and operation of the proposed resort would lead to a small increase in regional cumulative air pollutants. This small increase would represent a minor short- and long-term cumulative impact on the regional air quality. The addition of impervious surfaces on the proposed site would lead to a minor cumulative impact on regional geological resources due to similar beach development on Santa Rosa Island. The proposed resort would also increase the demand for potable water and lead to a minor adverse cumulative impact on the overall water supply of the region. Water would be obtained through municipal supply and water saving techniques and design features would be integrated into the proposed development. The proposed resort would lead to a minor overall increase in the adverse effects on biological resources on Santa Rosa Island caused by other past, present, and future projects in the region. Construction expenditures and long-term tourism taxes and would contribute a minor beneficial impact on the regional economy in Okaloosa County. The traffic impact analysis indicates there would be a negligible impact on area roadways. Therefore, the overall cumulative impact of the proposed resort on the regional transportation system would be negligible. The overall cumulative effects of the Proposed Action would not be significant.

PUBLIC REVIEW AND INTERAGENCY COORDINATION

A public notice was published in the *Northwest Florida Daily News* on January 23, 2009. The comment period closed on March 12, 2009. The Final EA was prepared after considering all public and agency comments that were received on the Draft EA. Comments were received on a wide range of topics such

as concerns over potential impacts on local hotels, traffic, flooding issues, and habitat issues. Other comments were received expressing support for the Proposed Action. Public and agency comments were addressed through a comment response matrix contained in the EA appendix, and by making clarifications or changes to the Final EA text, where warranted.

FINDING OF NO PRACTICABLE ALTERNATIVE

Taking the above information into consideration, pursuant to Executive Order 11988, *Floodplain Management;* Executive Order 11990, *Protection of Wetlands;* and the authority delegated by Secretary of the Air Force Order 791.1, I find there is no practicable alternative to conducting the Proposed Action within the floodplain and wetland areas. Much of the proposed site is within the 100-year floodplain as mapped by the Federal Emergency Management Agency; therefore, any development on the proposed site would necessarily be located within the 100-year floodplain. Because two wetlands have the potential to be impacted due to the proposed development, and these impacts would be minimized by incorporation of mitigations, this Finding of No Practicable Alternative is contingent upon permit approval by the United States Army Corps of Engineers pursuant to Title 33 United States Code Section 1344 and the specified mitigations contained within the permits. This finding fulfills both the requirements of the referenced Executive Orders and 32 CFR Part 989.14 requirements for a Finding of No Practicable Alternative.

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the Council on Environmental Quality regulations implementing the NEPA of 1969, as amended, and Environmental Impact Analysis Process, 32 CFR 989, an assessment of the identified environmental effects has been prepared for the Emerald Breeze Resort. I have determined that the Proposed Action would not have a significant impact on the quality of the human or natural environment and, therefore, an Environmental Impact Statement does not need to be prepared.

Timothy K Bridges

11 SEP 2009

TIMOTHY K. BRIDGES, SES
Command Civil Engineer
Installations and Mission Support

COVER SHEET

FINAL
ENVIRONMENTAL ASSESSMENT
ADDRESSING THE
EMERALD BREEZE RESORT, SANTA ROSA ISLAND,
FORT WALTON BEACH, FLORIDA

Responsible Agencies: U.S. Air Force (USAF), 96th Air Base Wing, Eglin Air Force Base (AFB), and Air Force Materiel Command.

Affected Location: Test Site A-5, Fort Walton Beach and Eglin AFB, Florida.

Report Designation: Final Environmental Assessment (EA).

Abstract: Eglin AFB proposes to enter into a long-term lease of Eglin real property under Enhanced Use Lease (EUL) authority for the purpose of constructing and operating a resort hotel and conference center on underutilized USAF property that could provide a steady income stream to Eglin AFB. Under the Proposed Action, the USAF would enter into a long-term EUL with a private developer, chosen through a competitive selection process, with the intent that the developer construct and operate the resort. Eglin AFB would stipulate to the developer that the USAF has the need to maintain rooftop low-power receivers and passive sensor equipment for continued occasional use of the proposed site for Eglin test missions. To support the missions, sufficient space would be provided to operate and maintain equipment when required. The rooftop space and offices would be secure access only. The resort would be open for use by the general public, and a percentage of rooms will be available at a discounted rate for military and Department of Defense (DOD) use. Actual number of rooms and discount rate will be determined during lease negotiations.

This Final EA evaluates the potential environmental consequences of the Proposed Action and the No Action Alternative, on the following 11 general impact topics: acoustic environment, land use, air quality, safety, geological resources, water resources, biological resources, socioeconomic resources and environmental justice, traffic, utilities, and hazardous materials and wastes.

Privacy Advisory

Your comments on this Final EA are requested. Any personal information provided, including private addresses, will be used only to compile a mailing list to fulfill requests for copies of the Final EA or associated documents. Only the names and respective comments of respondent individuals will be disclosed: personal home addresses and phone numbers will not be published.

Final

ENVIRONMENTAL ASSESSMENT
ADDRESSING THE
EMERALD BREEZE RESORT,
SANTA ROSA ISLAND, FORT WALTON BEACH, FLORIDA

96th Air Base Wing

Eglin Air Force Base, Florida

RCS 07-874

AUGUST 2009

FINAL
ENVIRONMENTAL ASSESSMENT
ADDRESSING THE EMERALD BREEZE RESORT, SANTA ROSA ISLAND, FORT WALTON BEACH, FLORIDA

TABLE OF CONTENTS

ACRONYMNS AND ABBREVIATIONS v

1. PURPOSE OF AND NEED FOR THE PROPOSED ACTION 1-1

1.1 INTRODUCTION 1-1
1.2 PURPOSE AND NEED 1-2
1.3 EGLIN AFB LOCATION AND BACKGROUND 1-2
1.4 REGULATORY COMPLIANCE 1-4
1.4.1 National Environmental Policy Act 1-4
1.4.2 Applicable Environmental and Regulatory Compliance 1-4
1.4.3 Scope of the Environmental Assessment 1-5
1.4.4 Issues Eliminated from Detailed Analysis 1-5
1.4.5 Applicable Permits, Approvals, and Consultations 1-6
1.4.6 Interagency and Intergovernmental Coordination for Environmental Planning and Public Involvement 1-8
1.5 ORGANIZATION OF THIS DOCUMENT 1-9

2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES 2-1

2.1 INTRODUCTION 2-1
2.2 SELECTION CRITERIA 2-1
2.3 PROPOSED ACTION 2-1
2.3.1 Proposed Site 2-1
2.3.2 Detailed Description of the Proposed Action 2-5
2.4 ALTERNATIVES 2-6
2.4.1 Preferred Alternative 2-6
2.4.2 No Action Alternative 2-6
2.4.3 Alternatives Considered but Eliminated from Detailed Analysis 2-6

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES 3-1

3.1 ACOUSTICAL ENVIRONMENT 3-1
3.1.1 Definition of the Resource 3-1
3.1.2 Description of the Affected Environment 3-3
3.1.3 Environmental Consequences 3-3
3.2 LAND USE 3-5
3.2.1 Definition of the Resource 3-5
3.2.2 Description of the Affected Environment 3-6
3.2.3 Environmental Consequences 3-8
3.3 AIR QUALITY 3-8
3.3.1 Definition of the Resource 3-8
3.3.2 Description of the Affected Environment 3-11
3.3.3 Environmental Consequences 3-12
3.4 SAFETY 3-14
3.4.1 Definition of the Resource 3-14
3.4.2 Description of the Affected Environment 3-15
3.4.3 Environmental Consequences 3-15

3.5 GEOLOGICAL RESOURCES 3-16
3.5.1 Definition of the Resource 3-16
3.5.2 Description of the Affected Environment 3-17
3.5.3 Environmental Consequences 3-18
3.6 WATER RESOURCES 3-19
3.6.1 Definition of the Resource 3-19
3.6.2 Description of the Affected Environment 3-22
3.6.3 Environmental Consequences 3-25
3.7 BIOLOGICAL RESOURCES 3-29
3.7.1 Definition of the Resource 3-29
3.7.2 Description of the Affected Environment 3-31
3.7.3 Environmental Consequences 3-40
3.8 SOCIOECONOMIC RESOURCES AND ENVIRONMENTAL JUSTICE 3-46
3.8.1 Definition of the Resource 3-46
3.8.2 Description of the Affected Environment 3-47
3.8.3 Environmental Consequences 3-50
3.9 TRAFFIC 3-52
3.9.1 Definition of the Resource 3-52
3.9.2 Description of the Affected Environment 3-52
3.9.3 Environmental Consequences 3-52
3.10 UTILITIES AND INFRASTRUCTURE 3-56
3.10.1 Definition of the Resource 3-56
3.10.2 Description of the Affected Environment 3-56
3.10.3 Environmental Consequences 3-59
3.11 HAZARDOUS MATERIALS AND WASTE 3-61
3.11.1 Definition of the Resource 3-61
3.11.2 Description of the Affected Environment 3-62
3.11.3 Environmental Consequences 3-64

4. CUMULATIVE AND OTHER EFFECTS 4-1

4.1 CUMULATIVE EFFECTS 4-1
4.1.1 Past Development 4-1
4.1.2 Cumulative Effects by Resource Topic 4-2
4.2 COMPATIBILITY OF THE PROPOSED ACTION AND ALTERNATIVES WITH THE OBJECTIVES OF FEDERAL, REGIONAL, STATE, AND LOCAL LAND USE PLANS, POLICIES, AND CONTROLS 4-4
4.3 RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY 4-4
4.4 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES 4-4

5. REFERENCES 5-1

6. LIST OF PREPARERS 6-1

APPENDICES

A. Applicable Laws, Regulations, Policies, and Planning Criteria
B. Public Involvement
C. Photo Documentation of the Proposed Site
D. Calculations to Support the Noise Impact Analyses
E. Calculations to Support the Air Quality Impact Analyses
F. CZMA Consistency Coordination
G. Calculations to Support the Traffic Impact Analyses
H. Biological Assessment
I. Operational Requirements and Best Management Practices

FIGURES

1-1. Eglin Air Force Base Location Map 1-3
2-1. Overview of the Proposed Site of the Emerald Breeze Resort 2-2
2-2. Proposed Site 2-3
2-3. Resort Development Adjacent to Proposed Site (Western Side) 2-4
2-4. Resort Development Adjacent to Proposed Site (Eastern Side) 2-4
3-1. Eglin AFB Noise Contours 3-4
3-2. Existing Land Uses Surrounding the Proposed Site 3-7
3-3. Wetland Areas and Plant Communities at the Proposed Site 3-23
3-4. Critical Habitat and Sea Turtle Nesting Areas on Santa Rosa Island 3-35
3-5. Wetland Areas and Plant Communities on Santa Rosa Island 3-39
3-6. Census Tracks in the Socioeconomic ROI 3-49

TABLES

2-1. Emerald Breeze Resort Assumptions 2-5
3-1. Typical Outdoor Noise Levels 3-2
3-2. Predicted Noise Levels for Construction Equipment 3-2
3-3. National and State Ambient Air Quality Standards 3-10
3-4. Local and Regional Air Emissions Inventories 3-11
3-5. Reported Air Emissions and Potential to Emit Values for Eglin AFB 3-12
3-6. Estimated Air Emissions Resulting from Implementation of the Preferred Alternative 3-12
3-7. Category 1 and Category 2 Invasive Plant Species at Eglin AFB 3-33
3-8. Overview of Employment by Industry 3-48
3-9. Race and Poverty Characteristics 3-50
3-10. Total Preferred Alternative Generated Trips 3-53
3-11. Distribution of Site Trips 3-54
3-12. Peak Hour Intersection Traffic Volumes 3-54
3-13. Assumed Intersection Configurations 3-55
3-14. Peak Hour Site Access Intersection Operations 3-55
3-15. Water Source Options Data 3-59

THIS PAGE INTENTIONALLY LEFT BLANK

ABBREVIATIONS AND ACRONYMS

$\mu g/m^3$	microgram per cubic meter
ACM	asbestos-containing material
AFB	Air Force Base
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
AFPD	Air Force Policy Directive
AFRPA	Air Force Real Property Agency
AQCR	air quality control region
BA	Biological Assessment
BHPO	Base Historic Preservation Officer
BMP	Best Management Practice
BRAC	Base Closure and Realignment Commission
CAA	Clean Air Act
CEC	Capacity Expansion Charge
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dBA	A-weighted decibels
DNL	Day-Night Average A-weighted Sound Level

DOD	Department of Defense
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
ERP	Environmental Resource Permit
ESA	Endangered Species Act
EUL	Enhanced Use Lease
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FNAI	Florida Natural Areas Inventory
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
HAP	hazardous air pollutant
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
ITE	Institute of Transportation Engineers
JLUS	Joint Land Use Study

LBP	lead-based paint
LOS	level of service
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
mg/m^3	milligrams per cubic meter
MOU	Memorandum of Understanding
MPPCSMI	Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRS	Natural Resources Section
NWFWMD	Northwest Florida Water Management District
NWI	National Wetland Inventory
O_3	ozone
OCWS	Okaloosa County Water and Sewer System
OGD	Okaloosa Gas District
OSHA	Occupational Safety and Hazard Administration
Pb	lead
pCi/L	picocuries per liter
PM_{10}	particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$	particulate matter equal to or less than 2.5 microns in diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SARA	Superfund Amendments and Reauthorization Act
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
tpy	tons per year
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force

USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound

WRCA	Water Resource Caution Area
WRF	Water Reclamation Facility
WWTP	Wastewater Treatment Plant

1. Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) describes the Eglin Air Force Base (AFB) proposal to enter into a long-term lease of Eglin real property under Enhanced Use Lease (EUL) authority for the purpose of constructing and operating the Emerald Breeze Resort (hereinafter referred to as "resort"). This EA was prepared in accordance with the National Environmental Policy Act (NEPA) and will comply with the USAF *Environmental Impact Analysis Process* (EIAP), as set forth in 32 Code of Federal Regulations (CFR) Part 989, as amended; Council on Environmental Quality (CEQ) Regulations; and Department of Defense (DOD) Instruction 4715.9, *Environmental Planning and Analysis*.

The subject parcel is known as Test Site A-5 (hereinafter referred to as "the proposed site"), a beachfront property in a prime tourist area on Santa Rosa Island, Fort Walton Beach, Florida. The proposed site is mostly vacant except for a small building and scattered utilities infrastructure that are occasionally used to support test missions at Eglin AFB. Due to its prime beachfront and resort area location, the proposed site has been identified by the Air Force Real Property Agency as an underutilized U.S. Air Force (USAF) property with significant income potential that could benefit Eglin AFB.

EULs are opportunities for the USAF to partner with private industry by leasing underutilized assets. These assets can bring numerous opportunities for land use improvements, such as office space, flight line and hangar facilities, warehouses and industrial buildings, laboratories and research and development facilities, energy co-generation plants, hotels and temporary lodging, or conference centers (USAF 2008a). The USAF is facing unexpected strains on its resources, including budget shortfalls, rising fuel prices, the costs of fighting the global war on terror, and restrictions on retiring weapon systems. In response to these factors, the USAF is transforming itself to guarantee it can continue to accomplish its mission. Part of this transformation is to utilize innovative business practices, such as EUL, to provide value to the American warfighter (USAF 2008b).

Through EUL projects, developers can establish long-term relationships with private and government partners who are potential tenants with specific real estate needs. Developers can also receive market rates of return on design, construction, maintenance, tenant leases, and property management activities. EUL projects cultivate meaningful support and improvement for the surrounding community through providing job opportunities and helping to stimulate further economic growth. USAF and community relationships are also strengthened as EULs enable joint cooperation to accomplish mutual goals (USAF 2008a).

The intended use of the proposed site would be as a hotel/resort development that would provide services to a combination of active-duty and reserve military service members and their guests, and the general population. The USAF is looking to the development community to determine a means of satisfying the intended use and maximizing value to Eglin AFB, with either cash or through in-kind consideration.

The Okaloosa County area where the proposed site is located has been identified as the second ranked tourist destination in the State of Florida. Approximately 7 million visitors traveled to northwestern Florida in 2006 and, of this 7 million, about 4.1 million stayed on the Emerald Coast, the area of the Gulf Coast stretching approximately from Pensacola to Port St. Joe, Florida. The main attractions driving tourism traffic are the beach and waterfront activities. The proposed site is well-situated to take advantage of the area's existing strength in tourism, offering 595 linear feet of shoreline along the Gulf of Mexico and nearby access to amenities including restaurants, shopping, golf, and water activities (USAF 2008c).

The Okaloosa County economy provides a favorable backdrop for the thriving tourism industry. Three military installations located in Okaloosa County (i.e., Eglin AFB, Hurlburt Field, and Duke Field) serve as economic generators for the area, with a combined economic impact of as much as $5 billion annually (USAF 2008c).

The county features an educated, growing workforce to support ongoing growth in the tourism industry, which generated close to $800 million in revenues in 2006. Revenues from tourism have grown approximately 28 percent from 2000 to 2006 (USAF 2008c).

1.2 Purpose and Need

The purpose of the Proposed Action is for the USAF to make the best use of a high-value real property asset that is currently underutilized. The Proposed Action would be implemented by entering into a long-term lease with a private developer with the intent to construct and operate a beach resort and conference center on the underutilized real property asset. The USAF intends to advance the Proposed Action under the EUL program.

The Proposed Action is needed because Eglin AFB owns and manages a high-value beachfront real property asset that is currently underutilized. Through the proposed long-term lease of the site to a private developer under the EUL program, Eglin AFB would have considerable flexibility ensuring the best use of the asset, and would realize the potential cash or in-kind consideration that the proposed site would generate as a commercial beachfront development.

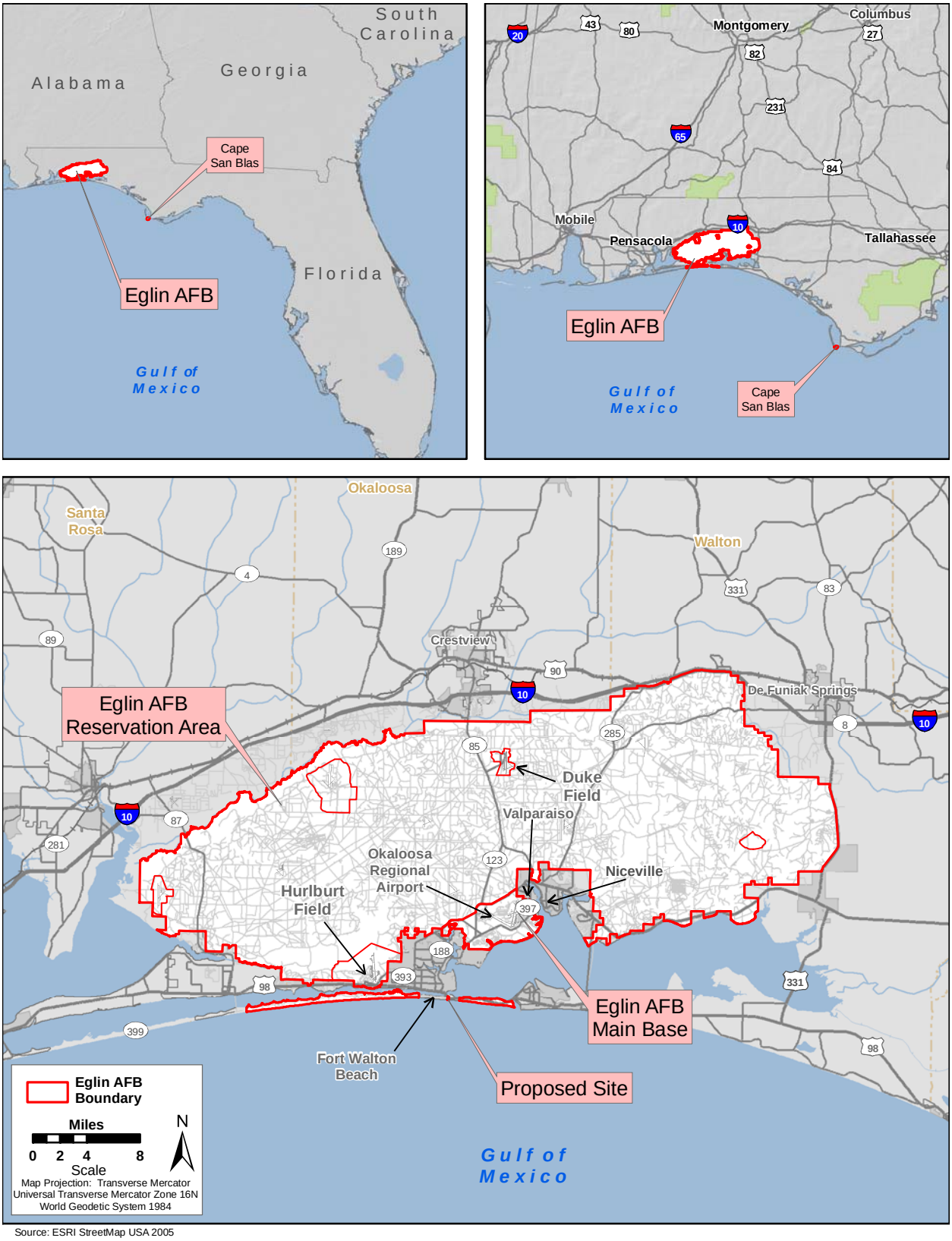
1.3 Eglin AFB Location and Background

Eglin AFB is situated in the panhandle of Florida and is spread out over the southern portions of Santa Rosa, Okaloosa, and Walton counties with a detachment on Cape San Blas in Gulf County (see **Figure 1-1**). The largest military installation in the DOD inventory, Eglin AFB composes 724 square miles of land area. Eglin's "Main Base" occupies 10,500 acres, (16 square miles) of the total land area, and is adjacent to Valparaiso, Florida, and 10 miles northeast of Fort Walton Beach, Florida. The flightline at the south-southwestern edge of Eglin Main Base is used for military aircraft operations. Commercial flights operate out of Northwest Florida Regional Airport, which is at the southwestern edge of the Main Base, and utilize Eglin AFB's runways. Hurlburt Field, home of the USAF Special Operations Command, is 5 miles west of Fort Walton Beach, Florida. Surrounding the Main Base area is the Eglin AFB Reservation Area, which provides adjacent lands for air-to-ground ranges and facilities for other activities associated with the test and evaluation of military equipment and munitions. The Main Base area and the Reservation Area are shown on **Figure 1-1**.

Eglin AFB is under the command of the Air Force Materiel Command. Eglin AFB is a national asset, operated and maintained by the Air Armament Center. It serves several DOD components responsible for developing, testing, and operating weapons systems. Eglin AFB supports training activities for numerous military units, military schools, and various Federal agencies. The installation houses a USAF Research Lab and, because of its leading work in this important military sector, there are many technology-based and defense contracting firms within Okaloosa, Walton, and Santa Rosa counties, Florida. According to the most recent data available, in fiscal year 2007, Eglin AFB accomplished the following (Eglin AFB 2007):

- Created approximately 12,000 nonactive-duty jobs in the local community
- Had a $1.7 billion impact on the local economy

- Directly employed approximately 13,800 military personnel and 8,500 civilians (appropriated and nonappropriated, contract civilians, and private business employees)



Source: ESRI StreetMap USA 2005

Figure 1-1. Eglin Air Force Base Location Map

- Supported approximately 11,000 military family members
- Supported approximately 45,000 retired military members in the local community.

In 2005, the Base Closure and Realignment Commission recommended specific military installation closures and asset realignment to streamline military operations. As a result of the 2005 Defense Base Closure and Realignment Commission (hereinafter referred to as "2005 BRAC Commission") decisions, an additional 5,000 personnel and 7,000 family members are expected to be added to the local population at Eglin AFB by 2015 (EDCOC 2008a).

1.4 Regulatory Compliance

1.4.1 National Environmental Policy Act

Under NEPA (1969), Federal agencies are required to assess the environmental consequences of their proposed actions systematically during the decisionmaking process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions. The NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. The CEQ was established under NEPA to implement and oversee Federal policy in this process. In 1978, the CEQ issued regulations implementing the process (40 CFR Parts 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*) and specified the following reasons to prepare an EA:

- Briefly provide evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI)
- Aid in an agency's compliance with NEPA when an EIS is unnecessary
- Facilitate preparation of an EIS when one is necessary.

The USAF has CEQ-approved regulations that supplement the CEQ regulations, found within Air Force Instruction (AFI) 32-7061, EIAP, as set forth in 32 CFR Part 989, as amended.

1.4.2 Applicable Environmental and Regulatory Compliance

To comply with NEPA, the planning and decisionmaking process for Federal actions involves a study of relevant environmental statutes and regulations. The NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decisionmaker to have a comprehensive view of major environmental issues and requirements associated with a proposed action. According to CEQ regulations, the requirements of NEPA must be integrated "with other planning and environmental review procedures required by law or by agency so that all such procedures run concurrently rather than consecutively."

Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states that the USAF will comply with applicable Federal, state, and local environmental laws and regulations, including NEPA. Through the analysis that will be conducted as part of the EA, the Proposed Action and alternatives will be assessed to ensure compliance with all applicable laws and regulations, such as the Clean Air Act (CAA); the Clean Water Act (CWA); the Endangered Species Act (ESA); the National Historic Preservation Act (NHPA); the Archaeological Resources Protection Act; the Solid Waste Disposal Act; and AFI 91-301, *Air Force*

Occupational and Environmental Safety, Fire Protection, and Health Program. **Appendix A** contains a representative listing and a more detailed description of laws, regulations, and Executive Orders (EOs) associated with various resource areas that are relevant to the Proposed Action.

EO 11988, *Floodplain Management* (24 May 1977), directs agencies to consider alternatives to avoid adverse effects and incompatible development in floodplains. An agency may locate a facility in a floodplain if the head of the agency finds there is no practicable alternative. In such cases, agencies must follow the Federal Emergency Management Agency (FEMA) 8-step process for siting in a floodplain. The proposed site is located in the 100-year floodplain. Therefore, the FEMA 8-step process must be followed, with each of the 8 steps corresponding to the various steps of the EA development process under NEPA. A Finding of No Practicable Alternative (FONPA) would be included in the decision document for the Proposed Action.

Similarly, in accordance with EO 11990, *Protection of Wetlands* and AFI 32-7064, *Integrated Natural Resources Management*, the USAF maintains a no net loss policy regarding all wetlands and must demonstrate that there are no practicable alternatives to construction within wetlands. Wetland areas have been identified on the proposed site that would be impacted through implementation of the Proposed Action. Therefore, the decision document for the EA would include a FONPA for wetland impacts that could not be avoided. The FEMA 8-step process will be followed as described for floodplain development, above.

1.4.3 Scope of the Environmental Assessment

The EA will analyze the following 11 general impact topics: acoustical environment, land use, air quality, safety, geological resources, water resources, biological resources, socioeconomic resources and environmental justice, traffic, utilities and infrastructure, and hazardous materials and wastes.

1.4.4 Issues Eliminated from Detailed Analysis

Potential cultural resource impacts are not analyzed in detail in the EA because surveys indicate that no cultural resources are present at the proposed site (Gaske 2005, Rodriguez 2005). In addition, consultation with the state historic preservation office under Section 106 of the National Historic Preservation Act (NHPA) specific to this undertaking has concluded in a determination that no historic properties would be affected (see **Appendix B**). A programmatic agreement (see **Appendix B**) between the Advisory Council on Historic Preservation (ACHP), the Florida State Historic Preservation Office (SHPO), and Eglin AFB sets forth standards and guidelines that activities which do not affect historic properties shall, upon review by the Base Historic Preservation Office (BHPO), be exempt from further consultation under Section 106 of the NHPA. The Eglin AFB BHPO notified the SHPO by phone and received a response that no historic properties are located on the proposed site, and the BHPO has determined further consultation under Section 106 of the NHPA is not necessary, in accordance with the programmatic agreement. The SHPO was afforded another opportunity to review the proposed undertaking through the Florida Clearinghouse environmental review process, but had no comments or concerns.

As described in the Eglin AFB Integrated Cultural Resources Management Plan (ICRMP), any action that causes disturbance to the surface of the earth has the potential to adversely affect buried archaeological resources (Eglin AFB 2003a). Therefore, under the Proposed Action, should any unexpected discoveries be made during the construction process, all actions in the immediate vicinity would cease and efforts would be taken to protect the archaeological resources from further effect. The 96th Civil Engineer Group, Cultural Resources Branch, would be contacted to evaluate the inadvertent find and determine what legal mandates are applicable and whether mitigation and consultations would be required (Eglin

AFB 2003a). Should any archaeological resource or human burial site be found on the proposed construction site, such a find would be treated in accordance with Standard Operating Procedures listed in the Eglin AFB ICRMP and guidelines specified in Florida Statute §872.05 regarding unmarked human burial sites. Construction and operation agreements (i.e., construction contracts, the Emerald Breeze Resort lease documents) would specify appropriate procedures for coordination between the 96th Air Base Wing and non-USAF parties associated with the proposed undertaking, should unexpected discoveries be made.

In planning efforts Eglin AFB consults five federally recognized tribes: Miccosukee Tribe of Indians of Florida; Muskogee (Creek) Nation, Oklahoma; Poarch Band of Creek Indians of Alabama; Seminole Tribe of Florida; and Thlopthlocco Tribal Town, Oklahoma. In a meeting with four of these tribes on 17 September 2008, the Eglin BHPO agreed verbally that consultation would be conducted anytime impact is likely to occur to a known site and anytime there is an inadvertent discovery. Since no sites are known to be present at this location, Tribes were not contacted.

1.4.5 Applicable Permits, Approvals, and Consultations

Appendix A contains examples of relevant laws, regulations, and other requirements that are often considered part of the analysis. Only those laws, regulations, and other requirements that are relevant to the Proposed Action are included in **Appendix A**. In addition, various permits would be required for construction and operating activities. An EA is not a substitute for those permit requirements.

Air Force Form 103, *Base Civil Engineering Work Clearance Request*, is required under AFI 32-1031, *Operations Management*. The developer chosen to construct the proposed resort would be responsible for ensuring any necessary permits and approvals are in place prior to construction. Although precise permits are uncertain at the early stages of planning, the following permits and approvals would normally be required.

The Proposed Action began as a General Officer directed initiative, was approved by the Mission Enhancement Committee in November 2006, and was last briefed to the Range Development Executive Steering Committee in July 2008.

Permits

Water-Related Permits

Permits Associated with Construction Activities. An Environmental Resource Permit (ERP) for construction storm water discharges would be required from the Northwest Florida Water Management District (NWFWMD). Best management practices (BMPs) for control of erosion and sedimentation will be implemented in accordance with Federal, state, and local statutes. BMPs could include temporary sediment basins, sediment fencing, or revegetation for ground stabilization.

In addition to the ERP permit, a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges from large construction sites would be required through the Florida Department of Environmental Protection (FDEP).

Surveys of the proposed site have revealed the presence of wetlands that are considered to be under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE). Due to the likelihood for these wetlands to be impacted during the construction process, the developer would be required to coordinate with the USACE Jacksonville District prior to construction activities. A permit under Section 404 of the CWA would be required, in addition to state water quality certification review under Section 401 of the CWA.

Permits Associated with Operational Activities. Subsequent to completion of construction, the developer of the proposed resort would be required to file a transfer request form with the NWFWMD, transferring the ERP from a construction phase permit to an operational phase permit. The purpose of the operational phase ERP is to minimize potential flooding and contamination as a result of the increase in impervious surfaces. The ERP Program would also require a permit for impacts on wetlands, although the wetland ERP (Phase II of the ERP Program) is expected to be in effect no sooner than July 2009.

In addition, the resort developer would need to coordinate with Eglin AFB and Okaloosa County to determine potential municipal separate storm sewer system (MS4) BMPs that might be required under the respective MS4 storm water management plans. Examples of MS4 BMPs include construction storm water management, and post-construction practices, such as installing storm water retention ponds or infiltration basins, periodic checks for illicit discharges (e.g., dumping used oil into parking lot gutter systems), and reviewing storm water management education materials from the respective MS4 permit holders (i.e., Eglin AFB and Okaloosa County).

A Consumptive Use Permit would be required from the NWFWMD for the drilling and use of water wells, including water used for irrigation or other consumption.

Air-Related Permits

Although a fugitive dust permit is not required since the site is less than 25 acres, a fugitive dust control plan would be developed to mitigate unnecessary dust emissions. The Proposed Action and alternatives would be reviewed for a determination of whether potential new air emissions are within the limits of the Eglin AFB CAA Title V permit. Additionally, the Proposed Action and alternatives might require a determination of the applicability of New Source Review or Prevention of Significant Deterioration requirements under the CAA.

Traffic-Related Permits

Entrance requirements for the state highway system are set by Florida Department of Transportation (FDOT). A connection to the state highway system requires a Driveway Connection Permit and, in some cases, a Drainage Connection Permit. Any new intersections require a traffic signal warrant study under FDOT and design under FDOT and National Transportation Safety Board standards.

Florida statutes generally lay out the requirements for future access. The critical points are as follows:

- The State Highway Department has the discretion to grant or deny access permits
- The intent of the legislature is that such access is to be granted unless the permitting of such access connection would jeopardize the safety of the public or have a negative impact upon the operational characteristics of the highway
- The cost of entrance improvements (intersection improvements) would be borne by the proposed development.

Hazardous Waste-Related Permits

The net change in hazardous materials and wastes from the proposed resort, if any, might require a permit under the Resource Conservation and Recovery Act (RCRA). The resort developers would work with state regulators to manage all hazardous materials and wastes in accordance with state rules and regulations for Process Safety Management of Highly Hazardous Chemicals; Occupational Safety and Health Standards, Chemical Safety; Hazards Communication; and Fire Prevention.

Approvals

A Coastal Zone Management Act (CZMA) consistency determination was prepared for this Proposed Action (see **Appendix F**). The CZMA consistency determination is reviewed for concurrence by Florida agencies through the Florida Clearinghouse process. State of Florida recommendations and consistency determination concurrence are contained in **Appendix F**.

Consultations

Due to the beachfront location of the proposed site, the Proposed Action has the potential for impacts on sensitive species that might be protected under the ESA (16 United States Code [U.S.C.] §§ 1531 to 1544). Section 7 of the ESA, 16 U.S.C. § 1536, requires Federal agencies to consult with the Secretary, U.S. Department of the Interior, in order to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of their habitat. Eglin AFB personnel prepared a Biological Assessment (BA) as the basis for consultations with the U.S. Fish and Wildlife Service (USFWS) regarding the potential impacts on species protected under the ESA.

Should the proposal for the resort include structures in the ocean, such as a pier, jetty, or similar type of structure, Eglin AFB would also consult with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). NMFS is responsible for stewardship of marine species protected under the ESA, in addition to marine mammals under the Marine Mammal Protection Act (16 U.S.C. § 1361 et seq.).

Should the Proposed Action require the use of fill material to be brought on site, or the use of off-site disposal of excavated material, any borrow or fill site used by a developer must be made known to the Eglin AFB BHPO. The Eglin AFB BHPO would, at that time, make a determination whether or not the SHPO/tribes should be consulted on the potential for borrow or fill operations to affect cultural resources.

Other permits or approvals not listed in this EA may be required. The developer of the Proposed Action would be required to secure all required permits and approvals for development, whether or not they are listed in this EA. In addition, the developer would be required to implement a host of BMPs designed to minimize the likelihood of environmental impacts. A list of required BMPs is contained in **Appendix I**.

1.4.6 Interagency and Intergovernmental Coordination for Environmental Planning and Public Involvement

NEPA requirements help ensure that environmental information is made available to the public during the decisionmaking process and prior to actions being taken. A premise of NEPA is that the quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process. CEQ regulations implementing NEPA specifically state, "There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping." The Intergovernmental Coordination Act and EO 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider territorial and local views when implementing a Federal proposal. AFI 32-7060 requires the USAF to implement a process known as *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP), which is used to facilitate agency coordination.

Through the IICEP process, Eglin AFB will notify relevant agencies about the Proposed Action and alternatives (see **Appendix B**) using the official Florida Clearinghouse. The IICEP process provides

Eglin AFB with the opportunity to cooperate with and consider other agencies' views associated with implementing the Proposed Action or alternatives.

Once the Draft EA is finalized, a Notice of Availability will be published in the *Northwest Florida Daily News*. Copies of the Draft EA will also be sent to the local libraries listed in **Appendix B** for local review. Public and agency comments on the Draft EA will be considered prior to a decision being made as to whether or not to sign a FONSI.

1.5 Organization of this Document

This EA is organized into the following sections and appendices**.**

1. **Section 1** provides the background information, and the purpose of and need for the Proposed Action
2. **Section 2** contains a detailed description of the Proposed Action and alternatives
3. **Section 3** provides a description of the affected environment and provides the analysis of the potential environmental consequences from implementing the Proposed Action or alternatives
4. **Section 4** is a discussion of the potential cumulative and other effects
5. **Section 5** contains a list of references used in preparing the EA
6. **Section 6** contains a list of the preparers of the EA
7. **Appendix A** includes a description of environmental laws, regulations, and EOs potentially applicable to the Proposed Action
8. **Appendix B** includes the public and agency review materials and will be expanded throughout the EA process
9. **Appendix C** contains the photo documentation of the proposed site
10. **Appendix D** contains calculations to support the noise impact analysis
11. **Appendix E** contains calculations to support the air quality impact analysis
12. **Appendix F** includes the CZMA consistency determination and State of Florida consistency recommendations and concurrence
13. **Appendix G** contains calculations to support the traffic impact analysis
14. **Appendix H** contains a Biological Assessment
15. **Appendix I** contains operational requirements and BMPs.

THIS PAGE INTENTIONALLY LEFT BLANK

2. Description of the Proposed Action and Alternatives

2.1 Introduction

This section describes the Proposed Action and the alternatives considered. As discussed in **Section 1.4.1**, the NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, which are defined in **Section 1.2**. In addition, CEQ regulations also specify the inclusion of a No Action Alternative against which potential effects can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in detail in accordance with CEQ regulations.

2.2 Selection Criteria

Eglin AFB evaluated all underutilized parcels for potential revenue-producing development. Considerations are potential mission enhancement, potential revenue stream, and development that is complementary to the existing environment. The goal was to research applicable uses for a single parcel, not applicable parcels for a single use. By proposing the resort-style development on the proposed site, Eglin AFB would have considerable flexibility and ensure the highest and best use of the proposed site and would realize the potential cash or in-kind consideration a project of this type could generate.

A percentage of resort and conference space available to DOD members would add value to the proposed project. The facility itself would offer Eglin AFB an elevated platform on which to place required communications/electronics devices, as required by the current or future mission. Currently, the parcel is bordered by resort development on both sides, which significantly restricts potential use. Through utilization of the EUL mechanism, a revenue stream, be it cash or payment in kind, could be obtained solely through lease of the land. The intended configuration provides a revenue stream and improved mission-related capabilities while enhancing the local economy.

2.3 Proposed Action

Eglin AFB proposes to enter into a long-term lease of Eglin real property under EUL authority for the purpose of constructing and operating a resort hotel and conference center that could provide a steady income stream to Eglin AFB. Under the Proposed Action, the USAF would enter into a long-term EUL with a private developer chosen through a competitive selection process, with the intent that the developer construct and operate the resort. Eglin AFB would stipulate to the developer the need to maintain for USAF use a designated location for rooftop low-power receivers and passive sensor equipment for continued occasional use of the proposed site for Eglin test missions. To support the missions, sufficient space would be provided to operate and maintain equipment when required. The rooftop space and offices would be secure access only. The resort would be open for use by the general public, and a percentage of rooms would be available at a discounted rate for military and DOD use.

2.3.1 Proposed Site

The proposed site is known as Test Site A-5, a beachfront property located in a prime tourist area on Santa Rosa Island, Fort Walton Beach, Florida (see **Figure 2-1**). The proposed site is mostly vacant except for a 1,040-square-foot building that is currently used for storage and occasional office space, an access road, perimeter fencing, antennae structures, and utilities infrastructure that is occasionally used to support test missions at Eglin AFB. Due to its prime beachfront and resort area location, the proposed



Source of Aerial Photography: NAIP 2007; Proposed Location: Eglin AFB 2008.

Figure 2-1. Overview of the Proposed Site of the Emerald Breeze Resort

site has been identified as an underutilized USAF property with significant income potential that could benefit Eglin AFB through utilizing the flexible EUL program. It is important to note that the proposed site, Test Site A-5, has been identified by the USAF as underutilized; however, it has not and will not be declared "excess" because it continues to be used for critical Eglin AFB range monitoring and test mission functions.

The proposed site consists of 17.1 acres of beachfront property approximately 13 miles south of the Eglin AFB west gate, at the southeastern corner of Santa Rosa Boulevard and U.S. Highway 98 (Miracle Strip Parkway) in Fort Walton Beach, Florida (see **Figure 2-2**). Situated in a beach resort community, the proposed site is bordered by a 339-unit condominium resort complex to the west as shown in **Figure 2-3**, and a 216-room Four Points Sheraton resort to the east as shown in **Figure 2-4**. The northern edge of the proposed site borders U.S. Highway 98 for approximately 662 feet. The southern edge of the proposed site consists of approximately 601 feet of prime ocean frontage on the Gulf of Mexico. Due to coastal development setback requirements, approximately 13.6 acres of the total 17.1-acre parcel is developable. For comparison purposes, the adjacent 339-unit condominium complex is situated on approximately 9.5 acres of similarly situated property.



Figure 2-2. Proposed Site

Within walking distance from the proposed site are restaurants, night clubs, shops, mini golf, and the "Gulfarium," a sea life-based educational facility and tourist attraction. Directly across U.S. Highway 98 from the proposed site is the Emerald Coast Conference Center, a full-service conference and banquet facility.

Two wetland areas have been identified on the northern edge of the proposed site, one on either side of the access road. According to Eglin AFB personnel, these wetlands are considered jurisdictional waters of the United States under Section 404 of the CWA. On the southern area of the proposed site, vegetated sand dunes run along the beach front. The two wetlands could be incorporated into proposed vegetative landscaping and irrigation features of the resort. The sand dunes would most likely be partially removed or altered to accommodate facilities construction and to provide beach access for future patrons.



Figure 2-3. Resort Development Adjacent to Proposed Site (Western Side)



Figure 2-4. Resort Development Adjacent to Proposed Site (Eastern Side)

2.3.2 Detailed Description of the Proposed Action

The Proposed Action consists of constructing a resort complex consisting of hotel facilities (e.g., parking, lodging, lobby, and conference areas), restaurants, bars, swimming pools, and light retail. The resort complex would be similar in size and facilities to resorts along U.S. Highway 98. Although the EUL developer could propose more or fewer guest rooms in the resort, the Proposed Action assumes 250 guest rooms. The existing Test Site A-5 facility, asphalt driveway and parking lots, foundations, and utility infrastructure would be demolished to make space for proposed development.

The proposed resort complex would be constructed by private developers. The developers would be required to integrate green design wherever feasible through the use of energy- and water-efficient building techniques and equipment, the use of recycled materials, and the avoidance or enhancement of existing environmental features of the proposed site. Examples might include low-impact design storm water collection and treatment structures that integrate into the landscape and recycle water back to groundwater; finding uses for recycled water such as fountains or irrigation systems; installing native landscape or xeric landscape design features; maintaining the maximum amount of open space feasible; and, where feasible, use of solar or other alternative energy sources and use of green building design principles.

Parking would be constructed on the outer perimeters of the resort complex in compliance with Okaloosa County Development Design and Implementation Standards (Okaloosa County undated a). Section 6.04.02 specifies that hotels shall provide one parking space per hotel room plus one parking space per three employees present onsite during the busiest shift. It is estimated that this will result in approximately 300 parking spaces being required. For the purpose of analyzing potential impacts in this EA, it is assumed that a single-level parking lot would be used. However, a developer could decide to design a multi-level parking structure, provided it meets Okaloosa County guidelines.

In addition to the area taken up by resort facilities and parking, approximately 0.5 acres, would be used for sidewalks, pathways, courtyards, walking zones, and other elements required to tie the resort complex together. The balance of the 17.1-acre site would be used for landscaping or open green space, and beach access. The estimated areas for individual components of the proposed resort are presented in **Table 2-1**.

Table 2-1. Emerald Breeze Resort Assumptions

Resort Facilities and Infrastructure	Size (Acres)
Lodging, Lobby, and Conference Facilities	3.0
Restaurants/Bars	1.0
Gift Shop	0.1
Water Park	0.5
Swimming Pools	0.5
Parking Lots	3.0
Sidewalks, Pathways, and Courtyards	0.5
Landscaping and Open Space	5.0
Open Beach Area	3.5
Total	**17.1**

Because Test-Site A-5 will continue to serve critical Eglin AFB range monitoring and test mission functions, a portion of the roof will be made available for Eglin AFB range instrumentation with

dedicated offices for range personnel and equipment. The USAF would require this instrumentation, offices, and equipment to maintain its Test Site A-5 mission. The roof top portion of the proposed building would need to be designed to adequately support the required instrumentation (e.g., weight, line of site, etc.). Most of the rooms at the resort would be for public use with a select number of room blocks dedicated for DOD and USAF personnel. All utilities will originate from city and county infrastructure availability.

Okaloosa County protective covenants and restrictions for development on Santa Rosa Island require that structures are not taller than 75 feet above mean sea level (Okaloosa County 2008a), which benefits aircraft operations at Eglin AFB. Therefore, Eglin AFB would require any developer of the proposed resort complex to adhere to the Okaloosa County 75 feet height restriction. However, this restriction would not apply to any range instrumentation that may be installed on the rooftop.

2.4 Alternatives

2.4.1 Preferred Alternative

Implementation of the Proposed Action as identified in **Section 2.3** is the Preferred Alternative.

2.4.2 No Action Alternative

Under the No Action Alternative, the USAF would not lease the property to construct a resort complex on Santa Rosa Island. A resort complex would not be constructed, and the high value USAF real property asset would continue to be underutilized. A significant potential source of income to Eglin AFB would not be realized.

2.4.3 Alternatives Considered but Eliminated from Detailed Analysis

2.4.3.1 Selling the Beach Front Property

Instead of constructing the proposed Emerald Breeze Resort under the EUL program as discussed in **Section 2.3**, the option of selling the proposed site outright to a developer or transferring ownership to another Federal agency was raised. Eglin AFB does not have the authority to sell property or transfer ownership. Furthermore, the proposed site continues to be needed to support the Eglin AFB test mission and it would no longer be available for this purpose if it were to leave the USAF real property inventory. Therefore, this alternative was eliminated from further detailed analysis in the EA.

2.4.3.2 Implementing the Resort Plan at Another Location

The prospect of implementing a long-term lease of Eglin real property under EUL authority at another location was considered. Due to the high level of development that has occurred in the Santa Rosa Island area already, there is little land remaining that is developable. To the east and west of the strip of development on Santa Rosa Island is land owned by Eglin AFB (see **Figure 1-1**), which is undeveloped at the moment and there are no current plans for development. Further along Santa Rosa Island is the Gulf Islands National Seashore Park, which would not be developed. Due to the distance from the existing strip of development and the presence of the Gulf Islands National Seashore Park, the additional areas on Santa Rosa Island owned by Eglin AFB were not considered as potential locations for the proposed resort and are therefore not carried forward for detailed analysis.

In addition, the proposed site would continue to remain an underutilized USAF property. Currently, the parcel is bordered by resort development on both sides, which significantly restricts potential use.

3. Affected Environment and Environmental Consequences

3.1 Acoustical Environment

3.1.1 Definition of the Resource

Sound is defined as a particular auditory effect produced by a given source, for example the sound of rain on the roof. Sound is measured with instruments that record instantaneous sound levels in decibels. A-weighted sound level measurements in decibels (dBA) are used to characterize sound levels that can be sensed by the human ear. "A-weighted" denotes the adjustment of the frequency content of a sound-producing event to represent the way in which the average human ear responds to the audible event. All sound levels analyzed in this EA are A-weighted.

Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory effect. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. How an individual responds to the sound source will determine if the sound is viewed as music to one's ears or as annoying noise. Affected receptors are specific (i.e., schools, churches, or hospitals) or broad areas (e.g., nature preserves or designated districts) in which occasional or persistent sensitivity to noise above ambient levels exists.

The Federal government has established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. According to the USAF, the Federal Aviation Administration, and the U.S. Department of Housing and Urban Development criteria, residential units and other noise-sensitive land uses are "clearly unacceptable" in areas where the Day-Night Average A-weighted Sound Level (DNL) noise exposure exceeds 75 dBA, "normally unacceptable" in regions exposed to noise between 65 and 75 dBA, and "normally acceptable" in areas exposed to noise of 65 dBA or less. The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL (FICON 1992). For outdoor activities, the U.S. Environmental Protection Agency (USEPA) recommends a DNL of 55 dBA as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA 1974). DNL is the metric recognized by the U.S. government for measuring noise and its effects on humans.

Ambient Sound Levels. Noise levels in residential areas vary depending on the housing density and proximity to parks and open space, major traffic areas, or airports. As shown on **Table 3-1**, a normal suburban area is about 55 dBA, which increases to 60 dBA for an urban residential area, and to 80 dBA in the downtown section of a city (FHWA 1980).

Most people are exposed to sound levels of 50 to 55 dBA or higher on a daily basis. Studies specifically conducted to determine noise effects on various human activities show that about 90 percent of the population is not significantly bothered by outdoor sound levels below a DNL of 65 dBA (USDOT 1984). Studies of community annoyance in response to numerous types of environmental noise show that DNL correlates well with effect assessments and that there is a consistent relationship between DNL and the level of annoyance.

Table 3-1. Typical Outdoor Noise Levels

DNL (dBA)	Location
50	Residential area in a small town or quiet suburban area
55	Suburban residential area
60	Urban residential area
65	Noisy urban residential area
70	Very noisy urban residential area
80	City noise (downtown of major metropolitan area)
88	3rd floor apartment in a major city next to a freeway

Source: FHWA 1980

Construction Sound Levels. Clearing and grading activities as well as building construction can cause an increase in sound that is well above the ambient level. A variety of sounds come from graders, pavers, trucks, welders, and other work processes. **Table 3-2** lists sound levels associated with common types of construction equipment that could be used under the Preferred Alternative. Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 35 dBA in a quiet suburban area.

Table 3-2. Predicted Noise Levels for Construction Equipment

Construction Category and Equipment	Predicted Noise Level at 50 feet (dBA)
Clearing and Grading	
Bulldozer	80
Grader	80–93
Truck	83–94
Roller	73–75
Excavation	
Backhoe	72–93
Jackhammer	81–98
Building Construction	
Concrete mixer	74–88
Welding generator	71–82
Pile driver	91–105
Crane	75–87
Paver	86–88

Source: USEPA 1971

3.1.2 Description of the Affected Environment

The ambient sound environment around the proposed site is affected mainly by vehicle traffic and aircraft operations. The noise from vehicle traffic dominates over noise produced by aircraft operations. The major transportation routes in the vicinity of the proposed site include U.S. Highway 98 (Miracle Strip Parkway) and Santa Rosa Boulevard. U.S. Highway 98 provides access to Santa Rosa Island from mainland Florida and Eglin AFB via a bridge 0.20 miles (0.32 kilometers) northeast of the proposed site. The northern edge of the proposed site borders U.S. Highway 98 and the parkway continues to the east, providing the only roadway access to the eastern portion of Santa Rosa Island. Santa Rosa Boulevard intersects with U.S. Highway 98 directly west of the proposed site and provides access to the western portion of Santa Rosa Island. This portion of the island proximate to the proposed site includes multiple hotels, restaurants, and attractions; therefore, these roadways are heavily used.

The DNL of 65 to 80+ dBA noise contours from aircraft operations at Eglin AFB were plotted on an aerial photograph (see **Figure 3-1**). As discussed in **Section 3.1.1**, noise-sensitive land uses are "normally unacceptable" in areas that exceed a DNL of 65 dBA. As shown, the proposed site is approximately 1.9 miles (3.1 kilometers) west of 65 dBA noise contour. Additional airports in the vicinity of Eglin AFB include the Destin-Fort Walton Beach Airport, which is approximately 7 miles southeast of the Eglin AFB airfield; Hurlburt Field, which is approximately 10 miles southwest of the Eglin AFB airfield; and Eglin Auxiliary Field 3 (i.e., Duke Field), which is approximately 12 miles north of the Eglin AFB airfield. Although the proposed site is not within the noise contours from aircraft operations at Eglin AFB, operations from these airports and Eglin AFB contribute to the acoustical environment around the proposed site. Land use compatibility with respect to construction of the resort is discussed in **Section 3.2.2**.

3.1.3 Environmental Consequences

Evaluation Criteria

An analysis of the potential impacts associated with noise typically evaluates potential changes to the existing acoustical environment that would result from implementation of a proposed action. Potential changes in the acoustical environment can be beneficial (i.e., they reduce the number of sensitive receptors exposed to unacceptable noise levels or reduce the ambient sound level), negligible (i.e., the total number of sensitive receptors to unacceptable noise levels is essentially unchanged), or adverse (i.e., they result in increased sound exposure to unacceptable noise levels or ultimately increase the ambient sound level). Projected noise effects were evaluated qualitatively for the alternatives considered.

Preferred Alternative

Under the Preferred Alternative, an increase in noise levels could originate from construction equipment and vehicular traffic.

Construction Noise. Short-term minor adverse effects are anticipated as a result of construction activities under the Preferred Alternative. Noise from construction activities varies depending on the type of construction being done, the area that the project would occur in, and the distance from the source. Construction activities under the Preferred Alternative include grading, paving, and building construction. To predict how these activities would affect populations, noise from the anticipated construction was estimated. For example, as shown in **Table 3-2**, building construction usually involves several pieces of equipment (e.g., saws and haul trucks) that can be used simultaneously. Cumulative noise from the construction equipment during the busiest day was estimated to determine the total effect of noise from building activities at a given distance. See **Appendix D** for noise level calculations.



Figure 3-1. Eglin AFB Noise Contours

Examples of expected construction noise during daytime hours for the Preferred Alternative are as follows:

- The proposed site is bordered by a 339-unit condominium resort complex to the west, and a 216-room Four Points Sheraton Resort to the east. The complex and Sheraton resort are approximately 100 feet from construction activities. It is anticipated that persons accessing these buildings would experience noise levels of approximately 83 dBA from construction activities.
- Persons accessing the Emerald Coast Conference Center approximately 450 feet northeast of the construction site would likely experience noise levels of approximately 70 dBA from construction activities.
- Persons accessing the "Gulfarium," a sea-life based educational facility and tourist attraction, approximately 600 feet east of the construction site are expected to experience noise levels of approximately 67 dBA from construction activities.

Implementation of the Preferred Alternative would have short-term minor adverse effects on the acoustical environment from the use of heavy equipment during construction activities. Noise generation would last only for the duration of construction activities (assumed to be approximately 12 months) and would be isolated to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Noise effects from increased traffic due to construction vehicles would also be temporary in nature.

Vehicular Noise. Long-term minor adverse effects on the ambient environment are anticipated as a result of the increase in vehicular traffic under the Preferred Alternative. Construction, civilian, and military traffic entering the proposed site would use U.S. Highway 98. As discussed in **Section 3.8.2**, U.S. Highway 98 and Santa Rosa Boulevard are heavily utilized. Consequently, the additional traffic resulting from civilian and military traffic would likely cause minor increases in noise levels for noise-sensitive populations on these roadways.

Equipment required for Eglin test missions. Under the Preferred Alternative, rooftop low power receivers and passive sensor equipment would be maintained for occasional use for Eglin AFB test missions. It is anticipated that this equipment would have no impact on the acoustical environment around the proposed site.

No Action Alternative

Under the No Action Alternative, the Emerald Breeze Resort would not be constructed. The acoustical environment described in **Section 3.1.2** would remain unchanged. No effects on the ambient noise environment would occur under the No Action Alternative.

3.2 Land Use

3.2.1 Definition of the Resource

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws. There is, however, no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meanings of various land use descriptions, "labels," and definitions vary among jurisdictions.

Natural conditions of property can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic area. There are a wide variety of land use categories resulting

from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational.

Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. Compatibility among land uses fosters the societal interest of obtaining the highest and best uses of real property. Tools supporting land use planning include written master plans/management plans and zoning regulations. In appropriate cases, the locations and extent of proposed actions need to be evaluated for their potential effects on project site and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include matters such as existing land use at the project site, the types of land uses on adjacent properties and their proximity to a proposed action, the duration of a proposed activity and its "permanence."

3.2.2 Description of the Affected Environment

Eglin AFB is in northwestern Florida along the panhandle. The proposed site is on Santa Rosa Island, approximately 13 miles south of the Eglin AFB west gate in Okaloosa County, Florida. Santa Rosa Island is a barrier island bisecting the Gulf of Mexico from the Santa Rosa Sound, a shallow lagoon, and the Choctawhatchee Bay. Santa Rosa Island is separated from neighboring cities by the Choctawhatchee Bay and the Pensacola Bay. The City of Fort Walton Beach lies approximately 0.5 miles to the northwest, the City of Pensacola is 35 miles to the west, and the City of Destin lies approximately 10 miles to the east. The proposed site is situated at the intersection of U.S. Highway 98 and Santa Rosa Boulevard, the two major arteries running through Santa Rosa Island.

Land use on the proposed site consists primarily of an undeveloped beach area, with a storage building and utilities infrastructure. This site is currently used for photo optic mission support by Eglin AFB. Photo optic activities are expected to continue with additional rooftop installation of electronic and other necessary equipment to support Eglin AFB's mission. The proposed site is bordered by a condominium resort complex and a hotel resort. Surrounding land uses (as shown on **Figure 3-2**) include commercial and residential, with some public facilities and recreation (Eglin AFB 2005a).

Land adjacent to the parcel where the resort would be built is zoned as B-3, light commercial and concession areas. Beyond U.S. Highway 98 to the north, land is zoned as B-3 and B-4; parks, beaches, and freeways. To the east are two parks, the Newman Brackin Wayside Park and the John C. Beasley Wayside Park.

Studies that address land use in the region around Eglin AFB include a Joint Land Use Study (JLUS) and a Tri-County Growth Management Plan. A JLUS between Eglin AFB and surrounding Okaloosa, Santa Rosa, and Walton counties was expected to be completed by August 2008 (Okaloosa County undated b). One of the goals of the JLUS is to provide guidelines for complementary growth management and land use compatibility with Eglin AFB and the surrounding communities. In addition, the Eglin Installation Growth Committee will compose a Tri-County Growth Management Plan to address growth around Eglin AFB since 2005 BRAC Commission actions have initiated. This plan is expected to be completed in October 2009 (Okaloosa County undated c). This plan will inventory land use as well as review and assess existing community and county land use plans and policy documents as they are affected by the growth and BRAC actions of Eglin AFB, Duke Field, and Hurlburt Field. The JLUS will be incorporated into the Tri-County Growth Management Plan once it is completed.

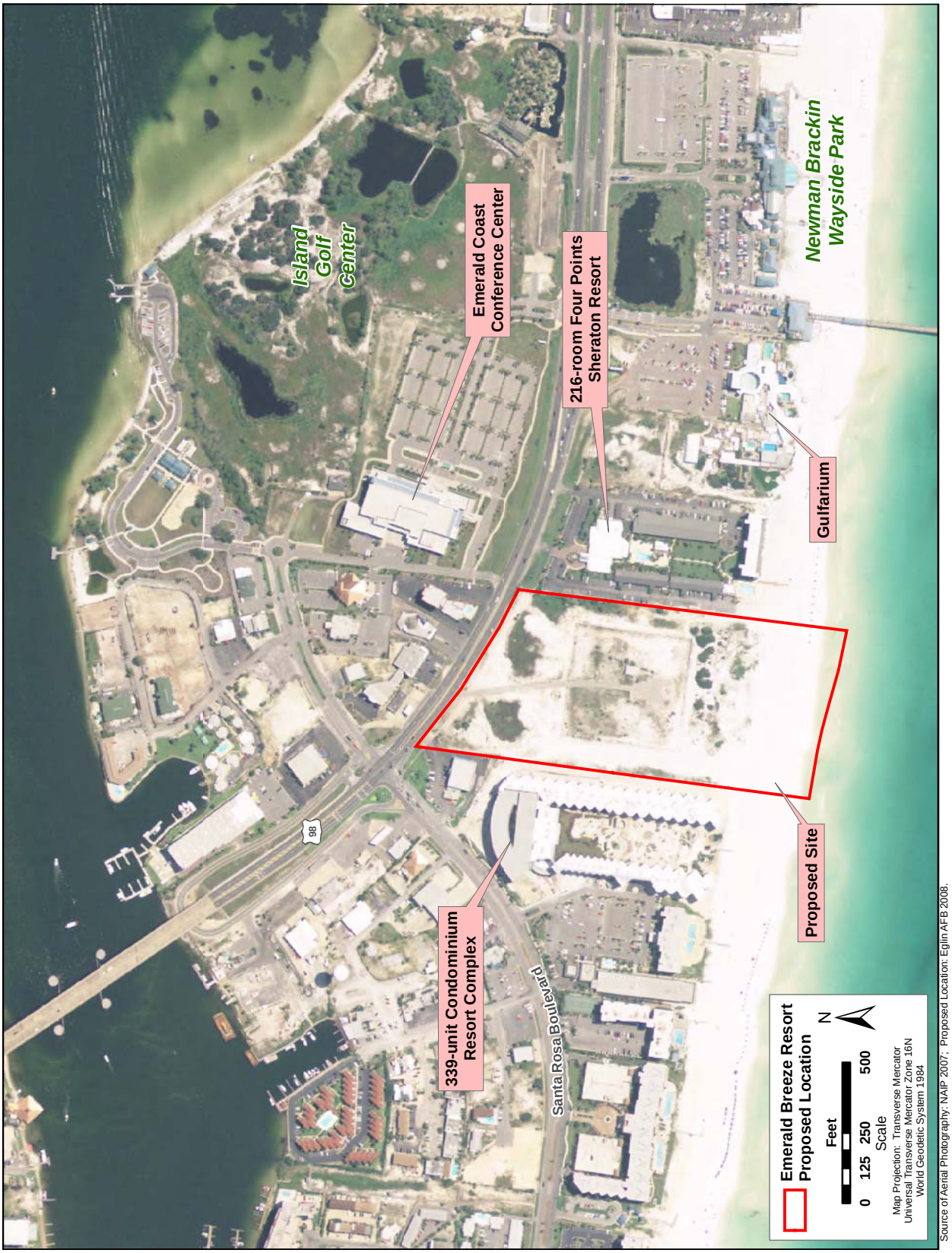


Figure 3-2. Existing Land Uses Surrounding the Proposed Site

3.2.3 Environmental Consequences

Evaluation Criteria

An analysis of the effects on land use addresses the potential for impacts on residential communities to occur, as well as the potential for buildings and other obstructions to intrude into safeguarded airspace. New construction should be compatible with current land use guidelines. Land use can remain compatible, become compatible, or become incompatible. Projected compatibility issues were measured both qualitatively and quantitatively. The level of potential land use effects is based on the degree of land use sensitivity in areas affected by a proposed action and compatibility of proposed actions with existing conditions. In general, a land use effect would be adverse if it met any of the following criteria:

- Was inconsistent or in noncompliance with existing land use plans or policies
- Precluded the viability of existing land use
- Precluded continued use or occupation of an area
- Was incompatible with adjacent land use to the extent that public health or safety is threatened
- Conflicted with planning criteria established to ensure the safety and protection of human life and property
- Was inconsistent with a state's coastal zone management program and adverse effects could not be mitigated through coordination with the state.

Preferred Alternative

No adverse effects on land use would be anticipated by implementing the Preferred Alternative. Under the Preferred Alternative, land would be used for commercial purposes, which would be consistent with the surrounding commercial uses. The Proposed Action would not preclude the viability of existing adjacent land uses or future plans since it is compatible with the land use on the current site.

Noise is not anticipated to impact adjacent populations due to the activities of the resort. The Preferred Alternative would result in temporary minor adverse impacts due to an increased presence of construction vehicles and disturbances related to construction activities. These activities are not expected to result in incompatible land use. Transportation impacts are discussed in **Section 3.9.3**. Although traffic congestion and delays could occur during rush hours, it is not anticipated that the Preferred Alternative would adversely impact the viability of the existing land use.

No Action Alternative

The No Action Alternative would result in a continuation of existing conditions. The affected environment would remain essentially unchanged from what was described in **Section 3.2.2**. No effects on land use would be expected.

3.3 Air Quality

3.3.1 Definition of the Resource

In accordance with Federal CAA requirements, the air quality in a given region or area is measured by the concentration of criteria pollutants in the atmosphere. The air quality in a region is a result of not only the

types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological "air basin," and the prevailing meteorological conditions.

Under the CAA, USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O_3)—measured as either volatile organic compounds (VOCs) or total nitrogen oxides (NO_x), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur oxides (SO_x), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM_{10}] and particulate matter equal to or less than 2.5 microns in diameter [$PM_{2.5}$]), and lead (Pb) (40 CFR Part 50). The CAA also gives the authority to states to establish air quality rules and regulations. Florida has adopted the NAAQS except for sulfur dioxide (SO_2) (Florida Administrative Code [F.A.C.] 62-204-240). **Table 3-3** presents the USEPA NAAQS and Florida Ambient Air Quality Standards.

USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either "attainment," "nonattainment," "maintenance," or "unclassified" for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS, nonattainment indicates that criteria pollutant levels exceed NAAQS, maintenance indicates that an area was previously designated nonattainment but is now attainment, and an unclassified air quality designation by USEPA means that there is not enough information to appropriately classify an AQCR so the area is considered attainment. USEPA has delegated the authority for ensuring compliance with the NAAQS in Florida to the FDEP, Division of Air Resource Management. In accordance with the CAA, each state must develop a State Implementation Plan (SIP), which is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS.

The General Conformity Rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS. The General Conformity Rule applies only to regionally significant actions in nonattainment or maintenance areas.

Federal Prevention of Significant Deterioration (PSD) regulations also define air pollutant emissions from proposed major stationary sources or modifications to be "significant" if (1) a proposed project is within 10 kilometers of any Class I area, and (2) regulated pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 microgram per cubic meter ($\mu g/m^3$) or more (40 CFR 52.21(b)(23)(iii)). A Class I area includes national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. PSD regulations also define ambient air increments, limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's Class designation (40 CFR 52.21(c)).

Many chemical compounds found in the Earth's atmosphere act as "greenhouse gases." These gases allow sunlight to enter the atmosphere freely. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat). Greenhouse gases absorb this infrared radiation and trap the heat in the atmosphere. Over time, the trapped heat results in the phenomenon of global warming.

Table 3-3. National and State Ambient Air Quality Standards

Pollutant	Standard Value		Standard Type
	Federal	State	
CO			
8-hour Average [a]	9 ppm (10 mg/m^3)	Same	Primary
1-hour Average [a]	35 ppm (40 mg/m^3)	Same	Primary
NO_2			
Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	Same	Primary and Secondary
O_3			
8-hour Average [b]	0.075 ppm	--	Primary and Secondary
1-hour Average [c]	--	0.12 ppm (235 µg/m^3)	Primary and Secondary
Pb			
Quarterly Average	1.5 µg/m^3	Same	Primary and Secondary
PM_{10}			
Annual Arithmetic Mean	--	50 µg/m^3	
24-hour Average	150 µg/m^3 [d]	Same [a]	Primary and Secondary
$PM_{2.5}$			
Annual Arithmetic Mean [e]	15 µg/m^3	--	Primary and Secondary
24-hour Average [f]	35 µg/m^3	--	Primary and Secondary
SO_2			
Annual Arithmetic Mean	0.03 ppm	0.02 ppm	Primary
24-hour Average [a]	0.14 ppm	0.1 ppm	Primary
3-hour Average [a]	0.5 ppm (1,300 µg/m^3)	Same	Secondary

Sources: USEPA 2008a and F.A.C. 62-204.240

Notes:

Parenthetical values are approximate equivalent concentrations.

ppm = parts per million

mg/m^3 = milligrams per cubic meter

µg/m^3 = micrograms per cubic meter

[a] Not to be exceeded more than once per year.

[b] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This standard is effective on May 27, 2008, and replaces the 1997 8-hour ozone standard of 0.08 ppm. However, the 1997 standard and its implementing rules remain in effect while USEPA undergoes rulemaking to transition to the 2008 standard.

[c] As of June 15, 2005, USEPA revoked the Federal 1-hour ozone standard in all areas except the 14 8-hour ozone nonattainment Early Action Compact Areas. The Florida 1-hour ozone standard has not been revoked.

[d] Not to be exceeded more than once per year on average over 3 years.

[e] To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3.

[f] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3. This standard is effective 17 December 2006.

In April 2007, the U.S. Supreme Court declared that carbon dioxide (CO_2) and other greenhouse gases are air pollutants under the CAA. The Court declared that the USEPA has the authority to regulate emissions from new cars and trucks under the CAA. Many gases exhibit these "greenhouse" properties. The majority of greenhouse gases comes from natural sources but is also contributed to by human activity.

Title V of the CAA Amendments of 1990 requires states and local agencies to permit major stationary sources. A major stationary source has the potential to emit more than 100 tons per year (tpy) of any one criteria air pollutant, 10 tpy of a hazardous air pollutant (HAP), or 25 tpy of any combination of HAPs. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their effect on air quality. Section 112 of the CAA defines the sources and kinds of HAPs.

3.3.2 Description of the Affected Environment

The proposed site is in Okaloosa County, Florida, which is part of the Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate (MPPCSMI) AQCR (40 CFR 81.68). The MPPCSMI AQCR is classified as in attainment for all criteria pollutants (USEPA 2008b). Most areas of Florida, including Eglin AFB, are designated as Class II areas, which are areas where moderate well-controlled industrial growth is allowed. There are no Class I areas within 10 kilometers of Eglin AFB or the proposed site (USEPA undated). The emissions inventories for Okaloosa County and the MPPCSMI AQCR are shown in **Table 3-4**. Okaloosa County is considered the local area of influence, and the MPPCSMI AQCR is considered the Region of Influence (ROI) for the air quality analysis.

Table 3-4. Local and Regional Air Emissions Inventories

	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Okaloosa County, Florida	8,479	19,494	148,737	686	14,231	10,133
MPPCSMI AQCR	393,759	312,507	1,842,768	384,684	336,547	137,698

Source: USEPA 2001

Eglin AFB is classified as a major source and has been issued a Title V Operation Permit (0910031-009-AV), which is scheduled for renewal on 14 June 2009 (Eglin AFB 2004). Hurlburt Field is not included in the Title V permit. There are various stationary combustion sources on the installation that have the potential to emit criteria pollutants and HAPs, including the installation's boilers and generators. VOCs are emitted primarily from handling of organic liquids (i.e., refueling activities). Miscellaneous particulate matter sources at Eglin AFB include abrasive blasting units and woodworking equipment (Eglin AFB 2004). Other stationary sources at Eglin AFB include paint booths, wash racks, and a dry cleaning facility.

Every year, Eglin AFB is required to prepare and submit an emissions inventory to the FDEP. The purpose of this annual emissions inventory is to estimate and document air pollutant emissions from stationary sources. There is no routine requirement to calculate pollutant emissions calculations for aircraft operations, government-owned vehicles, privately owned vehicles, aircraft engine testing, aerospace ground equipment, and other sources not included in the state's stationary source permitting program. **Table 3-5** summarizes the annual air emissions and the Title V potential to emit values.

Table 3-5. Reported Air Emissions and Potential to Emit Values for Eglin AFB

	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM (tpy)	HAP (tpy)
2007 Actual Emissions	86.01	162.95	65.96	3.96	91.57	14.84
Permitted Potential to Emit Values	342.00	176.00	254.00	6.81	90.00	13.66

Sources: Eglin AFB 2008a and Eglin AFB 2004
Note: PM = Particulate Matter

3.3.3 Environmental Consequences

Evaluation Criteria

The environmental consequences on local and regional air quality conditions near a proposed Federal action are determined based upon the increases in regulated pollutant emissions compared to existing conditions and ambient air quality. Specifically, the effect in NAAQS attainment areas would be considered significant if the net increases in pollutant emissions caused or contributed to a violation of any national or state ambient air quality standard or represented an increase of 10 percent or more in an affected AQCR emissions inventory. In addition, Federal PSD regulations define air pollutant emissions to be significant if the source is within 10 kilometers of any Class I area, and emissions would cause an increase in the concentration of any regulated pollutant in the Class I area of 1 $\mu g/m^3$ or more (40 CFR 52.21(b)(23)(iii)).

Preferred Alternative

The Preferred Alternative would have short-term and long-term minor adverse effects on air quality. **Table 3-6** summarizes the estimated air quality emissions from construction and operational activities. The estimated emissions from the Preferred Alternative would represent a minor percentage of the air emissions inventory locally in Okaloosa County and would represent a negligible percentage of the air emissions inventory regionally within the MPPCSMI AQCR.

Table 3-6. Estimated Air Emissions Resulting from Implementation of the Preferred Alternative

Activity	NO_x tpy	VOC tpy	CO tpy	SO_2 tpy	PM_{10} tpy	$PM_{2.5}$ tpy
2009						
Construction Combustion	*6.4*	*1.1*	*2.8*	*0.4*	*0.4*	*0.4*
Construction Fugitive Dust	--	--	--	--	*17.4*	*1.2*
Total Preferred Alternative Emissions in 2010	**6.4**	**1.1**	**2.8**	**0.4**	**17.8**	**1.7**
Percent of MPPCSMI AQCR Inventory	0.0016%	0.0004%	0.0002%	0.0001%	0.0053%	0.0012%
2010+						
Total Preferred Alternative Emissions in 2011 and Beyond	**57.2**	**6.9**	**48.5**	**0.5**	**2.3**	**2.0**
Percent of MPPCSMI AQCR Inventory	0.0145%	0.0022%	0.0026%	0.0001%	0.0007%	0.0015%

Construction Activities. Emissions from construction activities associated with the Preferred Alternative would have short-term minor adverse effects on local air quality and would have negligible effects on regional air quality. Implementation of the Preferred Alternative would not result in violations of any ambient air quality standards. The construction of the resort complex as described in **Section 2.3** would generate air pollutant emissions as a result of grading, filling, compacting, trenching, and operation of construction equipment. Construction activities would also generate total suspended particulate and PM_{10} emissions as fugitive dust from ground-disturbing activities (e.g., grading, trenching, soil piles) and from combustion of fuels in construction equipment. Fugitive dust emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. Additionally, construction workers commuting daily to and from the construction site in their personal vehicles would result in criteria pollutant emissions. **Appendix E** contains detailed calculations and the assumptions used to estimate the air quality emissions from construction activities.

Issuance of an air construction permit from FDEP would be required prior to beginning the proposed construction activities (F.A.C. 62-210.300). The private developer chosen to construct the resort complex would be responsible for obtaining all air construction permits from FDEP prior to commencing construction activities.

Construction activities would incorporate control measures to confine fugitive particulate matter in accordance with F.A.C. 62-296.320. Reasonable measures to limit fugitive dust emissions would be developed with the air construction permit in consideration of cost and the degree of emissions reduction realized, but could include the following (F.A.C. 62-296.320(4)(c)3):

- Paving and maintenance of roads, parking areas, and yards
- Application of water or chemicals to control emissions
- Application of asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stock piles, and similar areas
- Removal of particulate matter from roads and other paved areas to prevent reentrainment and from buildings or work areas to prevent particulate matter from becoming airborne
- Landscaping or planting of vegetation
- Use of hoods, fans, filters, and similar equipment to contain, capture, or vent particulate matter
- Confining abrasive blasting, where possible
- Enclosure or covering of conveyor systems.

Operations. Minor, long-term emissions of criteria pollutants would be expected as a result of commuter vehicles from employees and patrons traveling to and from the resort complex and from operation of natural gas boilers and back-up power generators.

Employees that work at the proposed resort complex are assumed to live within the MPPCSMI AQCR, so there would be no net increase in criteria pollutants from workers. Based on the traffic analysis prepared for the proposed resort complex (see **Appendix G**), on an average day, 208 rooms would be occupied (ITE 2003). For the emissions analysis, it is assumed that each occupied room has one vehicle. It is also assumed that 1,855 daily vehicle trips are made on weekdays and 2,184 daily vehicle trips are made on weekends. It was assumed that each patron's vehicle would travel 20 miles round-trip per daily trip made. Factors used to estimate emissions from commuter vehicles were obtained from the USEPA EMFAC 2007 (version 2.3) *On-Road Emissions Factors* model (SCAQMD 2008).

The actual size and quantity of boilers and generators are not known at this time. However, for emissions analysis it was assumed that two 1.2 million British thermal units -natural gas boilers would be used for heating the rooms and operation of laundry facilities. Factors used to estimate generator and boiler emissions were obtained from the USEPA AP-42 Volume I documents entitled *Stationary Internal Combustion Sources, Gasoline and Diesel Industrial Engines* (USEPA 1996) and *External Combustion Sources, Natural Gas Combustion* (USEPA 1998).

The installation of boilers and emergency generators, if determined necessary for the resort complex, could result in minor emissions of criteria air pollutants. New emergency generators that operate under limited conditions, such as a power outage and minor maintenance, are only required to submit notification to the FDEP and would not require an air operating permit (Eglin AFB 2004). Operation of the natural gas boilers for heating would be coordinated with FDEP for potential operational permits.

Appendix E contains detailed calculations and the assumptions used to estimate the air quality emissions from patrons and stationary sources. Emissions from operational activities associated with the Preferred Alternative would have long-term minor adverse effects on local air quality, and would have negligible effects on regional air quality.

Greenhouse Gas Emissions. The Preferred Alternative would contribute directly to emissions of greenhouse gases from the combustion of fossil fuels from construction equipment and commuter vehicles. CO_2 accounts for 92 percent of all greenhouse gas emissions; electric utilities are the primary source of anthropogenic CO_2, followed by transportation (FDEP 2008a). FDEP estimates that in 2005, gross CO_2 emissions in Florida were 268.65 million metric tons of CO_2 equivalents, or 295.52 million tons of CO_2 equivalents (FDEP 2008a).

Total CO_2 emissions for 2010 and 2011 and beyond were estimated at 733 tons and 7,246 tons, respectively (see **Appendix E** for detailed emissions calculations). The total CO_2 emissions for 2011 and beyond are higher than the emissions for 2010 because the 2010 emissions are for construction activities only. The total CO_2 emissions for 2011 and beyond are for operation of the facility, which includes the emissions from vehicles that drive to and from the resort. The vehicle emissions are based on the approximate number of vehicles per hotel room, which is derived from the traffic impact analysis (see **Section 3.9.3** and **Appendix G**). Construction activities and operations would have minor adverse contributions to greenhouse gas emissions locally. The Preferred Alternative would have a negligible contribution towards statewide greenhouse gas inventories.

No Action Alternative

Under the No Action Alternative, Eglin AFB would not lease the Test Site A-5 property to a private developer to construct the resort complex, which would result in the continuation of the existing condition, as described in **Section 3.3.2**. Therefore, no direct or indirect environmental effects would be expected on local or regional air quality from implementation of the No Action Alternative.

3.4 Safety

3.4.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety addresses (1) workers' health and safety during construction and demolition activities, and (2) public safety during construction and demolition activities and during subsequent operations of those facilities.

Construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by numerous DOD and USAF regulations designed to comply with standards issued by the Occupational Safety and Hazard Administration (OSHA) and USEPA. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors.

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of extremely noisy environments. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

3.4.2 Description of the Affected Environment

All contractors performing construction and demolition activities are responsible for following ground safety regulations and worker compensation programs and are required to conduct construction and demolition related activities in a manner that does not pose any risks to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and availability of Material Safety Data Sheets. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operation; to monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures.

There are emergency services (i.e., police, fire, and ambulance services) in the city of Fort Walton Beach. Therefore, emergency situations can be responded to within a quick timeframe. No aircraft safety zones (i.e., clear zones and accident potential zones), quantity-distance arcs, electromagnetic radiation safety zones, or explosive safety quantity distance clear zones are within or adjacent to the proposed resort site. The proposed resort site is currently accessible by a gate just off of U.S. Highway 98 or by public access through the beach and is currently utilized by the USAF for photo optic mission support.

3.4.3 Environmental Consequences

Evaluation Criteria

If implementation of the Preferred Alternative were to substantially increase risks associated with the safety of construction personnel, contractors, or the local community, or substantially hinder the ability to respond to an emergency, it would represent a significant impact. Impacts were assessed based on the potential effects of construction, demolition, and operational activities.

Preferred Alternative

Short-term, minor direct adverse effects would be expected from the Preferred Alternative during construction and demolition activities. No long-term operational safety impacts would be expected. Implementation of the Preferred Alternative would slightly increase the short-term risk associated with construction contractors performing work at the proposed site during the normal workday because the level of such activity would increase. Contractors would be required to establish and maintain safety programs. Adherence to these established safety programs will help to reduce any potential construction safety risks associated with the Preferred Alternative. Work areas surrounding construction and demolition activities would be fenced and appropriate signs posted to further reduce safety risks. No impacts associated with fire hazards or public safety are expected to occur within the vicinity of the proposed site from construction and demolition projects planned as part of the Preferred Alternative.

The Preferred Alternative would not pose a safety risk to mission support personnel or activities at test sites on Santa Rose Island. Although Eglin AFB would maintain rooftop low power receivers and passive sensor equipment for test missions, these mission support functions would not pose a safety risk and would only be accessible to mission support personnel. The resort would be outside of the restricted area associated with Santa Rosa Island mission activities.

No Action Alternative

Under the No Action Alternative, the proposed resort would not be constructed, resulting in a continuation of the existing conditions as described in **Section 3.4.2**. No effects on safety would be expected under the No Action Alternative.

3.5 Geological Resources

3.5.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of topography and physiography, geology, soils, and, where applicable, geologic hazards and paleontology. Geologic hazards refer to any geologic event that could endanger human lives or damage property. This includes events such as earthquakes, landslides, sinkholes, tsunamis, and volcanoes. In Florida, the primary geologic hazard of concern is shoreline erosion.

Topography and physiography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features.

Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition.

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Prime farmland is protected under the Farmland Protection Policy Act of 1981 (7 U.S.C. 4201–4209). Prime farmland is defined as land that has the best combination of physical and chemical characteristics

for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The Natural Resources Conservation Service is responsible for overseeing compliance with the Farmland Protection Policy Act and has developed the rules and regulations for implementation of the Act (7 CFR Part 658).

The State of Florida requires an Environmental Resource Permit (ERP) before any construction project is initiated that would affect wetlands, alter surface water flows, or contribute to water pollution. The developer chosen to construct the proposed resort would be responsible for ensuring any necessary permits and approvals are in place prior to construction. Dredging and filling in wetlands and other surface waters is regulated by the NWFWMD under the Wetlands Regulation Permit (F.A.C. 62-302). In addition, storm water discharges must meet state water quality standards, as outlined in F.A.C. 62-302. Degradation to water quality that might occur through alteration of soils could result from increased turbidity, dissolved solids, and excessive nutrients (FDEP 2007). The proposed resort complex would also need NPDES coverage as a MS4 to discharge storm water off the site. NPDES and Florida's ERP program requirements are discussed in detail in **Section 3.6.2**.

3.5.2 Description of the Affected Environment

Physiography and Topography. Santa Rosa Island resides in the Coastal Barrier Island Chain physiographic province and exhibits the typical features associated with barrier islands: beaches, coastal dunes, interior dunes, and low-lying soundside beaches and marshes. The island is dotted with rolling dunes, sandy beaches, and a mixture of trees and other vegetation (Eglin AFB 2002). Santa Rosa Island is a wave-dominated low-lying barrier island, characterized by well-developed but relatively low dunefields, ranging in height from about 3 to 6 meters (Bus et al. 1996). The elevation for the site of the Proposed Action ranges from sea level to approximately 10 feet above mean sea level along the northern boundary of the site (EDR 2008). There are no drainages that run through the proposed site, but two jurisdictional wetlands occur. Wetlands occurring in proximity to the proposed project area are discussed in **Section 3.6.2**. The steepest grades in the proposed site can be found in the southern portion, where land slopes towards the Gulf of Mexico.

Geology. Underlying the beach sand deposits, the local geology of the proposed site is composed of riverine and marine sands and clays, as well as limestone and dolomite. The geologic age of the strata ranges from the Miocene epoch (approximately 20 million years before present) to Recent, with the first 250 feet below surface composed of the Citronelle Formation. The Citronelle Formation is formed of sediments suggesting early riverine deposits that emptied into the Gulf of Mexico. The Citronelle Formation is composed of two types of sandy clay. The younger of the two units is a massive gray clay with a small amount of quartz sand. The older unit is a mottled red and gray clay with a higher percentage of quartz sand. Underlying the Citronelle formation is the Allum Bluff Group, a Miocene-aged coarse clastic unit with clay deposits measuring several hundred feet thick. Limestones underlie the Allum Bluff Group for several hundred feet (Eglin AFB 2002).

Soils. Two major surface soils are mapped on the proposed site. The rolling Newhan-Corolla complex is mapped on more than 90 percent of the site, and the remaining soils are mapped as Urban Land. The Newhan-Corolla complex is composed of sandy eolian deposits forming dunes on marine terraces. This complex is excessively drained with slopes ranging from 2 to 30 percent. The complex is classified as partially hydric (NRCS 2008). Hydric soils are soils that are saturated, flooded, or ponded for long enough during the growing season to develop anaerobic (oxygen-deficient) conditions in their upper part. Anaerobic soil conditions are conducive to the establishment of vegetation that is adapted for growth under oxygen-deficient conditions and is typically found in wetlands (hydrophytic vegetation). The presence of hydric soil is one of the three criteria (hydric soils, hydrophytic vegetation, and wetland hydrology) used to determine that an area is a wetland based on the USACE *Wetlands Delineation Manual*, Technical Report Y-87-1 (USGS 2001). Wetlands occurring in proximity to the proposed site

are discussed in **Section 3.6.2**. The depth to saturation in the Newhan-Corolla complex is more than 80 inches. These soils have a moderate potential for erosion, indicating that some erosion is likely and that erosion-control measures might be needed. Additionally, the Newhan-Corolla complex is rated as very limited for construction of commercial buildings due to slope, flood potential, and depth to saturation. The soils mapped as Urban Land are not rated for the aforementioned parameters. Site-specific soil characterizations would be necessary where the Urban Land mapping unit occurs to determine potential uses and limitations for proposed use and development under the Preferred Alternative. Necessary engineering would be incorporated into project design to address any identified limitations. Neither of the soils mapped on the site are designated as prime or unique farmland soils in Okaloosa County.

3.5.3 Environmental Consequences

Evaluation Criteria

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential effects of a proposed action on geological resources. Generally, adverse effects can be avoided or minimized if proper construction techniques, erosion-control measures, and structural engineering design are incorporated into project development.

Effects on geology and soils would be significant if they would alter the lithology, stratigraphy, and geological structures that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability; or change the soil composition, structure, or function (including prime farmland and other unique soils) within the environment.

Preferred Alternative

Negligible to minor impacts would be expected from implementation of the Preferred Alternative. Each soil unit was analyzed to determine any construction and operational limitations, according to the Natural Resources Conservation Service Web Soil Survey. Construction of the proposed resort and related infrastructure would be somewhat limited by the Newhan-Corolla complex due to slope and flooding potential. As these soil units could pose construction issues, BMPs should be implemented to aid in the design and construction processes.

Minor changes to topography would be expected due to grading and filling activities during building construction, as well as dune removal or alteration. This change would be irretrievable but a minor adverse impact. The developer chosen to construct the proposed resort would be responsible for the design specifications; therefore, it is not known if fill would need to be brought in or removed from the proposed site during construction. Any construction debris that is not recycled would be put in a landfill, which would be considered a minor long-term irreversible adverse effect. Construction debris is generally composed of clean materials, and most of this waste would be recycled or ground into gravel for reuse. Contractors hired for the various construction projects would be responsible for the removal and disposal of their construction wastes generated onsite and any fill that would be brought in or removed from the site. Due to grading and filling activities, soil erosion and sediment transport offsite in storm water runoff could occur. In addition, an increase in impervious surfaces would result from this action, effecting storm water runoff. Because the Proposed Action would disturb more than 5 acres of land, an NPDES General Permit for Storm Water Discharge from Large Construction Activities from the FDEP would be required. The NPDES construction permit would require preparation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) that identifies appropriate erosion and sediment control and storm water management measures.

The resort developer would be required to make an application to the NWFWMD under the ERP program due to resulting increased impervious surfaces or alterations of storm water flow. The ERP permit is discussed in detail in **Section 3.6.1**. Effects on soils, including erosion and sedimentation, would be reduced to negligible to minor by implementing BMPs. Examples of erosion and sediment controls and BMPs could include temporary sediment basins, sediment fencing, and revegetation for ground stabilization. A detailed analysis of environmental consequences of the Preferred Alternative on water resources can be found in **Section 3.6.3**.

The geologic hazard of concern at the proposed site is shoreline erosion resulting from removal or alteration of coastal dunes. Removal or alteration of dunes can be detrimental and could result in minor adverse impacts. Removal of dunes prior to the arrival of Hurricane Opal in 1995 is attributed to causing greater destruction of residences than if the dunes had not been removed (Bus et al. 1996). Recently, dunes in Santa Rosa Island have been severely eroded by storm activity, especially by Hurricane Ivan in 2004 and Hurricane Dennis in 2005. In general, the more densely vegetated dunefields near the bayside shoreline survive storm activity more readily than the discontinuous dunes with grassy vegetation near the Gulf shoreline (Sales et al. 2008). The dunes that would be potentially impacted by the Preferred Alternative would be the coastal dunes, which are most affected by wind and storms and are therefore constantly evolving. Coastal dunes are the first line of defense against storms, acting as natural barriers and protecting against shoreline erosion. Removal or alteration of the dunes at the proposed site would result in an increased potential for shoreline erosion. A plan for the restoration of altered dunes must first be approved the Board of County Commissioners if construction activities would alter or degrade the dune system (Okaloosa County 2003a). The Emerald Breeze Resort developer would be responsible for preparing and submitting this restoration plan.

No impacts on Prime Farmland would occur under the Preferred Alternative. The Newhan-Corolla complex and the Urban Land mapping unit are not classified as prime farmland soils in Okaloosa County, so there is no Prime Farmland on the proposed site.

No Action Alternative

Under the No Action Alternative, the resort would not be constructed and existing conditions would remain as described in **Section 3.5.2**. No effects on geological resources would be expected.

3.6 Water Resources

3.6.1 Definition of the Resource

Water resources include groundwater, surface water, and floodplains. Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes.

Groundwater consists of subsurface hydrologic resources. It is an essential resource often used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater typically can be described in terms of its depth from the surface, aquifer or well capacity, water quality, surrounding geologic composition, and recharge rate.

Surface water resources consist of lakes, rivers, and streams and wetlands. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale.

Stormwater is an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade lakes, rivers, and streams. Stormwater flows, which can be exacerbated by high proportions of impervious surfaces associated with buildings, roads, and

parking lots, are important to the management of surface water. Stormwater systems convey stormwater runoff away from developed sites to receiving surface waters. Various systems and devices might be used to slow the movement of water. For instance, a large, sudden flow could scour a streambed and harm biological resources. Stormwater systems provide the benefit of reducing sediments and other contaminants that would otherwise flow directly into surface waters. Failure to size stormwater systems appropriately to hold or delay conveyance of the largest predicted precipitation event often leads to downstream flooding and the environmental and economic damages associated with flooding. Higher densities of development, such as those found in urban areas, require greater degrees of stormwater management because of the higher proportions of impervious surfaces that occur in urban areas.

The CWA (33 U.S.C. 1251 et. seq., as amended) establishes Federal limits, through the NPDES, on the amounts of specific pollutants that are discharged to surface waters to restore and maintain the chemical, physical, and biological integrity of the water. The NPDES program regulates the discharge of point (end of pipe) and nonpoint sources (stormwater) of water pollution. Florida administers the Federal NPDES permit program for the discharge of stormwater through the FDEP. Section 404 of the CWA regulates the discharge of fill material into waters of the United States, which includes most wetlands.

In addition to the Federal NPDES permit program requirements, Florida also regulates stormwater at the local level through the Florida ERP program. On 1 October 2007, Phase I of the ERP program became effective. This current phase focuses on activities that have the potential to generate stormwater runoff and regulates the quality of runoff for all activities, and the quantity for those activities that exceed specific parameters. The NWFWMD is the agency responsible for ERP in Okaloosa County. The ERP program requires a single permit application for stormwater management for construction through operational phases of a development project. The developer chosen to construct the proposed resort would be responsible for ensuring any necessary permits and approvals are in place prior to construction.

Phase II rules are in the final stages of development (targeted for implementation as early as July 2009). Phase II will regulate impacts on wetlands at the state level. They would incorporate the current storm water regulations with new regulations for activities that occur in, on, or over wetlands and other surface waters. The operating agreement is being reviewed at this time and some changes can be expected. The implementation date for full ERP is tentatively scheduled for July 2009. The rules regarding the Florida ERP program are found in F.A.C. 62-346.

Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters. Such lands might be subject to periodic or infrequent inundation due to a flood created by rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated by FEMA, which defines the 100-year floodplain. The 100-year floodplain is the area within which there is a 1 percent chance of inundation by a flood event in a given year. Certain facilities inherently pose too great a risk from flooding to be located in either the 100- or 500-year floodplain, such as hospitals, schools, or storage buildings for irreplaceable records. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur within a floodplain. This determination typically involves consultation of appropriate FEMA Flood Insurance Rate Maps, which contain enough general information to determine the relationship of the project area to nearby floodplains.

Coastal Zone Management in Florida incorporates 23 statutes that protect and enhance Florida's natural, cultural, and economic coastal resources (FDEP 2006a). Florida has limited its consistency review of federally licensed and permitted activities as identified in Florida Statutes Section 380. As identified in Section 380.23(3) (c), laws requiring licenses or permits that are potentially relevant to Eglin AFB and

this Proposed Action, and therefore necessitate consistency review, include the Rivers and Harbors Act and the CWA. The developer chosen to construct the proposed resort would be responsible for ensuring any necessary permits and approvals are in place prior to construction.

The USACE defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 CFR Part 328).

Wetlands are important natural systems and habitats which can support a diverse number of different species. Wetlands perform a great number of important biological functions, some of which include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, wildlife habitat provision, and erosion protection. Some wetlands are protected as a subset of "the waters of the United States" under Section 404 of the CWA. The term "waters of the United States" has a broad meaning under the CWA and incorporates deepwater aquatic habitats and special aquatic habitats, including most wetlands.

The USACE is responsible for asserting jurisdiction over wetlands that it determines fall within the protections of Section 404 of the CWA. Accordingly, the USACE has defined the procedures for identifying and delineating jurisdictional wetlands. As described in the 1987 Corps of Engineers Wetlands Delineation Manual, jurisdictional wetlands must exhibit the presence of the following three parameters (Eglin AFB 2005b):

1. Hydric soils
2. Predominance of hydrophytic vegetation
3. Surficial hydrologic indicators.

Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill materials into the waters of the United States, including jurisdictional wetlands. Additionally, Section 401 of the CWA grants states with sufficient resources the right to assume the water quality portion of these responsibilities. The USFWS, as a component of the National Wetlands Inventory (NWI), has developed a classification system for identifying wetland types. Through the NWI, the USFWS is the principal Federal agency that provides information to the public on the extent and status of wetlands. EO 11990, *Protection of Wetlands*, requires that Federal agencies provide leadership and take actions to minimize or avoid the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial functions and values of wetlands. Federal agencies are to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland.

Typically, this wetland regulatory process is applied in accordance with the CWA's Section 404(B)(1) Guidelines, which state that impacts to the functions and values of jurisdictional wetlands and other "Waters of the U.S." must (1) be avoided; (2) impacts that cannot be further avoided must be minimized to the maximum extent practicable; and, (3) unavoidable impacts that cannot be further minimized must be replaced by compensatory mitigation through restoration, enhancement, creation, or some combination of these three procedures.

Many states and some municipalities also maintain their own wetland protection laws and regulations which must supersede the Federal CWA in terms of both jurisdictional hierarchy and regulatory stringency. In Florida, state regulation of wetlands was initiated under the Warren S. Henderson Wetlands Protection Act of 1984 (Florida Statutes § 403.91 et seq.). Pursuant to Chapter 62-312 of the

F.A.C., the NWFWMD now issues and processes Wetland Resource Permit Program forms for regulating proposed dredge and fill activities within wetlands in communities in Florida's Panhandle.

3.6.2 Description of the Affected Environment

As shown on **Figure 2-1**, Santa Rosa Island is a narrow barrier island approximately 50 miles long and less than 0.5 miles wide, separated from mainland northwestern Florida by Santa Rosa Sound, a shallow lagoon varying in width from 400 to nearly 5,000 feet, and Choctawhatchee Bay. Santa Rosa Island is bordered on the south shore by the Gulf of Mexico and on the north shore by Santa Rosa Sound and Choctawhatchee Bay. Eglin AFB controls 4,760 acres of Santa Rosa Island: a 4-mile strip eastward of Fort Walton Beach and a restricted access 13-mile section extending west to Navarre Beach, Florida. There are 2.5 miles of Okaloosa County property between the two parcels of Eglin property. The proposed site, Test Site A-5, is situated within this portion of the island.

In addition to the Santa Rosa Island land mass, this section addresses the Santa Rosa Island Surf Zone. The Surf Zone area is a shallow area covering the continental shelf seaward of the island to a depth of approximately 30 feet. The Santa Rosa Island land mass and its associated Surf Zone are considered the ROI for water resources.

Groundwater. The primary water supply for northwestern Florida comes from the Surficial and Floridan Aquifers. However, Santa Rosa Island contains extremely minimal potable water potential due to saltwater intrusion and low potentiometric surface levels of the aquifers. The aquifer system's potentiometric surface in the panhandle of Florida has gradually depleted over many years of pumping and over-withdrawal rates.

Much of Santa Rosa Island, including the proposed site, is situated in a zone of restricted groundwater use and management. This means that the proposed resort developer must adhere to the following:

- Cannot use potable water for irrigation
- Must use xeriscaping (lowest water volume requirements) to the maximum extent practicable.

Surface water. There are brackish ponds, and many other small wetlands, but no natural surface freshwater bodies on Santa Rosa Island (see **Figure 3-3**). After heavy rainfall, the ponds may become fresh for brief periods. No well-developed drainages exist, but numerous coves and inlets occur along the northern edge of Santa Rosa Island.

There are no streams on the proposed site. Two delineated, jurisdictional wetlands are located in the northern third of the property, one on each side of the existing access road (see **Figure 3-3**). As delineated, both of these wetlands are isolated and were probably created or excavated for fill material to use in the construction of U.S. Highway 98. The following limiting factors reduce the overall quality of the functions of these wetlands:

1. Isolated hydrology
2. Small size
3. Surrounding severe fragmentation
4. Previous severe disturbances
5. Non-natural origin
6. Low vegetative species/habitat diversity
7. Restricted wildlife access.

No other streams, ponds, or other nonmarine waters of the United States occur on the proposed site.



Source of Aerial Photography: NAIP 2007; Proposed Location: Eglin AFB 2008; Plant Communities: e²M, Inc. 2008.

Figure 3-3. Wetland Areas and Plant Communities at the Proposed Site

Tides within the Santa Rosa Island region are diurnal and microtidal. The mean tide range at East Pass is 0.43 feet with a spring tidal range of 0.51 feet. According to the USACE Wave Information Study, the mean significant wave height for offshore Okaloosa County is 3.3 feet and the mean wave period is 8.5 seconds (Eglin AFB 2005b). The most frequent wave direction is out of the east-southeast (Eglin AFB 2005b). There are several widely varying estimates of longshore sediment transport for this area. Most estimates range from 52,000 to 254,000 cubic yards per year. All estimates indicate that the net transport is to the west, which is supported by the physical pattern of erosion west of the inlet and accretion east of the inlet (Eglin AFB 2005b).

Based on topography, surface water on Santa Rosa Island either drains into Choctawhatchee Bay, Santa Rosa Sound, or the Gulf of Mexico. Some precipitation is lost through the natural hydrologic processes of interception, depression storage, infiltration, evaporation, and transpiration. The remaining precipitation flows overland and through the soil, collects as flow in swales and small channels, and eventually becomes runoff to the bay, sound, or Gulf. Land use, drainage improvements, storage facilities, and other development activities significantly affect the processes by which precipitation is converted to stream flow.

The surface water quality of water bodies in the ROI was rated by the State of Florida. The state delineated large basins and numerous sub-basins for each of the five water districts in the state. The marine waters seaward of Santa Rosa Island are defined as Class III (recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife) (Eglin AFB 2005a).

The FDEP also completed a Water Quality Assessment Report in 2006. The purpose of this report was to provide a verified list of impaired waters for which Total Maximum Daily Loads (TMDLs) of given pollutants must be developed pursuant to Section 303(d) of the CWA and the Florida Watershed Restoration Act (Eglin AFB 2005b).

Drainage from the proposed site primarily flows south into the Gulf of Mexico. The Gulf is classified as a Class III water body, meaning that it should be used for recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife (FDEP 2006b).

Floodplains. Most of the northern 60 percent of the proposed site lies within a FEMA Flood Zone AE, while the southern 40 percent is designated as a FEMA Flood Zone VE (Okaloosa County undated d). These FEMA Flood Zone Designations are defined as follows:

- ***Zone VE.*** Special Flood Hazard Areas (SFHAs) along coasts subject to inundation by the 100-year flood with additional hazards due to velocity (wave action). Base flood elevations derived from detailed hydraulic analyses are shown within these zones. Mandatory flood insurance purchase requirements apply.
- ***Zone AE.*** SHFAs are subject to inundation by the 100-year flood determined in a Flood Insurance Study by detailed methods. Base flood elevations are shown within these zones. Mandatory flood insurance purchase requirements apply.
- ***Zone X***. These areas have been identified in the community flood insurance study as areas of moderate or minimal hazard from the principal source of flood in the area. However, buildings in these zones could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems. Local storm water drainage systems are not normally considered in the community's Flood Insurance Study. The failure of a local drainage system creates areas of high flood risk within these rate zones. Flood insurance is available in participating communities, but is not required by regulation in these zones.

Coastal Zone Management. The proposed site is located entirely within Florida's Coastal Zone Management Area and is subject to Consistency Review procedures specified under both state and Federal regulations associated with the Federal CZMA (see **Section 3.6.1**). The CZMA consistency determination and accompanying State of Florida consistency concurrence and recommendations for the Proposed Action are provided in **Appendix F**.

3.6.3 Environmental Consequences

Evaluation Criteria

Evaluation criteria for effects on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. A proposed action would have significant effects on water resources if it were to do one or more of the following:

- Substantially reduce water availability or supply to existing users
- Overdraft groundwater basins
- Exceed safe annual yield of water supply sources
- Substantially adversely affect water quality
- Endanger public health by creating or worsening health hazard conditions
- Threaten or damage unique hydrologic characteristics
- Violate established laws or regulations adopted to protect water resources.

The potential effect of flood hazards on a proposed action is important if such an action occurs in an area with a high probability of flooding.

Preferred Alternative

Implementation of the Preferred Alternative has the potential to result in short- and long-term adverse effects on water resources. Implementation of BMPs, appropriate management of stormwater during and following construction, and adherence to all required permits would reduce the potential for adverse effects.

As previously described in **Section 3.6.2**, the northern 60 percent of the proposed site is within a FEMA Flood Zone AE while the southern 40 percent is within a FEMA Flood Zone VE. EO 11988, *Floodplain Management*, requires Federal agencies to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development whenever possible. Additionally, EO 11988 requires Federal agencies to make every effort to reduce the risk of flood loss; minimize the impact of floods on human health, safety, and welfare; and preserve the natural beneficial value of floodplains. The order stipulates that Federal agencies proposing actions in floodplains consider alternative actions to avoid adverse effects, avoid incompatible development in the floodplains, and provide opportunity for early public review of any plans or proposals. If adverse effects are unavoidable, the proponent must include operational procedures in the Preferred Alternative to minimize impacts.

Since most of the proposed site is within FEMA 100-year Flood Zones, FEMA's 8-step process for siting in a floodplain must be followed, with each of the 8 steps corresponding to the various steps of the EA development process under NEPA. A FONPA would be included in the decision document for the Proposed Action. The potential environmental consequences of the Proposed Action on the proposed site's two jurisdictional wetlands are discussed below.

The resort developer would also be required to make an application to the NWFWMD under the ERP Phase II Program because the Preferred Alternative would result in increased impervious surfaces and

alterations of stormwater flow. Phase II of the program would regulate impacts on wetlands at the state level. The resort developer would incorporate the current stormwater regulations with new regulations for activities that occur in, on, or over wetlands and other surface waters. The operating agreement is being reviewed at this time and some changes can be expected. The implementation date for the full ERP is tentatively scheduled for July 2009. The rules regarding Florida ERPs are found in F.A.C. 62-346.

Water for the Preferred Alternative would be supplied by existing municipal infrastructure. This would help ensure that surface water or groundwater quality or quantity would not be noticeably diminished following implementation of the Preferred Alternative.

Finally, the proposed resort would be constructed by private developers under a public-private venture scenario. The resort developer would be required to integrate green design wherever feasible through the use of energy- and water-efficient building techniques and equipment. Examples might include low-impact design storm water collection and treatment structures that integrate into the landscape and recycle water back to groundwater. Also, Eglin AFB would not allow potable water to be used for irrigation and would require the use of xeric landscape design throughout the proposed resort, and any deviation from this requirement would require written justification.

Potential short- and long-term effects from construction of the Preferred Alternative are presented in the following sections.

Short-Term Effects. Construction activities, such as grading, excavating, and recontouring of the soil, would result in soil disturbance. During storm events, overland storm flow picks up and carries contaminants (e.g., soil or leaked motor oil) directly into receiving surface water bodies (e.g., the Gulf) or surficial sand and gravel aquifers. To minimize the possible occurrence of water body contamination, the construction contractor would obtain all necessary construction permits and comply with all BMPs and other requirements and guidelines set forth in those permits.

Under the CZMA, Eglin AFB prepared a Coastal Management Program consistency determination for the Proposed Action (see **Appendix F**). The determination is reviewed by the Florida Coastal Management Program through the Florida Clearinghouse review process. The State of Florida consistency determination review and recommendations are contained in **Appendix F**.

The Preferred Alternative would require an NPDES General Permit for Stormwater Discharge from Large Construction Activities. A site-specific SWPPP would be prepared in association with the NPDES construction permit that includes BMPs to reduce the potential for soil erosion and prevent contaminant-laden stormwater from leaving the construction site. The site-specific SWPPP would be developed by the construction contractor as a bid requirement for the contract, and could include the following measures (Eglin AFB 1999, Eglin AFB 2003b):

- Runoff control by minimizing clearing and stabilizing drainageways
- Erosion control by stabilizing exposed soils, protecting steep slopes, protecting waterways, and phasing construction
- Sediment control by installing perimeter controls, sediment trapping devices, and inlet protection
- Good housekeeping to include general construction site waste management, spill prevention and control plan, and establishing appropriate vehicle maintenance and washing areas
- Adequate personnel training and documentation.

All construction BMPs would be approved by the Eglin AFB Civil Engineering Department to ensure they are adequate. The construction site would also be subject to onsite inspections to ensure that sediment and erosion controls are compliant with the permitting requirements and that good housekeeping measures are being employed.

Assuming proper use of BMPs to contain construction effects to the active construction site, minor adverse effects could occur. To minimize the potential of a spill or leak of fuel, construction equipment would be maintained according to the manufacturer's specifications to ensure it is in proper working order. All fuels and other potentially hazardous materials would be contained and stored appropriately. In the event of a spill, procedures identified in the Eglin AFB Spill Prevention Control and Countermeasures Plan would be followed to quickly contain and clean up a spill. There remains the possibility that a spill or leak could occur, but implementation of the BMPs identified in the site-specific SWPPP would minimize the extent of possible contamination.

Long-Term Effects. The Preferred Alternative would result in small increases in consumption of potable water that would be supplied by existing municipal infrastructure. The regional Floridan Aquifer supplies water for the Eglin AFB area. The long-term use of the Floridan Aquifer as a result of implementing the Preferred Alternative would be a negligible contribution to the overall use of the Floridan Aquifer.

The Preferred Alternative would result in an increase of impervious surfaces. As described in **Section 2.3.2**, the Preferred Alternative would require various structures that total approximately 8.6 acres. Therefore, it is assumed that the overall increase in impervious surfaces would be 8.6 acres. The creation of impervious surfaces has the potential to decrease stormwater quality and increase stormwater quantity and flow velocity, particularly during large rain events. Overland storm flows pick up contaminants and carry them directly into receiving water bodies, in this case the Gulf of Mexico. Large areas of impervious pavement that once were pervious soils increase the speed at which stormwater runs off. An increase in impervious areas can also reduce the land that is available for groundwater recharge. Approximately 8.5 acres of green space would be retained at the proposed site and stormwater retention would be constructed.

While the development of 8.6 acres and loss of that pervious area is an irretrievable adverse effect, this loss of recharge area for the surficial Sand and Gravel Aquifer on Santa Rosa Island would be negligible when compared with the total recharge area that is available on the island.

Long-term operational activities associated with the Preferred Alternative have the potential to moderately adversely affect surface water and groundwater quality as a result of nonpoint source pollution. There would be more cars onsite that could leak fuel or other hazardous materials, and there would be increased use of pesticides and fertilizers for landscaped areas. During rain events, stormwater could pick up pollutants and discharge them to the Gulf, or contaminated rainwater could infiltrate through the sandy soil into Santa Rosa Island's surficial Sand and Gravel Aquifer resulting in long-term moderate adverse effects on water quality. However, these effects would be mitigated through planned implementation of the various applicable Federal and state stormwater permitting requirements so that no water quality violations would be expected; water quality would be maintained by using BMPs and stormwater management as described in the following text.

Under the Preferred Alternative, a stormwater management system would be designed to contain and treat stormwater so that potential flooding and contamination are minimized. The stormwater management on site would be implemented under the NWFWMD ERP, which became effective in October 2007 (see **Section 3.6.1**). Implementing the Preferred Alternative would require an ERP from NWFWMD because impervious surfaces would increase and stormwater flows would be altered. In addition, the resort developer would be required to coordinate with FDEP for additional stormwater permitting under the NPDES program. Stormwater BMPs under the NPDES program would add to the ERP program

requirements and ultimately attenuate the potential adverse effects the Preferred Alternative could have on water quality and quantity.

In addition to the ERP program and the NPDES general stormwater permit for construction activities, the resort developer would need to coordinate with Eglin AFB or Okaloosa County for the implementation of stormwater management BMPs that are consistent with each jurisdiction's MS4 permit and stormwater management plan. The MS4 permit program requires development, implementation, and enforcement of a Stormwater Management Program for construction (i.e., building the resort) and operations (i.e., parking lot spill management, trash bin management, stormwater collection management). As discussed in **Section 3.6.1**, FDEP would begin determining the TMDL for the Gulf at this location in 2009 to reduce bacterial loads into that water body. If the Preferred Alternative is implemented, requirements as a result of the TMDL determination could be incorporated into the BMPs.

Post-construction runoff control is accomplished using a variety of structural and nonstructural BMPs. Specific BMPs would be developed during the final site design stage and included in the appropriate permits. Structural BMPs could include combinations of the following (Eglin AFB 2003b):

- Construction of ponds (e.g., wet ponds, wetland treatment basins)
- Infiltration practices (e.g., infiltration basins, infiltration trenches, porous pavements)
- Filtration practices (e.g., bioretention swales, sand and organic filters)
- Vegetative practices (e.g., stormwater wetlands, wildlife habitat swales, grassed filter strips)
- Runoff pretreatment practices (e.g., catch basins, in-line storage, manufactured products for stormwater inlets).

Nonstructural BMPs would be used in conjunction with structural BMPs. Nonstructural BMPs would be incorporated into the site design, such as the retention of 8.5 acres of green space. All proposed BMPs would be subject to regulatory approval during the permitting process and the approval of Eglin AFB Civil Engineering Department. Good housekeeping and pollution prevention measures would be followed to minimize potential sources of pollution during operations. Existing pollution prevention measures would be used since the kinds of operations associated with the Preferred Alternative would be similar to ongoing activities at Eglin AFB. Examples of nonstructural BMPs could include the following (Eglin AFB 2003b):

- Automobile maintenance restricted to specific contained areas
- Vehicle washing restricted to specific contained areas
- Landscaping and lawn care to minimize the application of fertilizers, pesticides, and herbicides
- Street and parking lot sweeping to remove small quantities of dry chemicals and solids from areas exposed to rainfall or stormwater runoff
- Hazardous materials storage with spill containment.

Wetlands. Minor long-term adverse effects on wetlands could occur. Since jurisdictional wetlands are located on the property, a FONPA will need to be issued and signed at the Command level before any wetland impacts can occur. In addition, any required local, state, or Federal approvals (e.g., Sections 404 and 401 permits issued under the Federal CWA) must also be acquired before wetland impacts can occur. The developer chosen to construct the proposed resort would be responsible for ensuring any necessary permits and approvals are in place prior to construction. If the Preferred Alternative does involve unavoidable impacts on wetlands, the lost functions and values can be replaced by enhancing the

remaining wetlands on the proposed site. The overall impact would be minor because of the small size and low quality of the wetlands.

Because construction design plans are not available for this analysis, an assumption is made that the existing wetlands cannot be avoided during the construction process. CWA Section 404 permits and Section 401(a) water quality certifications must be obtained, as required, for unavoidable impacts on jurisdictional waters of the United States, including wetlands. Compensation for unavoidable wetland impacts would be required as a condition of the Section 404 permit. In addition, EO 11990 and USAF policy require the avoidance of all wetlands, regardless of whether the wetland is jurisdictional or not, unless a there is no practicable alternative.

In accordance with EO 11990, *Protection of Wetlands* and AFI 32-7064, *Integrated Natural Resources Management*, the USAF maintains a no net loss policy regarding all wetlands and must demonstrate that there are no practicable alternatives to construction within these wetlands. Therefore, the decision document for the EA would include a FONPA for wetland impacts that could not be avoided. In addition, these wetlands will receive protection from Federal, state, and local wetland laws/regulations, such as the USACE's CWA Section 404 and Section 401 permitting programs, which assist in preserving both the amount and integrity of the nation's remaining wetland resources.

Construction activities could result in a potential increase in surface runoff due to sheet flow over increased impervious surfaces and a potential increase in erosion and sedimentation. Implementation of properly designed and maintained erosion and sediment controls and stormwater management practices during construction would minimize the potential for any adverse effects on wetlands or other waters of the United States occurring in proximity to the Preferred Alternative. Implementation of BMPs under a site-specific ERP, and either the Eglin AFB or Okaloosa County MS4 stormwater management plans, would minimize the potential for adverse effects associated with runoff from the resort. In addition, ERP Phase II rules for local level wetland regulation are in the final stages of development. ERP Phase II would supplement the current stormwater regulations with new regulations for activities that occur in, on, or over wetlands and other local surface waters. The implementation date for full ERP is tentatively scheduled for July 2009. Implementation of Phase II of the ERP Program would further minimize potential for adverse effects on wetlands or other waters of the United States associated with increased stormwater runoff both during and following site development.

No Action Alternative

Under the No Action Alternative, the proposed site would not be constructed, resulting in the continuation of the existing condition as described in **Section 3.6.2**. No effects on water resources would be expected.

3.7 Biological Resources

3.7.1 Definition of the Resource

Biological resources include plants, animals, and the habitats in which they exist such as, forests, water bodies, and grasslands. The biological resources of an area can be protected and sensitive. Protected and sensitive plants and animals can be listed as either endangered or threatened at the Federal or state level, a candidate species for Federal listing, a Species of Special Concern, or managed under conservation agreements or management plans. Habitats necessary to support listed species can also be proposed or designated as Critical Habitat.

State and Federal Listed Species. Under the ESA (16 U.S.C. § 1536), an endangered species is defined as any species in danger of extinction throughout all or a significant portion of its range. A threatened

species is defined as any species likely to become an endangered species in the foreseeable future. Although candidate species receive no statutory protection under the ESA, the USFWS advises government agencies, industry, and the public that these species are at risk and might warrant protection under the ESA in the future.

Working out of Natural Heritage Offices, many states also maintain separate lists of protected species, typically categorized as Endangered, Threatened, and Species of Special Concern. In Florida, the list of protected species is maintained by the Florida Natural Areas Inventory (FNAI). State lists consider the status of plant and animal species as they occur only within state property lines, typically without respect for overall abundance throughout the ranges of species. As a result, state-protected species lists are usually more expansive and might be quite different from the Federal lists maintained by the USFWS. Some species occurring on a state list are rare in the state because they are near the limits of their natural range. These species are typically more abundant within their natural range.

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–712) and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, protect migratory birds and their habitats and establish a permitting process for legal taking. A migratory bird is defined by the USFWS as any species or family of birds that lives, reproduces, or migrates within or across international borders at some point during their annual life cycle. For normal and routine operations such as installation support functions, actions of the DOD might not result in pursuit, hunting, taking, capturing, killing, possession, or transportation of any migratory bird, bird part, nest, or egg thereof, except as permitted. The DOD must address these routine operations through the Memorandum of Understanding (MOU) developed in accordance with EO 13186, *Responsibilities of Federal Agencies To Protect Migratory Birds*. Under the 2003 National Defense Authorization Act, the Armed Forces are exempted from the incidental taking of migratory birds during military readiness activities, except in cases where an activity would likely cause a significant adverse effect to the population of a migratory bird species. As detailed in the final rule in the Federal Register (50 CFR 21), in this situation the Armed Forces, in cooperation with the USFWS, must develop and implement conservation measures to mitigate or minimize the significant adverse impacts.

Essential Fish Habitat. The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act require that NMFS and regional Fishery Management Councils designate Essential Fish Habitat (EFH) for species included in a fishery management plan. EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity. Federal agencies that fund, permit, or carry out activities that could adversely affect EFH are required to consult with NMFS regarding potential impacts, and respond in writing to NMFS and Fishery Management Council recommendations. Adverse impacts are defined as impacts that reduce quality or quantity of EFH, and can include contamination, physical disruption, loss of prey, and reduction in species' fecundity. EFH that might be present in an area includes emergent vegetation, Submerged Aquatic Vegetation, Sargassum, and artificial reefs/underwater structures.

Invasive Plant Species. On February 3, 1999, EO 13112 was signed establishing the National Invasive Species Council. This EO requires that a Council representing departments dealing with invasive species be created. Currently there are ten departments and agencies on the Council, including the DOD. The purpose of EO 13112 was to "prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause." The EO directs Federal agencies whose actions affect the status of invasive species, to the extent practicable and permitted by law, to perform the following:

1. Identify such actions.
2. Subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to:
    a. Prevent the introduction of invasive species
    b. Detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner
    c. Monitor invasive species populations accurately and reliably
    d. Provide for restoration of native species and habitat conditions in ecosystems that have been invaded
    e. Conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species
    f. Promote public education on invasive species and the means to address them.
3. Not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species, and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

The Federal Noxious Weed Act (7 U.S.C. §§ 2801–2814 as amended) requires that each Federal agency perform the following:

1. Develop a management program to control undesirable plants on Federal lands under the agency's jurisdiction
2. Establish and adequately fund the program
3. Implement cooperative agreements with state agencies to coordinate management of undesirable plants on Federal lands
4. Establish integrated management systems to control undesirable plants targeted under cooperative agreements.

The Florida Exotic Pest Plant Council has developed a ranking system for invasive nonnative plants defining their invasiveness in natural areas. Category I species are those species that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with native species. This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage. Category II species are those species that have increased in abundance or frequency but have not yet altered Florida plant communities. These species could be ranked Category I if ecological damage is demonstrated (FLEPPC 2005).

3.7.2 Description of the Affected Environment

The Coastal Uplands Ecological Association dominates Santa Rosa Island. In addition, a variety of sensitive plant and animal species are supported by habitats on Santa Rosa Island. Sensitive species potentially associated with, or occurring in proximity to the project site are discussed in the text below.

Natural Vegetation and Land Cover. Officially designated as Eglin AFB's Test Site A-5, the proposed site is a remnant Coastal Upland Plant Community. The Coastal Upland Plant Community is the

predominant ecological association found on Santa Rosa Island (Eglin AFB 2005b). The Coastal Upland Plant Community on Santa Rosa Island encompasses the following primary habitat types (Eglin AFB 2005a):

1. Beach Dune Community (including both primary and secondary dunes)
2. Coastal Interdunal Swale
3. Coastal Grassland Scrub
4. Coastal Strand Community, including Mesic Flatwoods and Xeric Hammocks.

The Santa Rosa Island Beach Dune Community is typified by species of grasses, vines, and herbs. Sea oats (*Uniola paniculata*) dominate all regions of coastal upland communities, usually occurring with bitter panicum (*Panicum amarum var amarulum*) and beach elder (*Iva imbricata*). Other Beach Dune Community species likely to occur on Santa Rosa Island and the proposed site include seashore paspalum (*Paspalum distichum*), white morning glory (*Ipomoea stolonifera*), Gulf bluestem (*Schizachyrium maritimum*) and sea rocket (*Cakile constricta*). The Coastal Interdunal Swale and Coastal Grassland Scrub communities serve as transitional zones separating the pioneering vegetation of the Beach Dune Community from the more stable, inland, and upland Coastal Strand Community.

Frequently, the herbaceous species of Santa Rosa Island, including the proposed site, occupy areas of newly deposited sands along the Gulf coast. Abundant coastal grassland species are Gulf bluestem, sand squares (*Paronychia erecta*), telegraph weed (*Heterotheca subaxillaris*), and Godfrey's goldenaster (*Chrysopsis freyi*). Coastal shrub-scrub species often found on Santa Rosa Island and the proposed site are woody goldenrod, scrub oaks (*Quercus geminata* and *Q. myrtifolia*), sand pine, and rosemary. Large populations of lichens (*Cladonia perforata* and *C. leporina*) also frequently occur on Santa Rosa Island while the Maritime Hammock Community, characterized by sand live oak and southern red cedar (*Juniperus silicicola*), is found at higher interior elevations on Santa Rosa Island (Eglin AFB 2005a).

The majority of the proposed site has a long-term history of site disturbance associated with military operations (see **Section 2.3.1**). In its existing condition, the developable central footprint of the property primarily supports a highly disturbed Coastal Grassland Scrub Community bracketed to the west and north by open, nonbeach sandy areas (see **Figure 3-3**). Through the years, the direct habitat impacts associated with onsite test operations have been exacerbated by the indirect effects of ongoing habitat fragmentation to the west (The Waterscape Resort with 339 units), north (U.S. Highway 98, a four lane highway abutting mixed commercial uses), and east (the Sheraton at Four Points Resort with 216 rooms) of the proposed site. Habitat fragmentation is the progressive loss of wildlife habitat continuity or "connectivity" that results from the introduction of human-made elements/activities onto natural landscapes. A classic example of habitat fragmentation involves constructing a controlled access four-lane highway across a caribou migratory corridor.

As shown on **Figure 3-3**, this surrounding development fragmentation has permanently eliminated habitat connectivity/migratory pathways for future access and life history functions of terrestrial wildlife species. Historical records indicate that long-term avian use of the proposed site has also been diminished by this ongoing fragmentation effect.

Direct onsite observations support the generally low quality of the natural vegetation/wildlife habitat occupying the primary development footprint (8.6 acres) on the proposed site (Eglin AFB 2008b). The central, fenced-in portion of the property is vegetated by short grasses and cacti species growing amid scattered scrub brush and a few scraggly trees.

The southern 3.5 acres of the proposed site features beach/intertidal zone and beach dune habitats that are typical of the rapidly developing northern Florida Gulf Coast, in that they have maintained their primary ecological functions/qualities despite the negative effects of encroaching coastal development to the west,

north, and east. The ecological maintenance of the beach dune and intertidal zone habitats is primarily attributable to the fact that the direct linkages with the open Gulf environment have been maintained through the development years. Primarily, the majority of the coastal beach dune system, including both primary and secondary dunes, has been preserved and serves as a buffer to the surrounding development. As a result of CZMA setback requirements, these 3.5 acres are designated as "undevelopable" and will remain in their existing natural states.

Invasive Plant Species. No assessment of invasive and nonnative plant species has been conducted on the proposed site. However, invasive nonnative plant species have been documented at many locations across Eglin AFB. The most problematic areas with invasive plant species concerns are associated with the urban interface where illegal dumping and natural seed dispersal from private property have allowed establishment of invasive species on adjacent USAF property. The Eglin Main Base has several areas of concern involving invasive nonnative plant species because of the urban interface and past landscaping practices where Chinese tallow and other invasive plant species were used in main base housing and other landscapes. Road construction and maintenance activities have introduced and spread cogon grass (*Imperata cylindrical*) and torpedo grass (*Panicum repens*) to areas of the Eglin AFB road system and adjacent natural areas.

To date, 18 Category I and 8 Category II species have been documented on Eglin AFB. Chinese tallow, or popcorn tree (*Triadica sebifera*), cogon grass, Japanese climbing fern (*Lygodium japonicum*), Chinese privet/hedge (*Ligustrum sinense*), and torpedo grass have been prioritized as the most problematic of the Category 1 species impacting Eglin AFB's ecosystems. Many of Eglin AFB's high-quality natural areas and sensitive species are threatened by these nonnative invasive species. Several other invasive nonnative plant species have been documented on Eglin AFB, but are not yet considered major problem species. **Table 3-7** lists Category 1 and Category 2 species for Eglin AFB.

Table 3-7. Category 1 and Category 2 Invasive Plant Species at Eglin AFB

Category 1	Category 2
Mimosa (*Albizia julibrissin*)	Tung oil tree (*Aleurites fordii*) (*Vernicia fordii*)
Asparagus fern (*Asparagus aethiopicus*)	Alligator weed (*Alternanthera philoxeroides*)
Camphor-tree (*Cinnamomum camphora*)	Coral vine (*Antigonon leptopus*)
Wild taro (*Colocasia esculenta*)	Silverthorn (*Elaeagnus pungens*)
Air potato (*Dioscorea bulbifera*)	Chinaberry (*Melia azedarach*)
Water hyacinth (*Eichhornia crassipes*)	Chinese brake fern (*Pteris vittata*)
Lantana (*Lantana camera*)	Purple sesban/rattlebox (*Sesbania punicea*)
Glossy privet (*Ligustrum lucidum*)	Chinese wisteria (*Wisteria sinensis*)
Japanese honeysuckle (*Lygodium japonicum*)	
Nandina / heavenly bamboo (*Nandina domestica*)	
Kudzu (*Pueraria montana*)	
Natal grass (*Rhynchelytrum repens*)	
Tropical soda apple (*Solanum viarum*)	

Wildlife Habitat and Species. Representative wildlife species that regularly occur on Santa Rosa Island and are also expected to occur on the proposed site include the raccoon (*Procyon lotor)*, nine-banded armadillo (*Dasypus novemcinctus*), brown rat (*Rattus norvegicus*), house mouse, eastern cottontail

(*Sylvilagus floridanus*), blue jay (*Cyanocitta cristata*), English sparrow (*Passer domesticus*), laughing gull (*Larus atricilla*), American crow (*Corvus brachyrhyncos*), common grackle *(Quiscalus quiscala),* ruddy turnstone (*Arenaria interpres*), great blue heron (*Ardea herodias*), brown pelican (*Pelecanus occidentalis*), willet (*Catoptrophus semipalmatus*), lesser yellowlegs (*Tringa flavipes*), mourning dove (*Zenaida macroura*), southern fence lizard (*Sceloporus undulatus undulates*), and the green anole (*Anolis carolinensis)* (Eglin AFB 2008c).

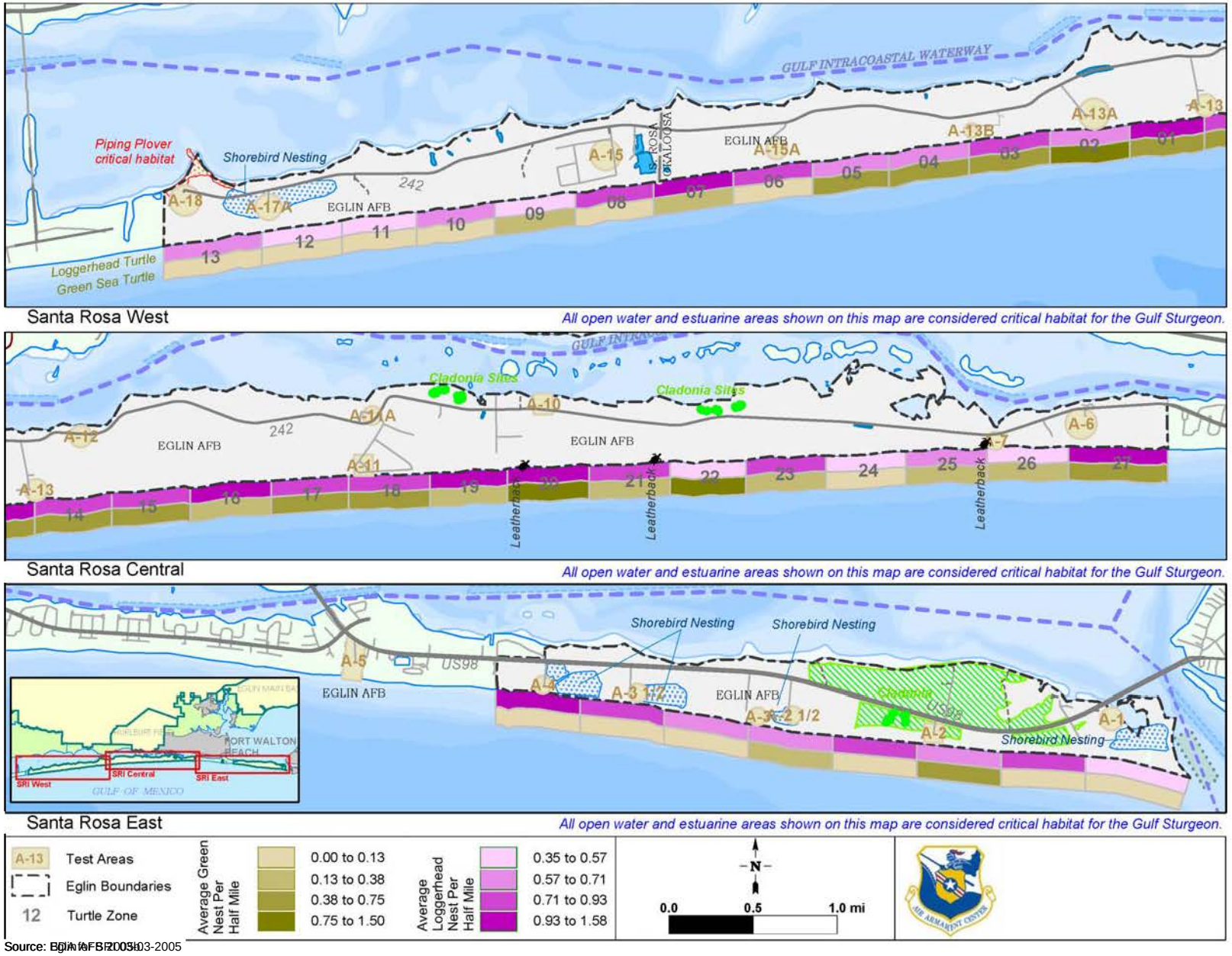
Protected and Sensitive Species

Based on a review of existing information, the following 16 Federal- and state-listed species (plus one unlisted but only found locally subspecies) have the potential to occur on the proposed site:

1. Atlantic Loggerhead Sea Turtle (*Caretta caretta*), Federal- and state-listed as Endangered
2. Atlantic Green Sea Turtle (*Chelonia mydas*), Federal- and state-listed as Endangered
3. Leatherback Sea Turtle (*Dermochelys coriacea*), Federal- and state-listed as Endangered
4. Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), Federal- and state-listed as Endangered
5. Piping plover (*Charadrius melodus*), Federal- and state-listed as Endangered
6. Least Tern (*Sterna antillarum*), Federal-listed as Endangered (interior populations only) and state-listed as Threatened
7. Southeastern Snowy Plovers (*Charadrius alexandrinus*), State-listed as Threatened
8. Black Skimmer (*Rynchops niger*), State-listed as Special Concern
9. Snowy Egret (*Egretta thula*), State-listed as Special Concern
10. Little Blue Heron (*Egretta caerulea)*, State-listed as Special Concern
11. Tricolored Heron (*Egretta tricolor*), State-listed as Special Concern
12. White Ibis (*Eudocimus albus*), State-listed as Special Concern
13. Florida (West Indian) Manatee (*Trichechus manatus*), Federal- and state-listed as Endangered
14. Southeastern American kestrel (*Falco sparverius paulus*), State-listed as Threatened
15. Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Federal- and state-listed as Endangered
16. Florida Perforate Lichen (*Cladonia perforata*), Federal- and state-listed as Endangered
17. Santa Rosa Beach Mouse (*Peromyscus polionotus leucocephalus*), not currently Federal- or state-listed, but is being considered for future Federal listing.

SEA TURTLES

Four species of marine turtles found in the Gulf of Mexico are known to nest on Santa Rosa Island beaches. These species are the Atlantic green sea turtle, Atlantic loggerhead sea turtle, Kemp's ridley sea turtle, and the leatherback sea turtle. However, the majority of turtle nests on Santa Rosa Island are from loggerhead sea turtles (see **Figure 3-4**). During the 2008 sea turtle nesting season, one Kemp's ridley turtle nest was confirmed and two other suspected nests were identified. The USFWS oversees sea turtle protection and conservation of habitat on land, while NMFS oversees protection in marine waters. The officially recognized sea turtle nesting and hatching season in northwestern Florida occurs from May 1 through October 31, with most hatching between mid-August and mid-October.



Source: Eglin AFB 2005b

Figure 3-4. Critical Habitat and Sea Turtle Nesting Areas on Santa Rosa Island

Atlantic green sea turtles have a breeding population in Florida and along the Pacific Coast of Mexico that is listed as endangered; all other populations are listed as threatened. Nesting activity has also been documented along the Florida Gulf coasts (Eglin AFB 2005b). Green turtle nesting has been documented in all counties in northwestern Florida but not on all beaches. The officially recognized nesting and hatching season for the green sea turtle extends from 1 May through 31 October in Florida's panhandle. Nesting in the panhandle, however, has been consistently documented as an every other year event since 1990, with incubation periods ranging from 60 to 90 days. Eglin AFB property on Santa Rosa Island supports the highest number of green sea turtle nests in northwestern Florida. Beginning in 2002, Eglin has documented green sea turtle nesting activity on an annual basis, except for 2004.

Leatherback sea turtles commonly nest along the shorelines of the Atlantic, Pacific, and Indian oceans. Only infrequent nesting activity has been documented for the leatherback in northwestern Florida (Eglin AFB 2005a and 2005b). The officially recognized nesting and hatching season for the leatherback extends from 1 March through 31 October, with nest incubation ranging from 60 to 75 days (Eglin AFB 2005a and 2005b). Until spring 2000, the only confirmed leatherback nests in northwestern Florida were in Franklin and Gulf counties. In May and June 2000, leatherback nesting activity was documented for the first time in Okaloosa County on Eglin AFB's portion of Santa Rosa Island (Eglin AFB 2005b).

Kemp's ridley sea turtles received their endangered status under the ESA in 1970. Adults have the most restricted distribution of any sea turtle and are usually confined to the Gulf of Mexico, while post-pelagic turtles can be found over crab-rich sandy or muddy bottoms. As hatchlings, the species presumably eat Sargassum and small organisms associated with the floating Sargassum mats. Adults feed mainly on crabs.

SHOREBIRDS AND WADING BIRDS

The ***piping plover*** primarily winters along the Atlantic and Gulf coasts from North Carolina to Mexico and into the Bahamas and West Indies. Piping plovers are commonly documented during winter in the Florida panhandle, with highest numbers of birds occurring in Franklin, Gulf, and Bay counties. Even though Florida has not been considered a primary wintering area for the piping plover, diminishing habitat along other Gulf coast areas could be pushing the piping plover into new wintering grounds in Florida. On Santa Rosa Island, the piping plover's winter foraging period runs from 15 July to 15 May. These wintering grounds are still considered less suitable, thus forcing the piping plover to utilize isolated patches. As a result, Critical Habitat has been designated for piping plovers along the Gulf coast of Florida, a portion of which covers Santa Rosa Island north of Test Area A-18. Wintering Critical Habitat for the piping plover was designated on 10 July 2001 (Eglin AFB 2005b).

The ***least tern*** is the smallest of the North American tern species. Nesting colonies have been documented on open, flat areas of Santa Rosa Island and several gravel rooftops on the Eglin AFB Main Base. Successful nesting on Santa Rosa Island is rare, due primarily to heavy predation from feral cats. While most colonies have been documented on the easternmost portion of Eglin AFB's Santa Rosa Island property, another colony was identified near test site A-17 (Eglin AFB 2005b).

The ***southeastern snowy plover*** is one of several shorebird species found on Santa Rosa Island property controlled by Eglin AFB. During the breeding season, these birds may be found foraging anywhere along the Santa Rosa Island beachfront. Nests are typically laid in the wrack line near vegetated areas, and will be abandoned if disturbed. Vehicular and foot traffic, storms, and predation by feral cats are considered the primary causes of nest failure. Eglin AFB controls beach property that contains the highest densities of snowy plovers (37 percent of Florida's breeding pairs) and the most productive nesting areas in the state (Eglin AFB 2005b). However, no shorebird nesting areas or wading bird rookeries have been identified on the proposed site.

The ***black skimmer*** is one of several ground-nesting shorebirds known to nest on Santa Rosa Island. The greatest threats to this species are attributed to human disturbance and storm-related flooding of nest sites, as well as predation of eggs and hatchlings (Eglin AFB 2005b). During the nesting season from mid-May through August, skimmers can be seen foraging for fish in nearshore waters of both the Gulf and Santa Rosa Sound. Historically, nesting colonies have been documented in open, flat areas on eastern portions of island property controlled by Eglin AFB from test site A-4 to the Destin Pass. However, another colony was documented in June 2002 near test site A-17 (Eglin AFB 2005b).

The ***snowy egret*** is a small, white, yellow-footed wading bird. The breeding distribution of this species ranges from northern California east to South Dakota and south to Florida and parts of the Caribbean and South America. In Florida, breeding season lasts from January through August. Snowy egrets spend the winter months in the southernmost parts of their breeding range, which includes the southeastern U.S and southern California. In the Florida panhandle, colonies of snowy egrets nest primarily in swamps or in emergent vegetation in conjunction with other species of wading birds. This species forages in both freshwater and saltwater habitats for fish, shrimp, and small vertebrates (Eglin AFB 2005b).

The ***little blue heron***, closely related to the snowy egret, is dependent on wetland habitat, which is diminishing throughout the state (Eglin AFB 2005b). While it is not rare in coastal areas, it seems to prefer freshwater habitats. The little blue heron is a solitary feeder but a colonial nester that often occurs with other species of wading birds. Its diet consists of insects, shrimp, amphibians, and fish. In Florida, breeding occurs from April through September, and migrations may occur in the Florida panhandle from February through March (Eglin AFB 2005b).

The ***tricolored heron*** is a slim, medium-sized heron with a head and upper body dark slate blue in color with purple coloration on its chest. This species, formerly known as the Louisiana Heron, nests from February through August. This species nests in colonies, often with other heron and ibis species, from Massachusetts down to the Caribbean and northern Brazil. It is a solitary feeder, foraging in both fresh and saltwater habitats (Eglin AFB 2005b).

The ***white ibis*** prefers nesting habitat in freshwater marshes or ponds. This species usually nests from March to August but has been known to nest from February through October in the Florida panhandle. The white ibis generally migrates in February and in September-October. It is rare or absent from the Florida panhandle during the winter months. Its diet consists of crayfish, crabs, insects, snakes, frogs, toads, and fish (Eglin AFB 2005b).

OTHER LISTED AND/OR NOTABLE SPECIES

The ***West Indian or Florida manatee*** does not occur regularly offshore of Santa Rosa Island. However, this species, commonly known as the "sea cow" because of its prolific eating habits, occurs occasionally in northern Florida estuaries during the spring and summer months and has been sighted in the Gulf near the coast. This species is not common to the northern Gulf coast, but isolated migrations have been noted during the warmer months.

The ***Southeastern American kestrel*** typically nests in tall dead trees or utility poles with unobstructed views of the surroundings. Sandhill habitats seem to be preferred, but the kestrel can occur in flatwoods settings, with open areas of grass or bare ground to allow for the easy detection of prey. A key habitat feature necessary for breeding is a suitable cavity tree (Eglin AFB 2005b).

The ***Gulf sturgeon*** inhabits offshore areas and inland bays during the winter months and moves into freshwater rivers during the spring to spawn. Migration into fresh water generally occurs from March to May, while migration into salt water occurs from October through November. The Gulf sturgeon lives predominately in the northeastern Gulf of Mexico, where it ranges from the Mississippi Delta east to the

Suwannee River in Florida. In proximity to Santa Rosa Island, the sturgeon occurs in the Yellow River in the spring and summer, and in Choctawhatchee Bay, Santa Rosa Sound, and the Gulf of Mexico in the winter. Little is known about the offshore distance the Gulf sturgeon travels, but analyses of stomach contents suggest that feeding occurs as far as 20 miles offshore (Eglin AFB 2005b). The final rule for Gulf sturgeon Critical Habitat was published in the Federal Register on 19 March 2003. As pertains to this study area, the nearshore waters (up to 1 nautical mile) along the Gulf of Mexico between Pensacola and Apalachicola Bays, Florida, have been designated as Critical Habitat. This area contains winter feeding and migration habitat for Gulf sturgeon.

The ***Florida perforate lichen*** is pale, yellowish-gray lichen that forms large dense clusters, the branches of which arise from spore-producing structures and not from the vegetative body of the fungus as is the case with other branched lichens. This species was listed as endangered in the Federal Register, 27 April 1993. There are 27 confirmed sites in Florida where this lichen can be found, two of which are on Santa Rosa Island. This fragile species is vulnerable to trampling from foot traffic and habitat destruction during land development and high-intensity storm events.

The ***Santa Rosa beach mouse*** is one of five beach mouse subspecies and is the only subspecies not currently listed by either the state or the federal government. However, it may be considered for federal listing in the near future. Santa Rosa beach mice are mostly nocturnal, and burrow nest in dunes. They prefer sand-covered dune slopes with patches of grasses and herbs, and their diet consists of various plant seeds and insects. This subspecies, which occurs only on Santa Rosa Island, was decimated after the storm surge from Hurricane Opal in 1995 destroyed its dune habitat. Monthly track count surveys conducted by Eglin AFB Natural Resources Section (NRS) personnel from 1996 to 2001 indicate a 40 percent increase in population (Eglin AFB 2005b).

Monthly track counts, along with tracking tubes, are currently being conducted in accordance with state tracking tube protocol. Current threats to this population include predation by feral cats and loss of dune habitat from recreational foot traffic and storms.

Sensitive Habitats

Essential Fish Habitat. Emergent vegetation species occur in isolated locations in Santa Rosa Sound as areas of saltmarsh and beach vegetation (see **Figure 3-5**). North Florida marshes typically support *Juncus roemerianus* (black needle rush), *Spartina* sp. (smooth cordgrass), *Distichlis spicata*, *Scirpus* spp., *Salicornia* spp., and *Phragmites australis* among others (Eglin AFB 2005b). Accordingly, the primary occurrence of these emergent species on Santa Rosa Island is associated with wetland or beach components and not essential fish habitat, since inundation by marine or estuarine waters occurs only during storm events.

The Florida Marine Research Institute estimates total seagrass coverage in Choctawhatchee Bay and the Okaloosa County portion of Santa Rosa Sound at 4,160 acres (Eglin AFB 2005b). The habitat on the Gulf side of Santa Rosa Island is a sandy/silty substrate, which does not support seagrass beds. The nearest major seagrass bed in the Gulf of Mexico is to the southeast of Cape San Blas, outside of the study area.

Sargassum, or gulfweed, a dominant genus in surface marine waters, is a free-floating brown algae that is present in the tropics and subtropics including the Gulf. Sargassum drifts as mats in oceanic eddies, provides an important niche for numerous species, and supports a unique community of animals. Fish can use Sargassum clumps for food or as habitat to lay their eggs. Between 1971 and 1976, 15 families and 40 species of fish were collected at 62 Sargassum locations within the eastern Gulf (Eglin AFB 2005a). Sea turtle hatchlings also use Sargassum as a vehicle for passive migration and shelter, and the abundance of invertebrate fauna that inhabit the mats is an important food source for sea turtles.

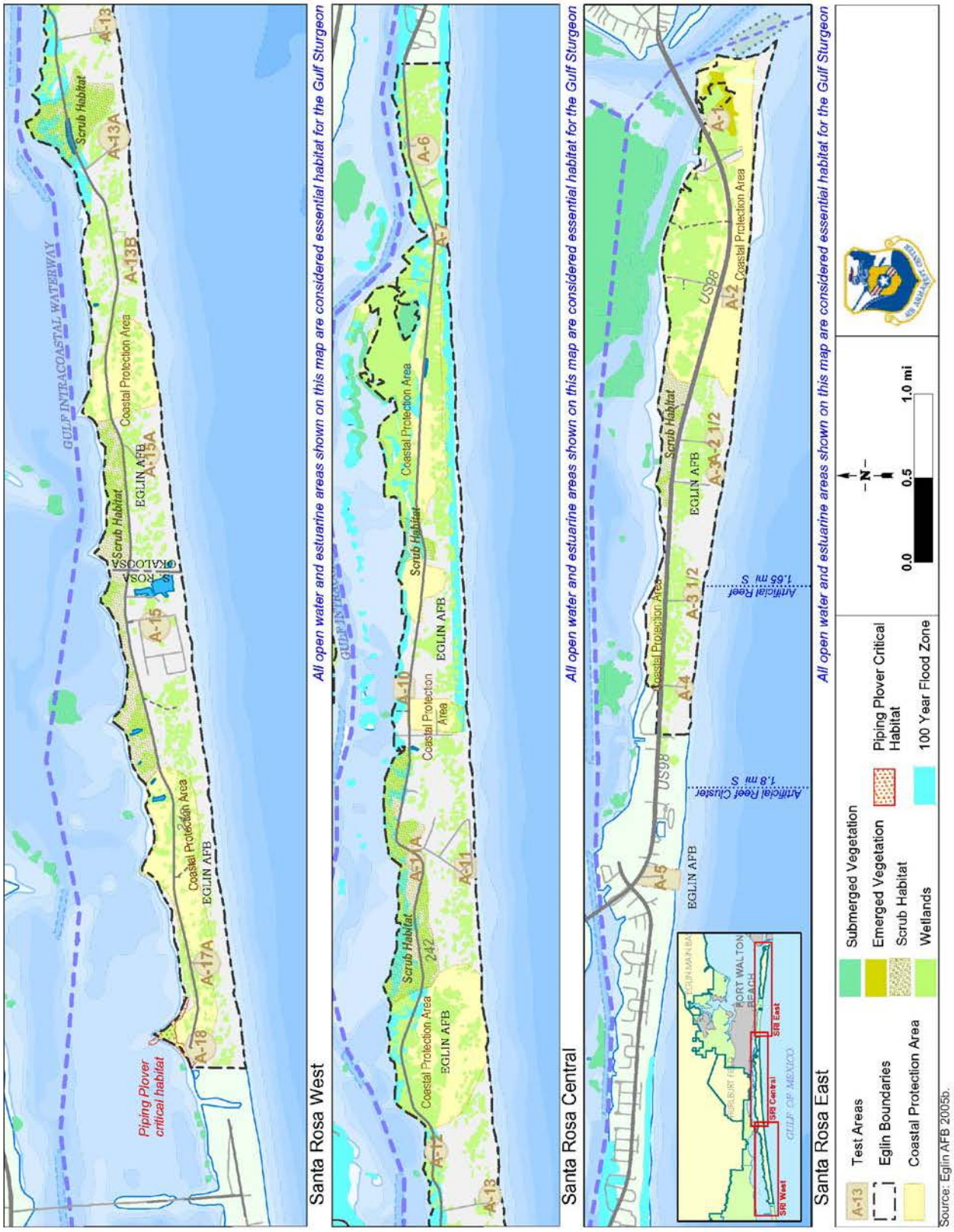


Figure 3-5. Wetland Areas and Plant Communities on Santa Rosa Island

Artificial reefs consist of materials deposited on the ocean floor, usually for the purpose of enhancing fishing or other recreational activities. Artificial reefs provide bottom relief and habitat for fish and other marine species in areas that might otherwise be featureless. Artificial reefs exist offshore of A-4 in the Gulf and there is a shipwreck near shore east of A-15A (see **Figure 3-5**).

3.7.3 Environmental Consequences

Evaluation Criteria

The significance of effects on biological resources is based on the following:

1. Importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
2. Proportion of the resource that would be affected relative to its occurrence in the region
3. Sensitivity of the resource to proposed activities
4. Duration of ecological effects.

Ground disturbance and noise associated with construction activities might directly or indirectly cause potential adverse effects on biological resources. Effects from ground disturbance were evaluated by identifying the types and locations of potential ground-disturbing activities in correlation to important biological resources. Mortality of individuals, habitat removal, and damage or degradation of habitats might be effects associated with ground-disturbing activities.

Noise associated with the Preferred Alternative might be of sufficient magnitude to result in the direct loss of individuals and a reduction in reproductive output within certain ecological settings. To evaluate effects, consideration was given to the number of individuals or critical species involved, amount of habitat affected, relationship of the Area of Potential Effect to total available habitat within the region, type of stressors involved, and magnitude of the effects.

As a requirement under the ESA, Federal agencies are required to provide documentation that ensures that agency actions would not adversely affect the existence of any federally threatened or endangered species. The ESA requires that all Federal agencies avoid "taking" threatened or endangered species, which includes jeopardizing threatened or endangered species habitat. Section 7 of the ESA requires a consultation process between USFWS and NMFS, in which both agencies determine the risk of jeopardy which is presented by a Federal agency project.

Adverse effects can be direct, such as the physical disruption or contamination, or indirect, such as loss of prey or reduction in fecundity. They can be narrow in scope, affecting only a particular site, or wide-ranging, affecting an entire habitat.

Direct adverse impacts encompass the immediate physical harm that occurs to organisms (usually native plants and animals) as a result of proposed or appurtenant land use activities that take place within a Proposed Action's ROI. Sensitive species occurring on the proposed site or within nearby Gulf waters can experience the direct loss (e.g., filling, excavation) of Critical Habitat or population members (e.g., vehicle collisions). Direct habitat alterations can also result from the removal of buffer zone vegetation along streams and elimination of migratory pathways and corridors.

Native plants and animals and their associated key habitats can also be adversely affected by indirect impacts of proposed actions. Degradation of downstream water quality caused by poorly designed onsite management (containment and treatment) of increased stormwater runoff is one of the best examples of indirect impacts.

The biological assessment (BA) prepared during the Section 7 consultation process for this Proposed Action resulted in a determination of "*not likely to adversely affect*" threatened or endangered species, provided certain conditions are applied to the project. The chosen developer would be responsible for implementing all conditions listed in the BA (see **Appendix H**) and other operational procedures listed in **Appendix I**.

Preferred Alternative

Natural Vegetation and Land Cover. Implementation of the Preferred Alternative would likely have only minor adverse effects on existing natural vegetation and land cover on the proposed site. Construction of the Preferred Alternative would permanently alter/occupy 8.6 acres in the center of the property. These 8.6 acres are the development footprint for the Proposed Action. As previously described (see **Section 3.7.2**), the existing natural vegetation/land cover within the development footprint consists of the following estimated acreages:

- 1.7 acres of existing impervious surface, including the access road surface, the parking lot, and the building that are currently on the proposed site
- 3.4 acres of previously-disturbed, relatively low-quality Coastal Grassland Scrub vegetation/ wildlife habitat
- 3.5 acres of previously-disturbed, relatively low-quality Coastal Interdunal Swale vegetation/ wildlife habitat.

Development of the Preferred Alternative would result in the permanent alteration/loss of the existing natural vegetation or current land use/impervious cover on these 8.6 total acres. However, the direct loss of 6.9 acres of existing natural vegetation/wildlife habitat (excluding the 1.7 acres of existing impervious surfaces) would not be significantly adverse for the following reasons:

1. As a result of the long-term history of military activities/disturbance in and around the proposed site, the overall quality (i.e., functions and values) of the existing natural vegetation/wildlife habitat within the development footprint is relatively low
2. In addition to its low quality, the natural vegetation/wildlife habitat within the development footprint represents less than one percent of the total area of both Coastal Grassland Scrub and Coastal Interdunal Swale habitat types on Santa Rosa Island (see **Figure 3-5**).

Also because of a combination of the required CZMA "surf zone" setbacks and the USACE's CWA wetland regulations, the three highest quality areas of wildlife habitat on the proposed site are located outside of the development footprint and would not be impacted. These three wildlife habitat areas include the following:

1. The Intertidal Zone that occupies 2.1 acres of land along the 601 linear feet of the proposed site's southern boundary, between the surf zone and the primary beach dunes
2. The Beach Dune Community, including 4.7 acres of both primary and secondary dunes located adjacent to and north of the Intertidal Zone and immediately south of the proposed development footprint
3. Two delineated jurisdictional wetlands (1.7 acres) that occur along the 662 linear feet of U.S. Highway 98 frontage on the northern third of the proposed site (see **Figure 3-3**).

A total of approximately 8.5 acres out of the 17.1 acres would be used for landscaping or preservation of the original vegetation. Using native vegetation or approved grass mixtures to replant temporarily

disturbed areas would be required to minimize erosion and invasive species establishment following construction activities.

Disturbance to soil and vegetation from land clearing and construction could enhance conditions for the establishment and spread of invasive nonnative plant species. Because the majority of the development footprint (8.6 acres) would be covered by buildings, pavement, or landscaped areas; areas with the proper environment for the establishment of invasive nonnative plants would be minimal. Additionally, all landscaping and plantings of vegetation would conform to the Presidential Memorandum dated 26 April 1994, *Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds*, and EO 13112, *Invasive Species*, both of which require the planting of regional natives in landscaping. Operational procedures that are available to reduce the potential for invasive nonnative species infestations could include the following:

- To reduce potential seed sources, existing onsite areas with known invasive nonnative species problems could be treated with USEPA-approved, documented-effective glyphosate-based herbicides (e.g., Rodeo®, Roundup®).
- To avoid spreading invasive nonnative species, vehicles should not be driven in areas with known invasive nonnative species problems. If a vehicle is driven in such an infested area, the vehicle should be cleaned before it is driven to a noninfested area.
- Only regional native plants should be used for landscaping.

With implementation of the required BMPs, impacts from invasive nonnative plant species to indigenous biological resources would not be significant under the Preferred Alternative.

Wildlife Habitat and Populations. Implementation of the Preferred Alternative would likely have only minor adverse effects on the existing wildlife habitat and populations on the proposed site. Minor short- and long-term adverse effects would be expected on wildlife species presently inhabiting the proposed site. Members of some species would be expected to relocate to other similar undeveloped habitats on Santa Rosa Island during and following construction. Some wildlife species adapted to dense commercial development and heavy vehicular traffic would be expected to move back into the area after development of the resort is complete (Eglin AFB 2008c). Some species may be forced to relocate permanently because of the reduction in suitable habitat resulting from development of the proposed resort. Direct short-term and long-term adverse effects could occur to smaller, less-mobile wildlife species on the site as a result of mortality associated with collisions with onsite construction equipment and increased vehicular traffic in the local area.

BMPs such as stopping construction activities when wildlife is encountered would be implemented to allow less-mobile species to be moved or otherwise avoid effects from construction equipment. Additional BMPs include providing educational materials and briefing construction personnel on the potential species that might be encountered.

Protected Species. Implementation of the Preferred Alternative is not likely to adversely affect any Federal-listed or state-listed species. The USFWS has agreed to consider a "*not likely to adversely affect*" determination with the inclusion of the following conditions:

1. Lighting in the facility and parking areas will be kept to a minimum and will be sea turtle friendly
2. Boardwalks will be considered to preserve existing and future dune systems
3. As much as possible, the existing dune systems and vegetation will be kept intact
4. Predator control measures will be implemented (i.e. predator proof trash cans)
5. The USFWS will review the final design for site layout and construction of the facility.

The following information provides preliminary findings and opinions about potential impacts the Preferred Alternative might have on Federal-listed and state-listed species.

Sea Turtles. As previously described (see **Section 3.7.2**), the following four species of Federal/state-endangered sea turtles have the potential to nest on the proposed site:

1. Atlantic Loggerhead Sea Turtle (*Caretta caretta*)
2. Atlantic Green Sea Turtle (*Chelonia mydas*)
3. Leatherback Sea Turtle (*Dermochelys coriacea*)
4. Kemp's Ridley Sea Turtle (*Lepidochelys kempii*).

With the addition of the Kemp's ridley sea turtle during the 2008 nesting season, all four of these sea turtle species are now known to nest on Santa Rosa Island. The USFWS oversees sea turtle protection and conservation of habitat on land, while NMFS oversees their protection in marine waters.

The officially recognized nesting and hatching season for all four of these endangered sea turtles in northwestern Florida occurs from 1 May through 31 October, with most hatching between mid-August and mid-October.

To avoid and minimize the potential for adverse impacts, sea turtle monitoring would include Eglin AFB's routine monitoring protocol, which is discussed in detail in the BA specific to this Proposed Action (the BA will be included as an appendix to the Final EA). Any developer of the proposed resort complex would be required to adhere to the following *Avoidance and Minimization Measures*:

- All activity associated with the proposed action would occur during daytime hours and after the morning sea turtle survey has been completed (during sea turtle nesting season).
- All known sea turtle nests would be marked and protected in accordance with established Eglin AFB NRS protocol.
- All ruts deeper than three inches created during daytime operations would be filled in before sunset. Ruts may be filled in by hand using a heavy-duty "garden" rake that penetrates no more than three inches deep into the sand or by towing a section of weighted chain-link fence behind a vehicle. At no time shall raking be conducted within the marked nest areas.
- All equipment would be removed from the work area before sundown and not left on the beach overnight.
- If a turtle crawl is seen on the beach with no associated marked nest, the Natural Resources staff or appropriate turtle monitoring personnel would be contacted immediately. Care would be taken not to disturb the crawl or nest site.
- No other equipment, vehicles, etc., would be allowed on the beach or dunes during construction activities that are not essential to the activity.
- All personnel involved in setup or performing the work would familiarize themselves with all requirements.
- If a nest occurs within 0.5 miles from the work area, a series of stakes and highly visible survey ribbon or string would be installed to establish a radius surrounding the nest. No activity would occur within this area, nor would any activity occur that could result in impacts to the nest. Nest sites would be inspected daily to ensure nest markers remain in place and that the nest has not been disturbed.

- For work that would occur after 31 October, the Eglin AFB NRS would be contacted to ensure the area is clear of any remaining nests before work would proceed.

Following completion of construction of the resort, the sea turtle nesting season monitoring program would continue on at least a weekly basis whenever the resort is in operation. Whenever sea turtle nesting is observed during the operational phase of the resort, the nesting area should be cordoned off from human presence and activities until the turtle hatchlings have emerged from their nest and successfully moved back into the open Gulf.

Also, throughout both the construction and operation phases of the resort, only low-pressure sodium vapor lights would be used within a mandatory Minimum Buffer Zone established during a future meeting with the contractor, proponent, USFWS, Florida Wetland Conservation Commission, and Eglin AFB NRS. All lighting used for parking lots, pool areas, and other outside facilities would be kept to a minimum and would be sea turtle friendly.

Florida Manatee (Trichechus manatus). As previously described (see **Section 3.7.2**), the Florida or West Indian Manatee is not expected to occur in the offshore waters of Florida's Gulf Coast. Therefore, the Preferred Alternative should not adversely affect this species.

Gulf Sturgeon (Acipenser oxyrhinchus desotoi). As established by final rule published in the Federal Register on 19 March 2003, Critical Habitat for the Gulf sturgeon is designated as nearshore waters (up to one nautical mile) along the Gulf of Mexico between Pensacola and Apalachicola Bays, Florida. Under this designation, the proposed site lies within Critical Habitat for the Gulf sturgeon which inhabits offshore areas and inland bays during the winter months and moves into freshwater rivers during the spring to spawn. Since the proposed site does not support any direct connection, such as a freshwater river, to the Gulf sturgeon's designated offshore Critical Habitat, the Preferred Alternative should not adversely affect this species.

Piping Plover (Charadrius melodus). As previously described (see **Section 3.7.2**), piping plovers are commonly documented during winter along beaches in the Florida panhandle. The wintering grounds on Santa Rosa Island are generally considered less suitable than other panhandle habitats, thus forcing the piping plover to use only isolated patches of land on Santa Rosa Island. Because of this, Critical Habitat was designated for piping plovers on 10 July 2001 (Eglin AFB 2005b) on only one small portion of Santa Rosa Island on the sound side, to the northwest of Test Area A-18 (see **Figure 3-5**). This area of designated Critical Habitat for piping plovers on Santa Rosa Island is approximately 15 miles west of the proposed site. Therefore, the Preferred Alternative would not be expected to adversely affect the piping plover. However, it should be noted that there have been sightings of the piping plover elsewhere on Santa Rosa Island. Piping plovers typically overwinter and then stay on Santa Rosa Island for an 11-month period, with June being the only month they are typically not seen on the island. Since piping plovers stay on Santa Rosa Island throughout most of the year, some of the birds would most likely be temporarily flushed from their roosts or feeding areas during the proposed construction. To minimize the potential for adverse impacts during and after the construction period, Eglin AFB will continue their current monitoring protocol for piping plovers and other shorebirds.

Florida Perforate Lichen (Cladonia perforate). This structurally showy lichen species was listed as endangered in the 27 April 1993 Federal Register. There are 27 confirmed sites in Florida where this lichen can be found, two of which are on Santa Rosa Island. Typical habitat for this species is described as occurring on the high sand dune ridges of the Florida peninsula, including the Atlantic Coastal and the Lake Wales Ridges. Typically, Florida Perforate Lichen is restricted to the highest, xeric white sands in sand pine scrub, typically in the rosemary phase (Eglin AFB 2005b). The proposed site does not support the Perforate Lichen's preferred habitat. The closest known population presently occurs approximately

2.5 miles east of the proposed site. As a result, the Preferred Alternative should not have any adverse effects on this vegetative species.

Other Shorebirds and Wading Birds. As described in **Section 3.7.2**, no shorebird nesting areas or wading bird rookeries have been identified on the proposed site. However, shorebird and wading bird individuals and/or small flocks can be found on Santa Rosa Island, including the proposed site, throughout most of the year. Therefore, some shorebirds and wading birds would be temporarily flushed from their feeding areas during construction and operation of the proposed resort. For example, state-listed wading birds such as the snowy egret, little blue heron, tricolored heron, and white ibis could be impacted by temporary displacement from foraging areas, such as the two small wetlands on the northern portion of the proposed site.

However, since the southern third of the proposed site is coastal dune and shoreline-beach habitat, shorebird nesting could occur during construction or operation of the proposed development. For example, snowy plovers which are solitary nesters and could nest anywhere along the wrack line or other suitable habitat along the beach on the proposed site.

Improper or unauthorized construction activity (i.e., operation of equipment beyond or outside of designated "limit of work" areas) during shorebird nesting season could produce a startle or flush response that may result in a potential increased vulnerability of eggs and chicks to predation. Resort visitors and employees could also produce a startle or flush response during the post-construction operation of the proposed resort facility. In both situations, continued flushing of nesting shorebirds could result in nest abandonment and some level of reproductive or recruitment failure of the local shorebird populations.

While such adverse effects to local shorebird and wading bird populations could result from construction and operation of the proposed site, they would not be significantly adverse for the following reasons:

- There are no historical records of shorebird or wading bird nesting activity on the proposed site. As a result, there is minimal likelihood that nesting colonies or rookeries that support significant numbers of nestlings would become established after construction has started.
- Any unauthorized construction activity or equipment operation beyond established work areas would be an accidental, one-time occurrence. Compliance with work limit boundaries will be closely supervised and monitored throughout the construction period to prevent accidental encroachments into primary dune or shoreline areas, especially any shorebird nesting or roosting areas that may be identified.
- After construction has been completed and the proposed Emerald Breeze Resort is open to visitors, Eglin AFB's Natural Resources Staff will continue their current monitoring protocol for shorebirds and wading birds on Santa Rosa Island, including the proposed development site. If any nesting areas are identified, they will be formally cordoned off with boundary fencing and warning signs that read "Protected Bird Nesting Areas – No Entry Allowed".
- Any shorebird nesting areas that may be identified during and after the proposed construction will be permanently closed to public access during the primary shorebird nesting season on Santa Rosa Island (1 March to 31 August).

Santa Rosa Beach Mouse. As described in **Section 3.7.2**, the primary foraging and sheltering habitat of the Santa Rosa beach mouse is within the primary, secondary, and tertiary sand dunes of Santa Rosa Island. Construction activity and heavy equipment operation would be restricted from primary dunes on the proposed site. In addition, as needed during resort operation, protective signage and/or boundary fencing would be installed to minimize visitor access to and disturbance of the primary dunes and the

associated vegetative habitat. It is anticipated that these measures would avoid potential impacts to beach mice and their burrows, while also minimizing impacts to dune vegetation, which serves as a primary food source for this rodent species.

Monthly track counts, along with tracking tubes, are currently being conducted in accordance with state tracking tube protocol. Data from these track counts would indicate any substantial changes in the Santa Rosa beach mouse populations that could be associated with the proposed action. If adverse impacts from site construction or operation were found during these track counts, corrective actions (such as more substantial boundary fencing) would be implemented.

Migratory Bird Habitats. The Preferred Alternative would directly impact 6.9 acres of migratory bird habitat and has the potential to cause adverse impacts on the resource. To avoid impacts on migratory birds, land clearing should occur from 1 September through 15 March to avoid the nesting season. The MBTA does not contain any prohibition that applies to the destruction of a migratory bird nest alone (without birds or eggs), provided that no possession occurs during the destruction. If clearing occurs before 1 September, care would be taken to leave snag trees in place. If snag trees need to be removed for construction purposes, they can be removed after 1 September. Coordination with Eglin AFB is required prior to project initiation to ensure compliance with the MBTA.

Essential Fish Habitat. Since the proposed site does not support any of the four categories of EFH as described in **Section 3.7.1**, the Preferred Alternative will not have any adverse effects on these special habitats.

No Action Alternative

Under the No Action Alternative, the proposed resort would not be constructed and existing conditions would remain as described in **Section 3.7.2**. Therefore, no effects on biological resources would occur.

3.8 Socioeconomic Resources and Environmental Justice

3.8.1 Definition of the Resource

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly characteristics of population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these fundamental socioeconomic indicators are typically accompanied by changes in other components, such as housing availability and the provision of public services. Socioeconomic data at county, state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends.

Data in three areas provide key insights into socioeconomic conditions that might be affected by a proposed action. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region can be used to compare the "before" and "after" effects of any jobs created or lost as a result of a proposed action. Data on industrial or commercial growth or growth in other sectors provide baseline and trend line information about the economic health of a region.

In appropriate cases, data on an installation's expenditures in the regional economy help to identify the relative importance of an installation in terms of its purchasing power and jobs base.

Demographics identify the population levels and changes in population levels of a region. Demographics data might also be obtained to identify, as appropriate to evaluation of a proposed action, a region's characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators.

Socioeconomic data shown in this section are presented at metropolitan, county, and state levels to characterize baseline socioeconomic conditions in the context of regional and state trends. Data have been collected from previously published documents issued by Federal, state, and local agencies; and from state and national databases (e.g., U.S. Census Bureau).

Environmental Justice. There are no Federal regulations on socioeconomics, but there is one EO that pertains to environmental justice issues. This EO is addressed in this section because it relates to various socioeconomic groups and the health effects that could be imposed on them. On 11 February 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was created to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Such information aids in evaluating disproportionate adverse effects from the Proposed Action and alternatives.

Protection of Children from Environmental Health and Safety Risk. EO 13045 establishes the President's Task Force on Environmental Health Risks and Safety Risks to Children. The Task Force reports to the President in consultation with the Domestic Policy Council, the National Science and Technology Council, the CEQ, and the Office of Management and Budget. The Task Force recommends to the President Federal strategies for approaching children's environmental health and safety issues within the limits of the Administration's budget, coordinates research agendas, identifies threats to children's health, proposes increases in public outreach, and states the desirability of new legislation. This task force identified four priority areas for immediate attention: asthma, unintentional injuries, developmental disorders (including lead poisoning), and cancer.

3.8.2 Description of the Affected Environment

The Eglin AFB reservation is within portions of Okaloosa, Santa Rosa, Walton, and Gulf counties, and the Main Base is approximately 1 mile southwest of Valparaiso, Florida. Florida had an estimated population in 2007 of 18,251,243. Okaloosa County, Santa Rosa County, Walton County, and Gulf County had estimated populations in 2007 of approximately 181,499, 147,044, 52,881, and 13,332, respectively. It is estimated that the populations of Okaloosa County, Santa Rosa County, and Walton County increased by approximately 6.5, 24.9, and 30.3 percent, respectively, between 2000 and 2007 (U.S. Census Bureau 2008). Eglin AFB directly employs more than 13,859 military personnel and approximately 8,574 civilians. Eglin AFB also supports 45,162 retired military members that reside in the local area around the base in Okaloosa and Santa Rosa counties. Okaloosa County is home to more than 300 government contractors. The direct economic effect of Eglin AFB on the local area is estimated to be about $1.7 billion annually. In addition to the 33,470 military and civilian jobs at Eglin AFB, it is estimated that the base indirectly creates an additional twelve thousand local jobs valued at an estimated

$409 million. The base itself is responsible for $187 million in local contract expenditures (Eglin AFB 2007).

For this analysis, the socioeconomic baseline is presented using three levels of comparison: the Emerald Breeze ROI; the counties of Okaloosa, Santa Rosa, and Walton (referred to as the Tri-County Area); and the State of Florida. Census data from the year 2000 was used, as it is the most recent year in which comprehensive data are available for all of the areas of comparison (including the census tracts) under analysis. The ROI was defined by identifying the census tract on which the proposed site was located (Tract 232) and the area adjacent to the proposed site. Census tract 232 and the City of Fort Walton Beach were defined as the ROI (see **Figure 3-6**). Okaloosa, Santa Rosa, and Walton counties include Eglin AFB, the proposed site, and the surrounding areas where effects from the Proposed Action would be most evident. The Tri-County Area includes the population within the ROI, along with major residential and commercial centers around Eglin AFB. Between 1990 and 2000, Florida's population increased by 11 percent. In the same period of time, the Tri-County Area grew by 30 percent while the Emerald Breeze ROI decreased by 8 percent, respectively (U.S. Census Bureau 2008).

Employment Characteristics. **Table 3-8** shows the type of employment by industry for residents in the Emerald Breeze ROI, the Tri-County Area, and the State of Florida. A large portion of the residents in the Tri-County Area and Florida are employed in education, health, social services, and retail trade. Since the ROI in an area with a large rate of tourism, the industry employing the largest percentage of the population is the arts, entertainment, recreation, accommodation, and food services (16.5 percent). A larger portion of the population in the Emerald Breeze ROI is employed in the arts, entertainment, recreation, accommodation, and food services compared to the Tri-County Area and the State of Florida at 10.3 percent and 10.5 percent, respectively (U.S. Census Bureau 2008).

Table 3-8. Overview of Employment by Industry

Employment by Industry	ROI[1]	Tri-County Area, Florida[2]	State of Florida
Percent of Employed Persons in Armed Forces	9.1	10.5%	0.5%
Agriculture, forestry, fishing and hunting, and mining	0.5%	0.6%	1.3%
Construction	8.3%	7.9%	8.0%
Manufacturing	5.9%	6.0%	7.3%
Wholesale trade	2.0%	1.3%	4.0%
Retail trade	13.9%	11.7%	13.5%
Transportation and warehousing, and utilities	3.1%	4.5%	5.3%
Information	2.8%	1.2%	3.1%
Finance, insurance, real estate, and rental and leasing	7.9%	5.7%	8.1%
Professional, scientific, management, administrative, and waste management services	11.2%	9.6%	10.6%
Educational, health, and social services	14.4%	19.1%	18.1%
Arts, entertainment, recreation, accommodation, and food services	16.5%	10.3%	10.5%
Other services (except public administration)	6.3%	3.8%	5.1%
Public administration	7.3%	8.5%	5.2%

Source: U.S. Census Bureau 2008

Notes:

[1] The ROI consists of the U.S. Census Tracts encompassing the proposed site (Tract 232) and the city of Fort Walton Beach.

[2] The Tri-County Area consists of Okaloosa, Santa Rosa, and Walton counties.

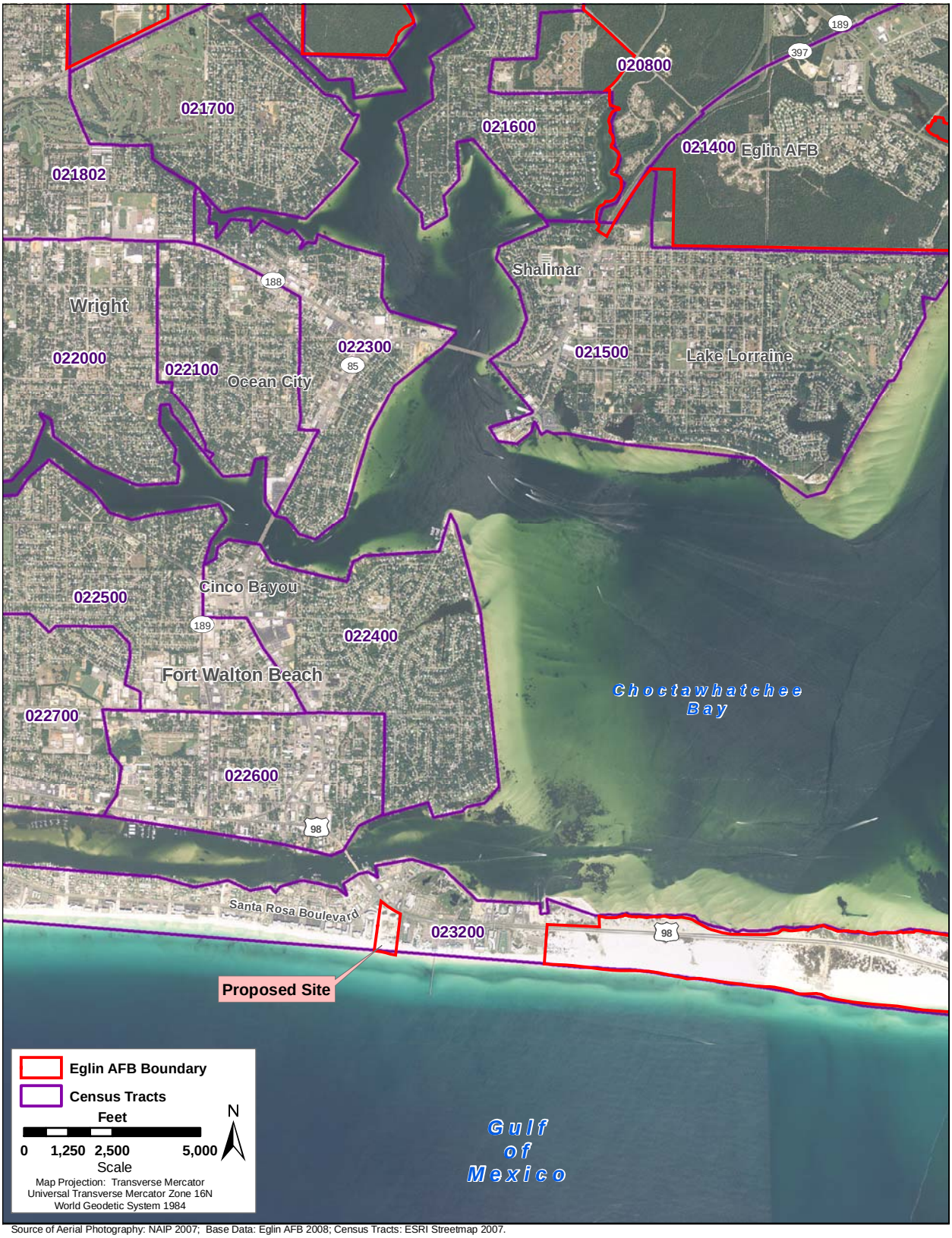


Figure 3-6. Census Tracks in the Socioeconomic ROI

Environmental Justice and Protection of Children. Minority and low-income populations were characterized within the Emerald Breeze ROI, the Tri-County Area, and Florida to establish a baseline for an environmental justice analysis. The census tract and city identified as the ROI (Tract 232 and the City of Fort Walton Beach) were evaluated for disproportionately low-income or minority populations compared to Okaloosa County and the State of Florida. As shown in **Table 3-9**, the ROI has a higher percentage of African Americans (12.7 percent) as compared to the Tri-County Area (7.1 percent), but slightly lower than the State of Florida (14.6 percent). The Emerald Breeze ROI has a higher median household income ($46,407) than both the Tri-County Area ($40,500) and the State of Florida ($38,819) (U.S. Census Bureau 2008).

Table 3-9. Race and Poverty Characteristics

	ROI[1]	Tri-County Area, Florida[2]	State of Florida
Total Population	21,786	328,842	15,982,378
Percent White	82.7%	86.6%	78.0 %
Percent Black or African American	12.7%	7.1%	14.6%
Percent American Indian, Eskimo, or Aleut	0.4%	0.8%	0.3%
Percent Asian	2.7%	1.8%	1.7%
Percent Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.1%
Percent reporting some other race	1.2%	1.0%	3.0%
Percent reporting 2 or more races	3.3%	2.5%	2.4%
Percent Unemployment	3.75%	2.8%	3.2%
Percent families below poverty	6.9%	9.5%	9.0%
Median Household Income	$46,407	$40,500	$38,819

Source: U.S. Census Bureau 2008

Notes:

[1] The ROI consists of the U.S. Census Tracts encompassing the proposed site (Tract 232) and the city of Fort Walton Beach.

[2] The Tri-County Area consists of Okaloosa, Santa Rosa, and Walton counties.

In 2000, the unemployment rate in the Emerald Breeze ROI (3.75 percent) was higher than both Florida (3.2 percent) and the Tri-County Area (2.8 percent). As shown in **Table 3-9,** residents within the Emerald Breeze ROI have a higher median household income compared to the Tri-County Area and the State of Florida. Fewer individuals in the Emerald Breeze ROI live below the poverty line (6.9 percent) compared to the Tri-County Area (9.5 percent) or the State of Florida (9.0 percent) (U.S. Census Bureau 2008).

3.8.3 Environmental Consequences

Evaluation Criteria

Construction expenditures are assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing). The magnitude of potential effects can vary greatly, depending on the location of a proposed action. For example, implementation of an action that creates ten employment positions might go unnoticed in an urban area, but could have considerable effects in a rural region. If potential socioeconomic changes were to result in substantial shifts in population trends or a

decrease in regional spending or earning patterns, those effects would be considered adverse. A proposed action could have a significant effect with respect to the socioeconomic conditions in the surrounding ROI if the following were to occur:

- Change the local business volume, employment, personal income, or population that exceeds the ROI's historical annual change
- Adversely affect social services or social conditions, including property values, school enrollment, county or municipal expenditures, or crime rates
- Disproportionately affect minority populations, low-income populations, or children.

Preferred Alternative

The Preferred Alternative would result in minor to moderate beneficial effects on socioeconomic resources. The resort would result in short- and long-term increases in civilian employment opportunities. The ROI does not have a disproportionate number of minority or low-income populations; therefore no environmental justice issues would be expected. It is not anticipated that construction of the proposed facility would require unusual procedures, materials, or equipment. Therefore, there are no anticipated environmental effects of the Preferred Alternative that would disproportionately affect children.

The Preferred Alternative would add new jobs to the local economy as employees of the new resort complex, restaurants, bars, and light retail facilities of the resort (USAF 2008c). Construction of the 17.1-acre facility would have direct minor short-term beneficial effects on the local economy and local employment levels. Direct expenditures for the resort would be paid for by the developer. Indirect expenditures from the construction activities would have additional beneficial effects on the local economy. It is estimated that construction activities would include 1 to about 8 percent of the labor force in the ROI and Tri-County Area. Therefore, it is anticipated that the financial benefits would stay within the ROI and the Tri-County Area.

The resort would be in a prime tourist area, and approximately 7 million tourists traveled to northwestern Florida in 2006. Of that total, almost 60 percent of those tourists stayed on Florida's Emerald Coast. The main tourist draws are beach and waterfront activities, and the resort is estimated to have 595 linear feet of shoreline along the Gulf of Mexico. With nearby access to popular amenities such as golfing, shopping, and fine dining, the resort is in a location to maximize its earning potential (USAF 2008c). With revenue growth, state-of-the-art facilities, and an excellent location, the resort is in a location that will maximize available tourist revenue, which have grown approximately 28 percent from 2000 to 2006 (USAF 2008c). The resort would have a net positive beneficial economic impact on the ROI with secondary spending having a positive beneficial impact on the Tri-County Area.

The Preferred Alternative would have negligible long term adverse effects on occupancy of existing hotels in the ROI. A business case analysis was conducted in support of the EUL development process. This study indicates that the local market has the capacity to absorb the additional rooms that the proposed resort would create. In addition, due to the projected marketing of the proposed Emerald Breeze Resort, a large portion of the customers are expected to be people who would not have otherwise traveled to the Fort Walton Beach area. Therefore, it is anticipated that the proposed Emerald Breeze Resort would raise demand for rooms in the area.

Indirect effects from the proposed construction projects are expected to be both short- and long-term and beneficial on the local economy and employment. Indirect short-term moderate minor beneficial effects could include construction expenditures for building materials, construction workers wages and taxes, taxes created by the new retail outlets, and purchases of goods and services in the area. The long-term benefits include the addition of both new permanent and temporary construction jobs, and the increased

tax base from the addition of new businesses to Santa Rosa Island and Fort Walton Beach. Therefore, short- and long-term beneficial effects are the expected results of the Proposed Action.

No Action Alternative

Under the No Action Alternative, the existing socioeconomic conditions would not be affected, and the current lease site would remain undeveloped and underutilized. Socioeconomic conditions would not improve or decline under the No Action Alternative.

3.9 Traffic

3.9.1 Definition of the Resource

The transportation resource is defined as the system of roadways and highways that are in the vicinity of the proposed site and could reasonably be expected to be potentially impacted by the Proposed Action. This includes U.S. Highway 98 (Miracle Strip Parkway).

3.9.2 Description of the Affected Environment

The Emerald Breeze Resort is proposed to be located at Test Site A-5, a beachfront property in a prime tourist area on Santa Rosa Island, Fort Walton Beach, Okaloosa County, Florida. The proposed site is mostly vacant except for a 1,040-square-foot building that is currently used for storage and occasional office space, an access road, perimeter fencing, antennae structures, and utilities infrastructure that is occasionally used to support test missions at Eglin AFB. It consists of 17.1 acres of beachfront property approximately 13 miles south of the Eglin AFB west gate, at the southeastern corner of Santa Rosa Boulevard and U.S. Highway 98 in Fort Walton Beach, Florida. The proposed site is bordered by a 339-unit condominium resort complex to the west and a 216-room Four Points Sheraton resort to the east. The northern edge of the proposed site borders U.S. Highway 98 and there is an existing stop sign that provides access onto U.S. Highway 98 from the site. There are no other roadways bordering the proposed site.

3.9.3 Environmental Consequences

Evaluation Criteria

Operational characteristics of roadway facilities are described in terms of level of service (LOS). The concept of LOS uses quantitative methods to develop a qualitative measure that characterizes operational conditions within a traffic stream and its perception by motorists and passengers. The descriptions of individual LOSs characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined and given letter designations A through F, with A being the best and F being the worst operating conditions. Most jurisdictions adopt a minimum LOS threshold for transportation facilities in urbanized areas of LOS C or D. The FDOT identifies the minimum LOS for U.S. Highway 98 as LOS C because the proposed site is inside the Fort Walton Beach Urbanized Area, which has a population of less than 500,000 people and U.S. Highway 98 is a controlled-access highway (FDOT 2002).

Preferred Alternative

There are two periods of interest related to the Preferred Alternative, the construction period and the full occupancy period.

Under the Preferred Alternative, construction of the proposed project would be anticipated to have no adverse effects on the surrounding transportation system. Construction would be assumed to utilize normal construction methods which will be confined to the boundaries of the site. The anticipated volume of construction vehicles would be very low in comparison to existing traffic volumes. These combined factors result in there being no anticipated adverse effects related to construction activities on the site.

The full occupancy of the proposed resort would be expected to have no significant adverse effects on traffic operations in the vicinity of the site. The traffic operations assessment of the adjacent roadways and intersections show that although traffic exiting the site to travel west on U.S. Highway 98 would experience significant delays, this will have no adverse effects on traffic traveling on U.S. Highway 98. U.S. Highway 98 will operate at the same level of service with or without the Preferred Alternative. Motorists exiting the proposed site onto westbound U.S. Highway 98 also would have the option of traveling eastbound and performing a legal U-turn at the existing traffic signal located approximately 1,000 feet to the east of the proposed site. This movement may be mandated through formal access control at the site access due to safety reasons as the project becomes further defined and designed. Access to the site is anticipated to remain controlled by a stop sign, as it is unlikely to meet FDOT traffic signal warrants and its proximity to the U.S. Highway 98/Santa Rosa Blvd signalized intersection precludes a traffic signal's placement at the site access.

The Preferred Alternative consists of constructing a resort complex consisting of hotel facilities (parking, lodging, lobby, and conference areas), restaurants, bars, swimming pools, and light retail. The resort complex would be similar in size and facilities to resorts along U.S. Highway 98. Although the EUL developer could propose more or fewer guest rooms in the resort, the Proposed Action assumes 250 guest rooms. The existing Test Site A-5 facility, asphalt driveway and parking lots, foundations, and utility infrastructure would be demolished in order to make space for proposed development.

To determine the potential effects of the Preferred Alternative on the surrounding transportation system, it is necessary to determine the quantity of new trips being generated by the Preferred Alternative at buildout, the distribution of those trips to the surrounding transportation system, and the assignment of trips to specific access points at the site.

Trip Generation. Trip generation for the site was performed using the methodologies and information from the 2003 Institute of Transportation Engineers (ITE) document entitled *Trip Generation Manual* (ITE 2003). Both daily and peak hour trips were generated. The total quantity of new trips entering and exiting the site was derived by using the base trip generation rates presented in the *Trip Generation Manual* (ITE 2003). The independent variable used to generate site-related trips is occupied rooms. Data presented for Land Use 310 (Hotel) in the *Trip Generation Manual* indicate that an average occupancy rate for a hotel is 83 percent (ITE 2003). It was assumed that the proposed 250-room hotel would conform to these data. This results in approximately 208 occupied rooms. The trip generation calculations are shown below in **Table 3-10**.

Table 3-10. Total Preferred Alternative Generated Trips

Land Use			Trip Generation Rates		Trips Generated	
			Weekday		Weekday	
Land Use ID	Land Use Description	Occupied Rooms	Daily	PM Peak Hour	Daily	PM Peak Hour
310	Hotel	208	8.92	0.7	1,855	146

Total	**1,855**	**146**
Total Trips Entering Site	**928**	**72**
Total Trips Exiting Site	**928**	**74**

Source: ITE 2003

Trip Distribution. The trips using the site were distributed to the surrounding area by using existing traffic data from the FDOT (FDOT 2008). Analysis of these data led to the trip distribution pattern shown in **Table 3-11**.

Table 3-11. Distribution of Site Trips

Roadway	Percent of Trips	Daily	Peak
U.S. Highway 98 west of proposed site	54.0%	1,002	79
U.S. Highway 98 east of proposed site	46.0%	853	67
Total		**1,855**	**146**

Trip Assignment. Once trips are generated and distributed to the surrounding roadway system, they must be assigned to specific access points to the proposed site in order to determine potential effects on nearby roadways and intersections and to determine how the access points need to be designed and controlled. For the purposes of this analysis only one access point was assumed; therefore, all site-related traffic was assigned to that access point based on the trip distribution data. Total peak hour traffic volumes at the site access intersection are shown in **Table 3-12**.

Table 3-12. Peak Hour Intersection Traffic Volumes

Intersection	Control	Proposed Action Peak Hour Traffic Volumes					
U.S. Highway 98/ Site Access	Unsignalized-Stop Sign	EBT	EBRT	WBT	WBLT	NBLT	NBRT
		1,835	39	2,665	33	40	34

Source: ITE 2003
Notes:
EBT = Eastbound Through
EBRT = Eastbound Right Turn
WBT = Westbound Through
WBLT = Westbound Left Turn
NBLT = Northbound Left Turn
NBRT = Northbound Right Turn

Potential Effect Analysis. To determine potential effects of the full occupancy period of the Preferred Alternative, an assessment of traffic operations was performed. The transportation network used in the traffic operations assessment is composed of existing facilities. No committed improvements unrelated to the Preferred Alternative are planned.

The proposed site access intersection with U.S. Highway 98 was evaluated according to the unsignalized intersection methodology presented in the 2000 Transportation Research Board document entitled *Highway Capacity Manual* (TRB 2000). An analysis of this nature looks at the performance of the intersection over a period of one hour in the peak period. The peak hour investigated was the afternoon peak hour due to the anticipated higher level of adjacent roadway traffic. This analysis also assumes an intersection lane configuration as shown in **Table 3-13**.

Table 3-13. Assumed Intersection Configurations

		Number of Lanes					
		Site Access		U.S. 98 West Approach		U.S. 98 East Approach	
Intersection	**Control**	**Left**	**Right**	**Through**	**Right**	**Left**	**Through**
U.S. Highway 98/Site Access	Unsignalized - Stop Sign	1	1	2	1	1	2

The result of the peak hour operational evaluation of the site access intersection for before and after build out is presented in **Table 3-14**.

Table 3-14. Peak Hour Site Access Intersection Operations

Intersection	**Control**	**No Action Alternative Operation***				**Preferred Alternative Operation***				**Net Effect**
U.S. Highway 98/Site Access	Unsignalized - Stop Sign	EBRT	WBLT	NBLT	NBRT	EBRT	WBLT	NBLT	NBRT	None
		B	B	F	B	B	B	F	B	

Notes:

* Based on Unsignalized Intersection Methodology contained in the 2000 Transportation Research Board *Highway Capacity Manual* (TRB 2000).

EBRT = Eastbound Right Turn NBLT = Northbound Left Turn

WBLT = Westbound Left Turn NBRT = Northbound Right Turn

The traffic operations assessment of the site access intersection indicates that there will be no change to the operations of the site access intersection after buildout. However, the intersection will continue to operate at LOS F after buildout due to the difficulty encountered by motorists attempting to make a left turn out of the site.

Although there are no site related changes to operational conditions at the site access intersection, the intersection continues to operate below FDOT LOS standards during the peak hour after buildout. It is recommended that a more detailed safety study be performed once the process is further along to determine if access control such as limiting site exiting traffic to a right turn only movement is prudent. These operational procedures would result in vehicles making a U-turn movement at the signalized intersection approximately 1,000 feet to the east of the proposed site. Due to the low volume of exiting traffic desiring to make a left turn out of the site (see **Table 3-12**), which would be forced to make a U-turn at the signalized intersection (consisting of approximately 40 vehicles), no adverse effects on the signalized intersection located approximately 1,000 feet to the east of the proposed site are anticipated.

No Action Alternative

Under the No Action Alternative, the proposed resort would not be constructed, and traffic conditions would remain as described in **Section 3.9.2**. There would be no effects on the transportation system.

3.10 Utilities and Infrastructure

3.10.1 Definition of the Resource

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as "urban" or developed. The availability of infrastructure and its capacity to support growth are generally regarded as essential to the economic growth of an area. Utilities and infrastructure include power supply, water supply, sewer and waste water systems, gas supply, liquid fuel supply, communications, transportation, and solid waste disposal. The infrastructure information contained in this section provides a brief overview of each infrastructure component and comments on its existing general condition. Transportation is discussed in detail in **Section 3.9**.

3.10.2 Description of the Affected Environment

Power Supply. Gulf Power Company, a subsidiary of Southern Company, currently provides electric service to the portion of Okaloosa County within Santa Rosa Island (Gulf Power 2008a). Gulf Power's service territory spans the area from the Alabama border on the west to the Apalachicola River on the east and from the Alabama border on the north to the Gulf of Mexico on the south. Gulf Power owns, in part, seven plants in Mississippi, Florida, and Georgia, which produce a total generating capacity of 2,659 megawatts to serve customers in 72 towns and communities (Gulf Power 2008b). Choctawhatchee Electric Cooperative, Inc., another company that provides electric service to Okaloosa County, does not service the Project Area (Morrow 2008).

There are multiple overhead electric lines with supporting wooden poles located throughout the site that tie into power lines along Highway 98. Existing infrastructure on the site itself would be demolished; however, the main power line on Highway 98 would still be available to connect to for electric service (Eglin AFB 2008b).

Water Supply. Potable water is regulated in Okaloosa County by the FDEP and the NWFWMD and supplied by Okaloosa County Water and Sewer System (OCWS). NWFWMD regulates drinking water in compliance with Federal drinking water standards set forth by the Safe Drinking Water Act and the National Primary Drinking Water Regulations. Okaloosa County receives most of its water supply from the Floridan Aquifer (AFMC 2006). The Project Area is within the OCWS Garniers Service Area (Unincorporated) (Okaloosa County 2003b). The Garniers service area is in southern Okaloosa County and is bounded by Eglin AFB on the north and east, Fort Walton Beach on the south and west, and the Gulf of Mexico on the south. The service area includes the Garniers Mainland and the Okaloosa Island (the developed portion of Santa Rosa Island that is within Okaloosa County) areas. The area serves a transient tourist population ranging between approximately 7,800 and 13,000.

Public potable water supply is supplied through a 16-inch water main that resides in a steel casing buried under Santa Rosa Sound near Brooks Bridge (Eglin AFB 2005a). The main water line for potable water would originate from Highway 98 (Eglin AFB 2008b). Eleven Floridan wells serve this service area (Okaloosa County 2003b). OCWS maintains one public water supply well on the island, which is referred to as the Amusement Park Well. It is used only as an emergency backup in case the 16-inch supply main is breached or has to be taken out of service (Eglin AFB 2005a). Water lines and an abandoned water well that has not been used for years are located on the property. This water well would be capped and abandoned in place prior to construction (Eglin AFB 2008b).

Public water supply demand projections for Okaloosa County from 2005 to 2025 show an expected increase of 11.83 million gallons per day (MGD) (24.68 MGD to 36.51 MGD). Of the entire expected demand increase, an 8.19 MGD increase from 2005 to 2025 is expected for the coastal areas of Okaloosa County (NWFWMD 2006). Public water supply demand projections for Garniers Service Area are expected to increase by 0.51 MGD from 2005 to 2020 (5.31 to 5.82 MGD). The projected average daily rate surplus of 0.012 MGD in 2010 is expected to decrease to a deficit of 0.32 MGD by 2020. The Garniers Service Area currently holds a Consumptive Use Permit (Permit Number 19840092) that allows an average daily rate of 5.5 MGD and a maximum daily rate of 8.2 MGD (Okaloosa County 2008b).

Santa Rosa Island contains extremely minimal potable water potential due to saltwater intrusion and low potentiometric surface levels of the aquifers (Eglin AFB 2005a). According to NWFWMD, there are anticipated water problems in the coastal area of Santa Rosa, Okaloosa, and Walton counties where extensive development and significant withdrawals of groundwater have occurred. This area, including the Garniers Service Area, has been designated as a Water Resource Caution Area (WRCA). NWFWMD has established minimum flows and levels for both groundwater and surface water systems for the effective future management of water resources in this area (NWFWMD 2008). The WRCA designation subjects all nonexempt withdrawals to more rigorous scrutiny to ensure that the proposed withdrawal does not result in unacceptable impacts on the resource. Permitees within a WRCA have increased water use reporting requirements, must implement water conservation measures, and must improve water use efficiencies. Permitees are also required to perform an evaluation of the technical, environmental, and economic feasibility of providing reclaimed water for reuse. Use of the Floridan Aquifer for nonpotable purposes is prohibited in the WRCA (NWFWMD 2000).

Due to a deep cone of depression in the Floridan aquifer and concerns of possible saltwater intrusion, the recent Garniers and Mid County consumptive use permits included a plan to reduce the withdrawals from the existing coastal supply wells. This reduction in coastal withdrawals would be accomplished by constructing an interconnecting water main between the Garniers and Mid County systems, utilizing existing available excess supply capacity in the Mid County system, and developing additional wells in this inland service area to meet future needs for the coastal area. All supply deficits in the Garniers system will be replaced by supply from the Mid County system (Okaloosa County 2003b).

OCWS requires impact fees for water use that are referred to as Capacity Expansion Charges (CECs), also referred to as tap fees. CECs are $800 per Equivalent Residential Unit and $400 per hotel room (Littrell 2008).

Sewer and Wastewater Systems. Domestic wastewater is regulated in Okaloosa County by the FDEP and the NWFWMD. NWFWMD regulates wastewater in accordance with the CWA and the Florida Air and Water Pollution Control Act. Both act together to establish water quality standards, regulate domestic wastewater facility management and industrial waste treatment, establish domestic wastewater treatment plant monitoring requirements, and regulate storm water discharge (AFMC 2006).

The Project Area is within the county's Garniers Wastewater Treatment Plant (WWTP) Service Area, which serves the wastewater needs in the south-central part of Okaloosa County. Current capacity of Garniers WWTP is 6.5 MGD. Due to the plant's age, location, operational performance, and other factors, OCWS is implementing a program to construct a new treatment facility that will replace the existing Garniers WWTP. The new 10 MGD Arbennie Pritchett Water Reclamation Facility (WRF) will be constructed at the existing Garniers spray field property on Eglin AFB. The new WRF is intended to provide new and improved technology, an increased service area, enhanced operational performance, and remove the existing Garniers WWTP from the increasing residential congestion of its current location. The Arbennie Pritchett WRF will discharge effluent to new rapid infiltration basins that will be constructed at the existing Garniers Effluent Spray field site. The Garniers WWTP will remain in service and operational throughout the construction of the new Arbennie Pritchett WRF (OCWS 2007).

Completion of the project is due by June 2009 (OCWS 2008) and demolition of existing structures and equipment of Garniers WWTP is tentatively expected to begin as early as October 2009 (OCWS 2007).

The new Arbennie Pritchett WRF will serve not only the County's Garniers Service Area, but also will treat wastewater flows generated by Eglin AFB properties and any new housing developments, and will have sufficient capacity to meet the wastewater needs of the region into the future (OCWS 2008).

Sewer service is accepted from commercial properties on Okaloosa Island. OCWS reports sufficient sewer capacity for new projects on the island. OCWS requires $3,200 per Equivalent Residential Unit and $1,600 per hotel room for sewer use CECs (Littrell 2008).

Natural Gas. Natural gas is supplied to several areas in Okaloosa County, including the Project Area, by the Okaloosa Gas District (OGD). The OGD buys approximately 34 million cubic feet per day of gas from the Gulf South and Florida Gas transmission pipelines (AFMC 2006). The OGD is part of the economic development council working with Eglin AFB in infrastructure improvements as part of Eglin AFB's Vision 2015 growth management plan (Okaloosa County 2008c).

The OGD service territory covers more than 400 square miles in Okaloosa, Santa Rosa, South Walton and Escambia counties. This area includes several military installations which more than over 61 square miles of military reservation. OGD provides natural gas service for approximately 35,000 residential, commercial, military and industrial customers within this territory. OGD's transmission system consists of 2-, 3-, 4-, 6-, 8-, 10-, and 12-inch high-pressure steel pipelines with a maximum allowable operating pressure of 550 pounds per square inch gauge. OGD has 1,050 miles of distribution mains, with approximately 25 main stations and more than 600 regulator stations and approximately 41,500 service lines (OGS 2008)

Liquid Fuel. Liquid fuels such as diesel distillates are commonly used in trucks and tractors. There is no current storage of liquid fuels onsite. There have been reports that there was a vehicle refueling area on the site in the 1960s; however, the location and storage type (aboveground or underground storage tanks) is not known.

Communications. Okaloosa County initiated a project in 1999 to install more than 75 miles of fiber optic cable connecting north and south county operations. When complete, Okaloosa County will have implemented its own fiber optic system, which will greatly reduce future communication cost. The Okaloosa County fiber optic network is ongoing and is projected to be finished between 2009 and 2010 (Okaloosa County 2008d).

Eglin AFB is partnering with Okaloosa County to develop a communications infrastructure as part of Eglin AFB's Growth Management Plan, Eglin AFB's Vision 2015 (EDCOC 2008b). Communications infrastructure would be provided by Florida LambdaRail, a Florida LLC. LambdaRail would operate the fiber optic network infrastructure to deliver Internet and high-speed data transport services (EDCOC 2007a). Other communications improvements include a new telephone cable along Highway 98, a new Cox Communications cable, and new cellular towers (EDCOC 2007b).

There is fiber optic line along the access driveway connecting to Building 8502 onsite and large fiber optic boxes are connected to the building. A separate fiber optic line might be needed to support Test Stand A-5 missions at the resort (Eglin AFB 2008b).

Solid Waste Management. Solid waste management is provided by two companies in the Okaloosa County area. Waste Management Systems has more than 300 active landfill sites and currently disposes of more than 128 million tons of waste per year throughout North America (WM 2008). The BFI Emerald Coast Division of Allied Waste Company also services this area. Allied Waste Company

operates a network of 291 collection companies, 161 transfer stations, 161 active landfills, and 53 recycling facilities in 37 states and Puerto Rico (AW 2007).

Okaloosa County maintains a franchise agreement with Waste Management for household trash, recyclables, and yard waste at curbside disposal for all residential units on Okaloosa Island (Okaloosa County 2008c). Commercial accounts are not included in Waste Management's franchise agreement and can contract with the solid waste management company of choice (Halsey 2008). There are several independent recycling services throughout the county (EDCOC 2007b).

3.10.3 Environmental Consequences

Evaluation Criteria

Effects on infrastructure are evaluated based on their potential for disruption, excessive use, or improvement of existing levels of service and additional needs for energy and water consumption, sanitary sewer and wastewater systems, and transportation patterns and circulation. Effects might arise from physical changes to circulation, construction activities, introduction of construction-related traffic on local roads or changes in daily or peak-hour traffic volumes, and energy needs created by either direct or indirect workforce and population changes related to installation activities. In considering the basis for evaluating the significance of effects on infrastructure resources, several items are considered including evaluating the degree to which the proposed construction projects could affect the existing solid waste management program and capacity of the area landfill. An effect might be considered adverse if a proposed action exceeded capacity of a utility.

Preferred Alternative

Power Supply. No long-term adverse effects on electricity would be expected from the construction and operation of the resort. There is adequate capacity and infrastructure for electrical power in the area. It is anticipated that the resort would obtain power from the existing service with Gulf Power.

The developers would be required to integrate energy-efficient building techniques and equipment where feasible, such as use of solar or other alternative energy sources and use of green building design principles.

Natural Gas. No long-term adverse effects on natural gas supply are expected from the construction and operation of the Proposed Action. Excessive needs for natural gas are not expected.

Liquid Fuel. No effects on liquid fuels are expected from the construction and operation of the Proposed Action.

Water Supply. Short-term and long-term, direct, minor adverse effects on water supply are expected as a result of the construction and operation of the Proposed Action. The additional infrastructure and population projected for the area would increase the county demand for potable water; however, there are alternative water source options that would absorb the additional needs. **Table 3-15** lists local water resource options with their estimated costs. Water resource needs are also being addressed through the creation of regional wellfields and supply systems, special permitting requirements, and long-range planning (Gulf Power 2008b).

Table 3-15. Water Source Options Data

Water Source Options	Estimated Water Available for	Estimated Costs of Water

	Water Supply (MGD)	Supply ($/1,000 gallons) *
Sand-and-Gravel Aquifer	20.0	$0.98–2.15
Floridan Aquifer-Inland	20.0	$1.37–2.66
Conservation	< 2.5	Up to $4.00
Reuse of Treated Water	5.0	$2.50–3.50
Aquifer Storage and Recovery	10.0	$2.56–2.85
Surface Water	> 20.0	$1.92–3.42

Source: NWFWMD 2000

Note: * Does not include costs associated with local distribution systems to end users

Traditional sources (i.e., Floridan and Sand-and-Gravel Aquifers) in the coastal area of Santa Rosa, Okaloosa, and Walton counties have been determined insufficient to meet projected future needs without causing adverse impacts due to saltwater intrusion of the Floridan Aquifer. As a result, utilities in the coastal area have begun to implement plans to procure water from other sources that the NWFWMD has recommended. All of the current efforts by larger utilities to develop nontraditional water sources are focused on inland groundwater sources outside of their respective coastal zone service areas, including inland water wells tapping the Sand-and-Gravel Aquifer and inland Floridan Aquifer wells in the more central part of the region. Development of alternate sources will help these utilities meet future water demands and will enable them to minimize future coastal zone pumping from the Floridan Aquifer (NWFWMD 2006).

Recent Garniers and Mid-County consumptive use permits included a plan to reduce the withdrawals from the existing coastal supply wells by constructing an interconnecting water main between the Garniers and Mid-County systems, utilizing existing available excess supply capacity in the Mid-County system, and developing additional wells in this inland service area to meet future needs for the coastal area. All supply deficits in the Garniers system will be replaced by supply from the Mid-County system (Okaloosa County 2003b).

Surface water sources have not been developed in Okaloosa, Santa Rosa, and Walton counties to date due to the high efficiency of developing and distributing traditional groundwater supplies. However, in the interest of securing long-term, viable sources of water supply, the feasibility of surface water sources for public water supply is currently being evaluated as a water resource development project (Okaloosa County 2008b).

The developers of the resort would be required to integrate water-efficient building techniques and equipment wherever feasible. Examples might include installation of low-flow plumbing fixtures, low-impact design storm water collection and treatment structures that recycle water back to groundwater, finding uses for recycled water such as fountains or irrigation systems, and installing xeric landscape features. The Project Area is located in a red zone for irrigation and no potable water can be used for irrigational purposes Eglin AFB would require the use of xeric landscape design throughout the proposed resort and any deviation from this requirement would require written justification (Eglin AFB 2008b).

Sewer and Wastewater Systems. No effects are expected on the sanitary sewer and wastewater systems from the construction and operation of the Proposed Action. OCWS has at least 1 MGD of excess wastewater treatment and disposal capacity (Okaloosa County 2003b). The FDEP developed a Water Supply Facilities Work Plan to coordinate water supply with projected land use planning. Estimates from the Final Report published in March 2003 indicated that 6.1 MGD of capacity would be needed from the Garnier WWTP to service the projected population of 64,000. The new Arbennie Pritchett WRF is expected to handle 10 MGD. Therefore, there would be an approximate 40 percent excess in waste water treatment capacity (Okaloosa County 2003b). Consequently, the Proposed Action would not adversely affect the sanitary sewer and wastewater systems.

Communications. No adverse effects on the planned communication systems are anticipated considering there is adequate capacity.

Solid Waste Management. Minor short-term and long-term impacts would be expected on solid waste management as a result of construction debris. Debris that is not recycled would be put in a landfill, which would be considered a minor long-term irreversible adverse effect. Construction debris is generally composed of clean materials, and most of this waste would be recycled or ground into gravel for reuse. Contractors hired for the various construction projects would be responsible for the removal and disposal of their construction wastes generated onsite. Minor short-term and long-term impacts would also be expected on solid waste management as a result of the generation of packaging debris and food waste that would be generated from retail stores and restaurants and common household trash generated by hotel guests. Waste Management Services and Allied Waste Company both operate in Okaloosa County and together have approximately 460 active landfills where construction wastes can be disposed of (WM 2008, AW 2007).

No Action Alternative

The No Action Alternative would result in a continuation of the existing condition. Under the No Action Alternative, the Proposed Action would not be constructed and there would be no change in baseline conditions; therefore, the affected environment would remain essentially unchanged from what was described in **Section 3.10.2**. If the No Action Alternative were carried forward, there would be no change in or effects on infrastructure and utilities at Site A-5.

3.11 Hazardous Materials and Waste

3.11.1 Definition of the Resource

Hazardous material is defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act (SARA), and the Toxic Substances Control Act, as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, incapacitating reversible illness, or pose a substantial threat to human health or the environment. Hazardous waste is defined by the RCRA, which was further amended by the Hazardous and Solid Waste Amendments, as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that poses a substantial present or potential hazard to human health or the environment. In general, both hazardous materials and wastes include substances that, because of their quantity; concentration; or physical, chemical, or infectious characteristics, might present substantial danger to public health or welfare or the environment when released or otherwise improperly managed.

Evaluation of hazardous materials and wastes focuses on underground storage tanks and aboveground storage tanks; and the storage, transport, handling, and use of pesticides and herbicides, fuels, and petroleum, oil, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of hazardous materials and wastes can threaten the health and well being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of hazardous materials or wastes, the extent of contamination varies based on the type of soil, topography, and water resources.

Special hazards are those substances that might pose a risk to human health but are not regulated as contaminants under the hazardous wastes statutes. Potential hazards generally associated with demolition and renovation of older buildings include asbestos-containing material (ACM) and lead-based paint

(LBP). Information on special hazards describing their locations, quantities, and condition assists in determining their relevance to a proposed action.

To protect habitats and people from inadvertent and potentially harmful releases of hazardous substances, DOD has dictated that all facilities develop and implement Hazardous Material Emergency Planning and Response Plans or Spill Prevention Control and Countermeasures Plans. Also, DOD has developed the Environmental Restoration Program, intended to facilitate thorough investigation and cleanup of contaminated sites on military installations. Through the Environmental Restoration Program, DOD evaluates and cleans up sites where hazardous wastes have been spilled or released to the environment. The Environmental Restoration Program provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination. Description of the Environmental Restoration Program activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., activities dependent on groundwater usage might be restricted until remediation of a groundwater contaminant plume has been completed). These plans and programs, in addition to established legislation (i.e., CERCLA and RCRA), effectively form the "safety net" intended to protect the ecosystems on which most living organisms depend.

AFPD 32-70, *Environmental Quality*, establishes the policy that USAF is committed to the following:

- Cleaning up environmental damage resulting from its past activities
- Meeting all environmental standards applicable to its present operations
- Planning its future activities to minimize environmental effects
- Managing responsibly the irreplaceable natural and cultural resources it holds in public trust
- Eliminating pollution from its activities wherever possible.

AFPD 32-70 and the AFI 32-7000 series incorporate the requirements of all Federal regulations, other AFIs, and DOD Directives for the management of hazardous materials, hazardous wastes, and special hazards.

3.11.2 Description of the Affected Environment

Pollution Prevention. AFI 32-7080, *Pollution Prevention Program*, implements pollution prevention requirements at Eglin AFB. The USAF is required to procure, to the greatest extent practical, recycled or energy-efficient goods for administrative and construction activities. AFI 32-7080 prescribes the establishment of Pollution Prevention Management Plans. Eglin AFB has a Pollution Prevention Management Plan that complies with these mandates, and would require any contractor to comply with these mandates when constructing any public-private venture facilities associated with the Preferred Alternative.

Okaloosa County accepts a variety of household hazardous wastes as part of an effort to responsibly divert hazardous waste from local landfills. County disposal services include paints, pesticides, used oil, oil filters, pool chemicals, batteries, gas, solvents, paint products, tar, automotive chemicals, fluorescent bulbs, smoke alarms, fire extinguishers, and computer monitors (Okaloosa County undated e).

Hazardous Materials. AFI 32-7086, Hazardous *Materials Management*, established procedures and standards to govern management of hazardous materials throughout the USAF. The AFI applies to all USAF personnel who authorize, procure, issue, use, or dispose of hazardous materials; and to those who manage, monitor, or track any of those activities. In addition, 10 U.S.C. § 2692, *Storage, Treatment, and Disposal of Nondefense Toxic and Hazardous Materials*, does not permit the storage, treatment, or

disposal of any material that is a toxic or hazardous material and that is not owned either by the DOD or by a member of the armed forces (or a dependent of the member) assigned to or provided military housing on the installation unless an exception is granted from the Secretary of Defense. The majority of hazardous materials procured on Eglin AFB are for aircraft operations.

Hazardous Wastes. Eglin AFB produces a variety of wastes from aircraft maintenance, base transportation, and civil engineering activities. Wastes include spent solvents, process chemicals, contaminated fuels, stripping chemicals, waste paint, oils and lubricants, and medical biohazard waste. AFI 32-7042, *Hazardous Waste Management Plan*, deals with key points in implementing the complex area of hazardous waste management required by RCRA as enforced by the USEPA and the FDEP. The plan covers the control and management of hazardous materials from the point they become hazardous wastes at the point of generation to the point of ultimate disposal. The scope of the plan is implementation of the USEPA's philosophy of "cradle-to-grave" management and control of hazardous waste. AFI 32-7005 regulates the identification, handling, storage, and record-keeping related to hazardous waste on installations. Hazardous waste at Eglin AFB is disposed of within 90 days (Eglin AFB 2006). Similar to the use and control of hazardous materials, tenants would establish procedures for handling, storing, and shipping of any hazardous waste in accordance with state and local regulations.

Asbestos-Containing Material. Asbestos is a naturally occurring mineral formation. It has historically been used in building materials because asbestos is fire-resistant, has high tensile strength, and has low heat and electrical conductivity. Asbestos is a friable material readily inhaled, resulting in respiratory complications including asbestosis or lung cancer including mesothelioma. However, inhalation of friable asbestos is only a concern during construction or deconstruction activities. Proper use of personal protective equipment in accordance with OSHA regulations would mitigate any effects from friable ACM.

In accordance with USEPA guidelines for maintaining and removing ACM, USAF developed AFI 32-1052, *Facility Asbestos Management,* in March 1994. This comprehensive plan provides the direction for asbestos management at USAF installations. AFI 32-1052 incorporates by reference the applicable requirements of 29 CFR Part 669 et seq., 29 CFR 1910.1025, 20 CFR 1926.58, 40 CFR 61.3.80, Section 112 of the CAA, and other applicable AFIs and DOD Directives. AFI 31-1052 requires each installation to develop an asbestos management plan to maintain a permanent record of the status and condition of all ACM in installation facilities, record asbestos management efforts, and detail asbestos removal plans.

Lead-Based Paint. In October 1992, Congress passed the *Residential Lead-Based Paint Hazard Reduction Act of 1992*, as promulgated in 40 CFR Part 745, and 24 CFR Part 35, which requires disclosure by persons selling or leasing housing constructed before the phase-out of residential LBP use in 1978 if known LBP or LBP hazards exist. This act, commonly called Title X, requires Federal agencies to comply with Federal, state, and local laws relating to LBP activities and hazards.

USAF policy requires that installations have specific procedures for managing facilities with LBP and protecting personnel from the hazards associated with deteriorated LBP. The LBP Management Plan focuses on protecting children from LBP and preventing facility occupants from exposure to LBP.

Radon. Radon is a naturally occurring radioactive gas that develops in soils and rocks as uranium decays. Radon has the tendency to accumulate in enclosed spaces such as basements that are generally below ground and have poor ventilation. Radon is an odorless, colorless gas that has been determined to increase the risk of developing lung cancer. The average (mean) radon level in homes in the United States is approximately 1.3 picocuries per liter (pCi/L), which is three times greater than the average outdoor level of 0.4 pCi/L. Because of this risk, the USEPA recommends that Americans consider fixing their home when radon levels are between 2 pCi/L and 4 pCi/L.

USEPA developed the USEPA Map of Radon Zones using five factors to determine radon potential: indoor radon measurements, geology, aerial radioactivity, soil permeability, and foundation type. Radon potential assessment is based on geologic provinces, and is the quantitative assessment of radon potential. According to the USEPA Radon Zone map for Okaloosa County, Florida, the base is in a zone of low radon potential. Based on this assessment, the USEPA has assessed that Okaloosa County has a predicted average indoor radon screening level less than 2 pCi/L (USEPA 2007).

Environmental Restoration Program. The Environmental Restoration Program, formerly known as the Installation Restoration Program, is a subcomponent of the Defense Environmental Restoration Program that became law under SARA. The Environmental Restoration Program requires each DOD installation to identify, investigate, and clean up hazardous waste disposal or release sites. A review of the Eglin AFB Environmental Restoration Program Management Action Plan indicates there are no Environmental Restoration Program related sites on the proposed site (AAC 2003).

3.11.3 Environmental Consequences

Evaluation Criteria

Effects on hazardous materials and waste management would be considered significant if the Federal action resulted in noncompliance with applicable Federal and state regulations or permit capabilities. Effects on pollution prevention would be considered significant if the Federal action resulted in worker, resident, or visitor exposure to hazardous materials, or if the action generated quantities of these hazardous materials beyond the capability of management procedures. Effects on the Environmental Restoration Program would be considered significant if the Federal action disturbed (or created) contaminated sites resulting in adverse effects on human health or the environment. Effects on fuels management would be significant if management policies, procedures, and handling capacities could not accommodate the proposed activities.

Preferred Alternative

Pollution Prevention. Negligible long-term effects would be expected as a result of constructing and operating the proposed resort. Eglin AFB would require any developers to initiate and carry out pollution prevention management programs as set forth in state and local rules and regulations in accordance with the Emergency Planning and Community Right-To-Know Act and the Pollution Prevention Act of 1990.

Hazardous Materials. Long-term minor adverse effects would be expected as a result of the use of hazardous materials during the construction process. It is not anticipated that large volumes of hazardous materials would be used during operation of the Preferred Alternative; most hazardous materials use would be of small quantity and considered household hazardous materials (e.g., cleaning solutions, paint). Hazardous materials associated with the aircraft operations would not affect the Preferred Alternative. The use of backup generators would require storage of small quantities of petroleum fuel. Storage tanks would be in compliance with AFI 32-7044, *Storage Tank Compliance,* or state or local government regulations. Management of any materials used at the proposed site would be required to be consistent with the installation *Hazardous Materials Management Plan* and the Response Plans or Spill Prevention, Control, and Countermeasure Plans. The *Hazardous Waste Management Plan* provides plans and procedures for handling, storing, and disposing of hazardous materials. The Response Plans or Spill Prevention, Control, and Countermeasure Plans list the procedures to prevent, respond to, and train for hazardous material and petroleum product spills.

Hazardous Wastes. Short-term minor adverse effects would be expected from the generation of hazardous wastes during the construction process. The construction permits along with any necessary permits for use of hazardous wastes would be the responsibility of the development contractor. The

Hazardous Waste Operations and Emergency Response Standard regulations that protect workers are discussed in 29 CFR 1910.120 and 29 CFR Part 1926 and would be followed.

Limited hazardous waste is expected to be generated during normal operations of the proposed resort due to cleaning, maintenance, and similar types of activities. If necessary, the *Hazardous Waste Management Plan* provides plans and procedures for handling, storing, and disposing of hazardous materials. The Spill Prevention Control and Countermeasures Plan lists the procedures to prevent, respond to, and train for hazardous material and petroleum product spills. The net change in hazardous materials use at and waste generated from the proposed site under the Preferred Alternative would likely not require a permit under RCRA.

Asbestos-Containing Material and Lead-Based Paint. USAF regulations prohibit the use of ACM and LBP for new construction. Therefore, no effects from ACM or LBP are expected from the construction of the Preferred Alternative. If ACM or LBP are identified in pre-demolition surveys of Building 8502, it would need to be removed and disposed of in accordance with applicable Federal, state, and local guidelines.

Radon. Okaloosa County is within an area of low potential for radon gas (USEPA 2007). Therefore, no exposure to radon gas is anticipated from the construction of the Preferred Alternative.

Environmental Restoration Program. No Environmental Restoration Program-related sites are located on the proposed site. Should contamination be encountered during demolition or construction, handling, storage, and disposal activities would be conducted in accordance with applicable Federal, state, and local guidelines. Therefore, no impacts on Environmental Restoration Program-related sites would be expected.

No Action Alternative

Under the No Action Alternative, the proposed Emerald Breeze Resort would not be constructed, which would result in the continuation of the existing condition, as described in **Section 3.11.2**. No direct environmental effects would be expected on hazardous materials and wastes.

THIS PAGE INTENTIONALLY LEFT BLANK

4. Cumulative and Other Effects

4.1 Cumulative Effects

CEQ defines cumulative impacts as the "impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time by various agencies (Federal, state, and local) or individuals. Informed decisionmaking is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future. Reasonably foreseeable future actions consist of activities that have been approved and can be evaluated with respect to their effects.

This section briefly summarizes past, current, and reasonably foreseeable future projects within the geographic and time scope of the Proposed Action. The past, current, and reasonably foreseeable projects, identified below, make up the cumulative impact scenario for the Proposed Action. The cumulative impact scenario is then compared to the Proposed Action's impacts on the individual resource areas analyzed in **Section 3** to determine the cumulative impacts of the Proposed Action. In accordance with CEQ guidance, the current effects of past actions are considered in aggregate as appropriate for each resource area without delving into the historical details of individual past actions (CEQ 2005).

The geographic scope of the analysis varies by resource area. For example, the geographic scope of cumulative impacts on noise, soils, and vegetation is very narrow and focused on the location of the resource. The geographic scope of air quality, wildlife and sensitive species, and socioeconomics is much broader and considers more county- or regionwide activities. Projects that were considered for this analysis were identified by reviewing Okaloosa County planning department documents, maps, and other publicly available information. Projects that do not occur in close proximity (i.e., within the Santa Rosa Island portion of Fort Walton Beach, Florida) to the proposed Emerald Breeze Resort site would not contribute to a cumulative impact and are not evaluated further.

4.1.1 Past Land Use and Development

Past Land Use. All land adjacent to the proposed site was USAF range property in the 1940's and 1950's. In the 1950's, a Federal law was passed providing USAF with the authority to lease portions of Santa Rosa Island to Okaloosa County, and the county further leased the land to private developers for commercial and residential use. Eventually the USAF ceded the leased lands to Okaloosa County. The proposed site was not leased or ceded, but retained in USAF ownership.

Condominium Developments. Over the course of the past 4 years, Santa Rosa Island, Fort Walton Beach has seen the development of 16 condominium developments in a radius of approximately 1.5 miles from the proposed site of the Emerald Breeze Resort, four of which have beach frontage along the Gulf of Mexico adjacent or near to the proposed site. These developments add up to approximately 3,900 units in total (Okaloosa County 2008e).

Emerald Coast Conference Center. This 70,000-square-foot conference center was built in 2001 and is across U.S. Highway 98 from the proposed site. It has parking for 553 vehicles and can host 1,400 people in the Grand Ballroom as well as 2,350 people in the theatre (ECCC 2008).

Reasonably Foreseeable. Looking forward, because of the high level of development that has occurred in the Santa Rosa Island area already, there is little land remaining that is developable. To the east and west of the strip of development on Santa Rosa Island is land owned by Eglin AFB which is undeveloped at the moment and there are no current plans for development. Further along Santa Rosa Island is the Gulf Islands National Seashore Park, which would not be developed.

Beach Restoration Programs. Two beach restoration programs have been recently developed for the Santa Rosa Island area. Eglin AFB's Beach Restoration Program and Okaloosa County's Beach Restoration Program are both currently pending in their Joint Coastal Permit Application. Both the Beach Restoration Programs propose beach and dune management to prevent and reverse the damage caused by the hurricanes and tropical storms that hit the Gulf Coast (FDEP 2008b and 2008c). The programs involve the use of dredged material from an offshore borrow site to build up diminished areas to their pre-storm levels. The programs differ in the locations of the dredge site and fill site but both the programs are focused on the Santa Rosa Island area.

Impacts of the beach restoration programs were highlighted in the EA's submitted with the Joint Coastal Permit Application. Temporary impact predicted included adverse impacts to benthic infaunal communities within borrow and beach fill area and adverse impacts on essential fish habitat due to localized increase in turbidity during construction. Temporary impacts to water quality due to increased turbidity during construction; minor, temporary impacts on air quality and noise levels due to presence of construction equipment; and temporary negative impacts on aesthetic resources during construction are also expected to occur. The restoration of beaches and dunes would help increase aesthetic resources in the long term.

The possible impacts resulting from the construction of the Emerald Breeze Resort have been determined to affect primarily biological resources, in particular sea turtles and migratory bird habitat. There will be no affects on benthic habitats or essential fish habitat as all work will be completed onshore.

Cumulative effects may occur if the projects are undertaken simultaneously. These impacts include temporary, minor adverse effects on noise and air quality which are expected due to construction.

4.1.2 Cumulative Effects by Resource Topic

Acoustical Environment. Noise caused by construction of the proposed resort would not accumulate with other similar construction noise sources because other projects unrelated to the Proposed Action would be spatially separated. The minor increase in noise levels due to additional vehicles traveling to and from the proposed site would lead to a small overall increase in the regional noise levels caused by traffic.

Land Use. The Proposed Action would not have cumulative impacts on land use. The Proposed Action is consistent with immediately adjacent land uses, existing resort land use of Fort Walton Beach and Santa Rosa Island, and the Emerald Coast Conference Center, which is across the street from the proposed site.

Air Quality. Minor adverse effects on air quality could result from the cumulative effects of the construction of the Proposed Action and any nearby construction that occurs simultaneously; however, these effects would be short-term and localized. Although operational emissions associated with the Proposed Action are expected to be minor, they would contribute to the regional impacts on air quality caused by the operation of similar facilities nearby. The overall contribution to regional air impacts from operation of the Proposed Action would be minor.

Geological Resources. The Proposed Action would contribute a small percentage to the overall cumulative loss of pervious surface throughout beachfront areas of Santa Rosa Island that has occurred due to previous beachfront development projects.

Water Resources. As development throughout Eglin AFB and the surrounding regions continues, both surface and groundwater quality will continue to be degraded. The Proposed Action would require increased use of potable water and contribute slightly to the cumulative regional shortage of water supply. However, water resource conservation and management would be included in the Site Development Plan for the Proposed Action and would likely be included in the Site Development Plans for other foreseeable future actions, helping to offset the increase in regional demand. In addition, the potential loss of up to 1 acre of low quality wetlands on site due to filling or other disturbance would represent a very small percentage of the overall past loss of wetlands on Santa Rosa Island due to development activities.

Under the Preferred Alternative and other foreseeable future actions, vehicle operations would increase, which would increase the potential for fuel spills and leaks. This effect can be mitigated through improved BMPs and storm water retention ponds. Consequently, the cumulative effect of these activities would lead to a minor direct and indirect adverse effect on surface and groundwater.

Biological Resources. As a result of the long-term history of military activities and disturbance in and around the proposed site, the overall quality (i.e., functions and values) of the existing natural vegetation and wildlife habitat within the development footprint is relatively low. In addition to its low quality, the natural vegetation and wildlife habitat within the development footprint represents less than 1 percent of the total area of both Coastal Grassland Scrub and Coastal Interdunal Swale habitat types on Santa Rosa Island. Therefore, implementing the Preferred Alternative would lead to a minor overall increase in the adverse effects on biological resources on Santa Rosa Island caused by other past, present, and future projects in the ROI.

Socioeconomic Resources. The overall cumulative impact of resort development in Fort Walton Beach and the Okaloosa County area has been positive due to the contributions of increased tourism on the local economy. With a 4 percent bed tax rate, the Economic Development Council of Okaloosa County indicates that local bed tax revenue has grown from $3.77 million in 2003 to $4.32 million in 2007 (EDCOC 2008c). The proposed 250-room Emerald Breeze Resort would contribute positive cumulative impacts on a growing tourist economy in the region through increased bed tax revenue and additional dollars spent on the local economy from visiting tourists.

Traffic. The traffic analysis indicates that the Proposed Action would have negligible adverse impacts on the roadway system near the proposed site. Therefore, within the ROI, cumulative effects of traffic from construction of the preferred alternative would also be negligible.

Utilities and Infrastructure. Short-term and long-term, direct, minor adverse effects on water supply are expected as a result of the construction and operation of the Proposed Action. The additional infrastructure and population projected for the area would increase the county demand for potable water; however, the increase would represent only a very small percentage of the overall regional demand for potable water supply. Water resource demands in the area are being addressed through the creation of regional wellfields and supply systems, special permitting requirements, and long-range planning efforts that account for future development projects such as the Proposed Action.

Minor short-term and long-term impacts would be expected on solid waste management as a result of construction debris. Minor short-term and long-term impacts would also be expected on solid waste management as a result of the generation of packaging debris and food waste that would be generated from retail stores and restaurants and common household trash generated by hotel guests. Waste Management Services and Allied Waste Company both operate in Okaloosa County and together have

approximately 460 active landfills where waste can be disposed of. The Proposed Action would contribute a negligible amount of additional waste to the cumulative waste stream where landfill capacity is not currently an issue.

Hazardous Materials and Wastes. Only minor amounts, if any, of hazardous substances would be utilized in construction of the proposed Emerald Breeze Resort. Likewise, only minor amounts, if any, of hazardous waste would be generated during construction and operation. Therefore, any hazardous substance use or hazardous waste generated under the Proposed Action would represent a negligible increase to the overall cumulative scenario.

4.2 Compatibility of the Proposed Action and Alternatives with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

The Proposed Action would occur in an area of Fort Walton Beach, Florida, that is a tourist and beach resort destination, across from the Okaloosa Convention Center. The Proposed Action would be constructed on a beachfront parcel that is situated between two existing resort developments. The Proposed Action would, therefore, not result in any incompatible land uses or land use change. The Proposed Action would not conflict with any applicable off-installation land use ordinances or designated clear zones, and would be constructed following all applicable permitting, zoning, building, and safety requirements.

4.3 Relationship between Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Short-term uses of the biophysical components of the human environment include direct construction-related disturbances and direct effects associated with an increase in population and activity that occurs over a period of less than 5 years. Long-term uses of the human environment include those effects occurring over a period of more than 5 years, including permanent resource loss.

Several kinds of activities could result in short-term resource uses that compromise long-term productivity. Filling of wetlands or loss of other especially important habitats and consumptive use of high-quality water at nonrenewable rates are examples of actions that affect long-term productivity.

4.4 Irreversible or Irretrievable Commitment of Resources

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources will have on future generations. Irreversible effects primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). The irreversible and irretrievable commitments of resources that would result from implementation of the Proposed Action involve the consumption of material resources used for construction, energy resources, land, and human labor resources. The use of these resources is considered to be permanent.

Material Resources. Material resources utilized for the Proposed Action include building materials (for construction of facilities), concrete and asphalt (for roads and parking areas), and various material supplies (for infrastructure). Most of the materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would not be considered significant.

Energy Resources. Energy resources used for the Proposed Action would be irretrievably lost. These include petroleum-based products (such as gasoline and diesel), natural gas, and electricity. During construction, gasoline and diesel would be used for the operation of construction vehicles. During operation, gasoline would be used by the additional traffic. Natural gas and electricity would be used by operational activities. Consumption of these energy resources would not place a significant demand on their availability in the region. Therefore, no significant effects would be expected.

Biological Habitat. The Proposed Action would result in a loss of vegetation and wildlife habitat. However, the loss would be minimal and not considered significant on a regional basis.

Human Resources. The use of human resources for construction and operation is considered an irretrievable loss only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

THIS PAGE INTENTIONALLY LEFT BLANK

5. References

AAC 2003 — Air Armament Center (AAC). 2003. *Eglin AFB Environmental Restoration Program Management Action Plan.* July 2003.

AFMC 2006 — Air Force Material Command (AFMC). 2006. *Revised Draft Environmental Impact Statement Military Family Housing Demolition, Construction, Renovation, and Leasing (DCR&L) Program, Eglin AFB, Fl and Hurlburt Field, Fl.* Prepared for the 96th Air Base Wing. March 2006.

AW 2007 — Allied Waste (AW). 2007. "Getting Stronger by Design: Allied Waste Industries 2007 Annual Report." Available online: <*http://investor.alliedwaste.com/phoenix.zhtml?c=74587&p=IROL-index*>. Accessed 23 October 2008.

Bus et al. 1996 — Bush, D.M., C.A. Webb, R.S. Young, B.D. Johnson, and G.M. Bates. 1996. "Impact of Hurricane Opal on the Florida/Alabama Coast." Available online: <*http://www.colorado.edu/hazards/research/qr/qr84.html*>. Accessed 27 October 2008.

CEQ 2005 — Council on Environmental Quality (CEQ). 2005. "Guidance on the Consideration of Past Actions in Cumulative Effects Analysis." Available online: <*http://ceq.hss.doe.gov/nepa/regs/Guidance_on_CE.pdf*>. Accessed 5 November 2008.

ECCC 2008 — Emerald Coast Conference Center (ECCC). 2008. "Conference Center Summary." Available online: <*http://www.destin-fwb.com/Conference/?c=35*>. Access 5 November 2008.

EDCOC 2007a — Economic Development Council of Okaloosa County (EDCOC). 2007. *Value-Added Analysis, The Emerald Coast Technology and Research Campus, Eglin AFB, Florida.* March 2007.

EDCOC 2007b — EDCOC. 2007. "Public Utilities." Available online: <*http://www.florida-edc.org/utilities.htm*>. Accessed 16 October 2008.

EDCOC 2008a — EDCOC. 2008. "Eglin Reservation BRAC Impact." Available online: <*http://www.florida-edc.org/defense.htm*>. Accessed 30 May 2008.

EDCOC 2008b — EDCOC. 2008. "Defense Support Initiative (DSI)." Available online: <*http://www.florida-edc.org/defense.htm*>. Accessed 23 October 2008.

EDCOC 2008c — EDOC. 2008. "Tourism in Okaloosa County." Available online: <*http://www.florida-edc.org/Tourism.htm*>. Accessed 5 November 2008.

EDR 2008 — Environmental Data Resources (EDR). 2008. *The EDR Historical Topographic Map Report: Test Stand A-5*. August 2008.

Eglin AFB 1999 — Eglin Air Force Base (AFB). 1999. *Storm Water Pollution Prevention Plan*. Prepared by Pacific Environmental Services, Inc. August 1999.

Eglin AFB 2002 Eglin AFB. 2002. *Integrated Natural Resources Management Plan (INRMP) 2002-2006.* April 2002.

Eglin AFB 2003a Eglin AFB. 2003. *Cultural Resources Management Program (CRMP) Management Procedure.* Air Armament Center (AAC) Procedure P-CRMP-1. June 2003.

Eglin AFB 2003b Eglin AFB. 2003. *Storm Water Management Plan Phases I and II Storm Water Construction and Phase II Municipal Separate Storm Sewer System Program*. March 2003.

Eglin AFB 2004 Eglin AFB. 2004. *Title V Permit*. 16 June 2004.

Eglin AFB 2005a Eglin AFB. 2005. *Santa Rosa Island Final Programmatic Environmental Assessment (PEA).* March 2005.

Eglin AFB 2005b Eglin AFB. 2005. *Santa Rosa Island Programmatic Biological Assessment (BA).* March 2005.

Eglin AFB 2006 Eglin AFB. 2006. *Hazardous Waste Management*. Air Armament Instruction 32-7003. 9 June 2006.

Eglin AFB 2007 Eglin AFB. 2007. *Economic Impact Analysis for Eglin Air Force Base for Fiscal Year 2007.* Eglin AFB Air Armament Center.

Eglin AFB 2008a Eglin AFB. 2008. *Calendar Year 2007 Air Emissions Inventory Report*. March 2008.

Eglin AFB 2008b Eglin AFB. 2008. *Site Visit Trip Report: Environmental Assessment and Environmental Baseline Survey Addressing the Construction of the Emerald Breeze Resort, Santa Rosa Island, Fort Walton Beach, Florida.* Prepared by: engineering-environmental Management (e²M). July 2008.

Eglin AFB 2008c Eglin AFB. 2008. *Draft Environmental Assessment for Construction of the Emerald Coast Technology and Research Campus (ECTRC) at the University of Florida Research Engineering Education Facility (UF-REEF) at Eglin Air Force Base*. March 2008.

Eglin AFB 2008d Eglin AFB. 2008. *Draft Environmental Impact Statement for the Proposed Implementation of the Base Realignment and Closure (BRAC) 2005 Decisions and Related Actions at Eglin AFB, FL.* March 2008.

FDEP 2006a Florida Department of Environmental Protection (FDEP). 2006. "Federal Consistency Intergovernmental Coordination and Review." Last updated 17 April 2008. Available online: <*http://www.dep.state.fl.us/cmp/federal/index.htm*>. Accessed 13 June 2008.

FDEP 2006b — FDEP. 2006. "Water Quality Assessment Report: Choctawhatchee–St. Andrew." Prepared by the Choctawhatchee–St. Andrew Basin Team, FDEP. Available online: <*http://dep.state.fl.us/water/basin411/csa/assessment.htm* >. Accessed 17 June 2008.

FDEP 2007 — FDEP. 2007. "Summary of Wetland and Other Surface Water Regulatory and Proprietary Programs in Florida." Available online: <*http://www.dep.state.fl.us/water/wetlands/docs/erp/overview.pdf*>. Accessed 16 June 2008.

FDEP 2008a — FDEP. 2008. *Preliminary Inventory of Florida Greenhouse Gas Emissions: 1990-2005.* FDEP Division of Air Resource Management. January 2008.

FDEP 2008b — FDEP. 2008. "Okaloosa County Beach Restoration Joint Coastal Permit Application." Available online: <*http://bcs.dep.state.fl.us/env-prmt/okaloosa/pending/0286020_Okoloosa_Island_Beach_Restoration/001-JC/Application/*>. Accessed 31 December 2008.

FDEP 2008c — FDEP. 2008. "Eglin AFB Beach Restoration Joint Coastal Permit Application." Available online: <*http://bcs.dep.state.fl.us/env-prmt/okaloosa/pending/0289154_Eglin_AFB_Beach_Restoration/001-JC/Eglin%20AFB/*>. Accessed 31 December 2008.

FDOT 2002 — Florida Department of Transportation (FDOT). 2002. *Florida Department of Transportation Quality/Level of Service Handbook.* November 2002.

FDOT 2008 — FDOT. 2008. *2007 Florida Traffic Information*. May 2008.

FHWA 1980 — Federal Highway Administration (FHWA). 1980. "Caltrans Noise Manual." March 1980. Available online: <*http://www.dot.ca.gov/hq/research/researchreports/1978-1980/80-07.pdf*>. Accessed 30 October 2008.

FICON 1992 — Federal Interagency Committee on Noise (FICON). 1992. *Federal Agency Review of Selected Airport Noise Analysis Issues*. August 1992.

FLEPPC 2005 — Florida Exotic Pest Plant Council (FLEPPC). 2005. "List of Invasive Species." Available online: <*http://www.fleppc.org/list/05List.htm*>. Accessed 10 November 2008.

FNAI 2001 — Florida Natural Areas Inventory (FNAI). 2001. "Field Guide to the Rare Animals of Florida." Available online: <*http://www.fnai.org/FieldGuide/pdf/Falco_sparverius_paulus.pdf*>. Accessed 20 June 2008.

FNAI 2006 — FNAI. 2006. *Biological Survey of Four Tracts on Eglin AFB*. December 2006.

Gaske 2005 — Gaske, Frederick. 2005. Letter from Mr. Frederick Gaske (State Historic Preservation Officer [SHPO]) in response to 29 November 2005 letter from Ms. Maria D. Rodriguez (Eglin AFB Cultural Resources) concerning cultural resources at Eglin and Survey of X-765. 30 December 2005.

Gulf Power 2008a — Gulf Power. 2008. Email correspondence between Gulf Power News and Ms. Audrey Wessel (e²M) regarding Gulf Power's service area. 16 October 2008.

Gulf Power 2008b — Gulf Power. 2008. "Background." Available online: <*www.gulfpower.com/about/about.asp*>. Accessed 16 October 2008.

Halsey 2008 — Halsey, Cindy. 2008. Email correspondence between Ms. Cindy Halsey (Environmental Services Manager, Okaloosa County Public Works) and Ms. Audrey Wessel (e²M) regarding waste management services on Okaloosa Island. 16 October 2008.

ITE 2003 — Institute of Transportation Engineers (ITE). 2003. *Trip Generation Manual*. 7th Edition. January 2003.

Littrell 2008 — Littrell, Jeff. 2008. Email correspondence between Mr. Jeff Littrell (Director, Okaloosa County Water and Sewer System) and Ms. Audrey Wessel (e²M) regarding water and sewer service on Okaloosa Island. 16 October 2008.

Miller 2008 — Miller, Bob. 2008. Correspondence between Mr. Bob Miller (Endangered Species Biologist, Eglin AFB) and Louise Kelly (e²M) regarding Eglin AFB Natural Resources. 13, 16, and 25 June 2008.

Morrow 2008 — Morrow, Kathy. 2008. Email correspondence between Ms. Kathy Morrow (Director of Communications, CHELCO) and Ms. Audrey Wessel (e²M) regarding CHELCO's service area. 17 October 2008.

NRCS 2008 — Natural Resources Conservation Service (NRCS). 2008. "Web Soil Survey." Available online: <*http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx*>. Accessed 28 October 2008.

NWFWMD 2000 — Northwest Florida Water Management District (NWFWMD). 2000. "Regional Water Supply Plan For Santa Rosa, Okaloosa and Walton Counties, Florida." Available online: <*http://www.nwfwmd.state.fl.us/pubs/r2wsp/rwsp.htm*>. Accessed 16 October 2008.

NWFWMD 2006 — NWFWMD. 2006. "Regional Water Supply Plan for Santa Rosa, Okaloosa and Walton Counties, Water Supply Planning Region II, Plan Update." Approved 26 October 2006. Available online: <*http://www.nwfwmd.state.fl.us/pubs/2006Rwsp/rwspfinal.pdf*>. Accessed 16 October 2008.

NWFWMD 2008 — NWFWMD. 2008. "About the District." Available online: <*http://www.nwfwmd.state.fl.us/aboutdistrict.html*>. Accessed 23 October 2008.

OCWS 2007 — Okaloosa County Water and Sewer Department (OCWS). 2007. "Letter from the Director of OCWS- Arbennie Pritchett Water Reclamation Facility Project, Okaloosa County, Florida." 25 January 2008. Available online: <*http://www.ocwswwtp.com/pdfs/2007-10/ABP_Letter.pdf*>. Accessed 21 October 2008.

OCWS 2008 — OCWS. 2008. "Arbennie Pritchett Water Reclamation Facility Program." Available online: <*http://www.ocwswwtp.com/index.asp*>. Accessed 23 October 2008.

OGS 2008 — Okaloosa Gas District (OGS). 2008. "About Us." Available online: <*http://www.okaloosagas.com/Content.aspx?ContentID=1*>. Accessed 16 October 2008.

Okaloosa County undated a — Okaloosa County. Undated. "Okaloosa County Land Development Code Ordinance 91-1." Chapter 6: Development Design and Implementation Standards. Available online: <*http://www.co.okaloosa.fl.us/doc/chapter%2006.pdf*>. Accessed 6 November 2008.

Okaloosa County undated b — Okaloosa County. Undated. "Tri County Growth Management Plan: Joint Land Use Study." Available online: <*http://webgis.co.okaloosa.fl.us/jlus/index.php/jlus.html*>. Accessed 30 May 2008.

Okaloosa County undated c — Okaloosa County. Undated. "Tri County Growth Management Plan: Eglin Installation Growth Committee (EIGC) Growth Management Planning." Available online: <*http://webgis.co.okaloosa.fl.us/jlus/index.php/growth-management-planning.html*>. Accessed 24 October 2008.

Okaloosa County undated d — Okaloosa County. Undated. "Okaloosa County Geographic Information Systems (GIS) Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Zones Layer." Available online: <*http://webgis.co.okaloosa.fl.us/okaloosagis/viewer.htm*>. Accessed 19 December 2008.

Okaloosa County undated e — Okaloosa County. Undated. "Resources Division – Hazardous Waste." Available online: <*http://www.co.okaloosa.fl.us/dept_pw_resources_recycle_haz.html*>. Accessed 5 November 2008.

Okaloosa County 2003a — Okaloosa County. 2003. "Okaloosa County Comprehensive Plan." Available online: <*http://www.co.okaloosa.fl.us/doc/dept/growth_mgmt/comp_plan/ch2.9_coastal_management.pdf*>. Accessed 3 November 2008.

Okaloosa County 2003b — Okaloosa County. 2003. *Water Supply Facilities Work Plan for Okaloosa County Department of Growth Management*. Department of Growth Management. March 2003.

Okaloosa County 2008a — Okaloosa County. 2008. "Santa Rosa Island Protective Covenants and Restrictions." Available online: <*http://www.co.okaloosa.fl.us/covenants.pdf*>. Accessed 29 December 2008.

Okaloosa County 2008b — Okaloosa County. 2008. "Okaloosa County Water Supply Plan 2008 Update." Available online: <*http://www.co.okaloosa.fl.us/doc/dept/growth_mgmt/planning/water_plan_2008.pdf*>. Department of Growth Management. Accessed 21 October 2008.

Okaloosa County 2008c — Okaloosa County. 2008. "Public Works." Available online: <*http://www.co.okaloosa.fl.us/dept_pw_resources_waste.html*>. Accessed 23 October 2008.

Okaloosa County 2008d — Okaloosa County. 2008. "County Connection, County/Public Works Projects." Available online: <*http://www.co.okaloosa.fl.us/cc_county_works.html*>. Accessed 22 October 2008.

Okaloosa County 2008e — Okaloosa County. 2008. "Okaloosa County Comprehensive Plan." Available online: <*http://www.co.okaloosa.fl.us/dept_growth_mgmt_comp_plans.html*>. Accessed 6 November 2008.

Rodriguez 2005 — Rodriguez, Maria D. 2005. Letter from Ms. Maria D. Rodriguez (Eglin AFB Cultural Resources) to Mr. Frederick Gaske (State Historic Preservation Officer [SHPO]) concerning cultural resources at Eglin AFB and Survey of X-765. 29 November 2005.

Sales et al. 2008 — Claudino-Sales, V., P. Wang, and M. H. Horwitz. 2008. "Factors Controlling the Survival of Coastal Dunes during Multiple Hurricane Impacts in 2004 and 2005: Santa Rosa Barrier Island, Florida." *Geomorphology* 95: 295-315.

SCAQMD 2008 — Southern Coast Air Quality Management District (SCAQMD). 2008. "EMFAC 2007 (v2.3) Emission Factors (On-Road)." Last updated 24 April 2008. Available online: <*http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html*>. Accessed 4 November 2008.

TRB 2000 — Transportation Research Board (TRB). 2000. *Highway Capacity Manual*. January 2000.

U.S. Census Bureau 2008 — U.S. Census Bureau. 2008. "U.S. Census Bureau American Fact Finder." Available online: <*http://factfinder.census.gov/home/saff/main.html?_lang=en*>. Accessed 30 October 2008.

USAF 2008a — U.S. Air Force (USAF). 2008. "Air Force Enhanced Use Lease Program." Secretary of the Air Force, Installations, Environment, and Logistics. Available online: <*http://www.safie.hq.af.mil/afrpa/eul/index.asp*>. Accessed 23 July 2008

USAF 2008b — USAF. 2008. "Questions and Answers, Air Force Enhanced Use Lease Program." Secretary of the Air Force, Installations, Environment, and Logistics. Available online: <*http://www.safie.hq.af.mil/afrpa/eul/faq.asp*>. Accessed 15 December 2008.

USAF 2008c — USAF. 2008. "Emerald Breeze Resort Enhanced Use Lease Development Opportunity Description." Provided on USAF Privatization Real Estate Support Services Website. Prepared by Jones Lang LaSalle. Available online: <*http://adminpress.jllpress.com/Eglin_AFB/eglin_afb_development_opportun.html*>. Accessed 23 July 2008.

USDOT 1984 — U.S. Department of Transportation (USDOT). 1984. *Airport Noise Compatibility Planning: Development of Submission of Airport Operator's Noise Exposure Map and Noise Compatibility Program: Final Rule and Request for Comments.* 14 Code of Federal Regulations (CFR) Parts 11 and 150, Federal Register 49(244). December 1984.

USEPA undated — U.S. Environmental Protection Agency (USEPA). Undated. "Mandatory Class I Areas." Available online: <*http://www.epa.gov/ttn/oarpg/t1/fr_notices/classimp.gif*>. Accessed 5 November 2008.

USEPA 1971 — USEPA. 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* 31 December 1971.

USEPA 1974 — USEPA. 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* Publication No. 550/9-74-004, Washington D.C. March 1974.

USEPA 1996 — USEPA. 1996. "AP-42 Volume I, Stationary Internal Combustion Sources." October 1996. Available online: <*http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf*>. Accessed 10 November 2008.

USEPA 1998 — USEPA. 1998. "AP-42 Volume I, External Combustion Sources." July 1998. Available online: <*http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf*>. Accessed 10 November 2008.

USEPA 2001 — USEPA. 2001. "AirData NET Tier Report." Available online: <*http://www.epa.gov/air/data/geosel.html*>. Accessed 3 November 2008.

USEPA 2007 — USEPA. 2007. "USEPA Map of Radon Zones." Last updated 29 August 2008. Available online: <*http://www.epa.gov/radon/zonemap/florida.htm*>. Accessed 5 November 2008.

USEPA 2008a — USEPA. 2008. "National Ambient Air Quality Standards (NAAQS)." Last updated 20 October 2008. Available online: < *http://www.epa.gov/air/criteria.html*>. Accessed 5 November 2008.

USEPA 2008b — USEPA. 2008. "The Green Book Nonattainment Areas for Criteria Pollutants." Last updated 15 August 2008. Available online: <*http://www.epa.gov/oar/oaqps/greenbk/*>. Accessed 5 November 2008.

USFWS 2005 — U.S. Fish and Wildlife Service (USFWS). 2005. "Eastern Indigo Snake Standard Protection Measures." Available online: <*http://www.fws.gov/northflorida/IndigoSnakes/east-indigo-snake-measures-071299.htm*>. Accessed 13 June 2008.

USGS 2001 — U.S. Geological Survey (USGS). 2001. *National Land Cover Database*.

WM 2008 — Waste Management, Inc. (WM). 2008. "About Waste Management." Available online: <*http://www.wmdisposal.com/about/*>. Accessed 11 June 2008.

THIS PAGE INTENTIONALLY LEFT BLANK

6. List of Preparers

This EA has been prepared by engineering-environmental Management (e²M) under the direction of the Air Force Materiel Command and the 96th Air Base Wing at Eglin AFB. The individuals who contributed to the preparation of this document are listed below.

Louise Baxter
M.P.A. Public Administration
B.S. Political Science
Years of Experience: 7

Shannon Cauley
B.S. Geology
USACE Certified Wetland Delineator
Certified Professional Soil Scientist
Years of Experience: 23

Elaine Dubin
B.S. Earth Science
Years of Experience: 2

Stuart Gottlieb
B.A. Geography
Years of Experience: 6

George Greczmiel
B.A. Economics
Years of Experience: 3

Dan Koenig
B.S. Environmental Policy and Planning
Years of Experience: 3

Ronald E. Lamb, CEP
M.S. Environmental Science
M.A. Political Science/International Economics
B.A. Political Science
Years of Experience: 22

Sean McCain
M.B.A Business Administration
B.S. Forestry and Natural Resources Management
Years of Experience: 14

Michael Moran
PhD Biochemistry
Years of Experience: 23

Cheryl Myers
A.A.S. Nursing
Years of Experience: 20

Tanya Perry
B.S. Environmental Science
B.A. Communications
Years of Experience: 8

Stephen Pyle
B.S. Natural Resource Management
J.D. with Certificate in Environmental Law
Years of Experience: 11

Jennifer Rose
B.S. Geology
Years of Experience: 2

Sarah Smith
B.S. Geography
Years of Experience: 2

Budd Titlow
M.S. Wildlife Ecology and Fisheries Science
B.S. Chemistry
Years of Experience: 35

Chris Vogelsang
Ordonez and Vogelsang, LLC
B.S. Civil Engineering
Years of Experience: 15

Jeffrey Weiler
M.S. Resource Economics/Environmental Management
B.A. Political Science
Years of Experience: 34

Audrey Wessel
M.S. Environmental Science and Policy
B.S. Wildlife Science
Years of Experience: 3

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX A

APPLICABLE LAWS, REGULATIONS, POLICIES, AND PLANNING CRITERIA

Appendix A

Applicable Laws, Regulations, Policies, and Planning Criteria

When considering the affected environment, the various physical, biological, economic, and social environmental factors must be considered. In addition to the National Environmental Policy Act (NEPA), there are other environmental laws as well as Executive Orders (EOs) to be considered when preparing environmental analyses. These laws are summarized below.

NOTE: This is not a complete list of all applicable laws, regulations, policies, and planning criteria potentially applicable to documents, however, it does provide a general summary for use as a reference.

Airspace

Airspace management in the U.S. Air Force (USAF) is guided by Air Force Instruction (AFI) 13-201, *Air Force Airspace Management*. This AFI provides guidance and procedures for developing and processing special use airspace (SUA). It covers aeronautical matters governing the efficient planning, acquisition, use, and management of airspace required to support USAF flight operations. It applies to activities that have operational or administrative responsibility for using airspace and establishes practices to decrease disturbances from flight operations that might cause adverse public reaction and provides flying unit commanders with general guidance for dealing with local problems.

Noise

The Air Installation Compatible Use Zone (AICUZ) Program, (AFI 32-7063), provides guidance to air bases and local communities in planning land uses compatible with airfield operations. The AICUZ program describes existing aircraft noise and flight safety zones on and near USAF installations.

Land Use

Land use planning in the USAF is guided by *Land Use Planning Bulletin, Base Comprehensive Planning* (HQ USAF/LEEVX, August 1, 1986). This document provides for the use of 12 basic land use types found on a USAF installation. In addition, land use guidelines established by the U.S. Department of Housing and Urban Development (HUD) and based on findings of the Federal Interagency Committee on Noise (FICON) are used to recommend acceptable levels of noise exposure for land use.

Air Quality

The Clean Air Act (CAA) of 1970, and Amendments of 1977 and 1990, recognizes that increases in air pollution result in danger to public health and welfare. To protect and enhance the quality of the Nation's air resources, the CAA authorizes the U.S. Environmental Protection Agency (USEPA) to set six National Ambient Air Quality Standards (NAAQSs) which regulate carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter pollution emissions. The CAA seeks to reduce or eliminate the creation of pollutants at their source, and designates this responsibility to state and local governments. States are directed to utilize financial and technical assistance as well as leadership from the Federal government to develop implementation plans to achieve NAAQS. Geographic areas are officially designated by the USEPA as being in attainment or nonattainment to pollutants in relation to their compliance with NAAQS. Geographic regions established for air quality planning purposes are designated as Air Quality Control Regions (AQCR). Pollutant concentration levels are measured at

designated monitoring stations within the AQCR. An area with insufficient monitoring data is designated as unclassifiable. Section 309 of the CAA authorizes USEPA to review and comment on impact statements prepared by other agencies.

An agency should consider what effect an action might have on NAAQS due to short-term increases in air pollution during construction as well as long-term increases resulting from changes in traffic patterns. For actions in attainment areas, a Federal agency could also be subject to USEPA's Prevention of Significant Deterioration (PSD) regulations. These regulations apply to new major stationary sources and modifications to such sources. Although few agency facilities will actually emit pollutants, increases in pollution can result from a change in traffic patterns or volume. Section 118 of the CAA waives Federal immunity from complying with the CAA and states all Federal agencies will comply with all Federal- and state-approved requirements.

The General Conformity Rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS, contribute to an increase in the frequency or severity of violations of NAAQS, or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

The General Conformity Rule applies only to actions in nonattainment or maintenance areas and considers both direct and indirect emissions. The rule applies only to Federal actions that are considered "regionally significant" or where the total emissions from the action meet or exceed the *de minimis* thresholds presented in 40 Code of Federal Regulations (CFR) 93.153. An action is regionally significant when the total nonattainment pollutant emissions exceed 10 percent of the AQCR's total emissions inventory for that nonattainment pollutant. If a Federal action does not meet or exceed the *de minimis* thresholds and is not considered regionally significant, then a full Conformity Determination is not required.

Safety

AFI 91-202, *USAF Mishap Prevention Program*, implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*. It establishes mishap prevention program requirements (including the Bird/Wildlife Aircraft Strike Hazard [BASH] Program), assigns responsibilities for program elements, and contains program management information. This instruction applies to all USAF personnel.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program,* implements AFPD 91-3, *Occupational Safety and Health,* by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet Federal safety and health requirements. This instruction applies to all USAF activities.

Geological Resources

Recognizing that millions of acres per year of prime farmland are lost to development, Congress passed the Farmland Protection Policy Act to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland (7 CFR Part 658). Prime farmland are soils that have a combination of soil and landscape properties that make them highly suitable for cropland, such as high inherent fertility, good water-holding capacity, deep or thick effective rooting zones, and are not subject to periodic flooding. Under the Farmland Protection Policy Act, agencies are encouraged to conserve prime or unique farmlands when alternatives are practicable. Some activities that are not subject

to the Farmland Protection Policy Act include Federal permitting and licensing, projects on land already in urban development or used for water storage, construction for national defense purposes, or construction of new minor secondary structures such as a garage or storage shed.

Water Resources

The Clean Water Act (CWA) of 1977 is an amendment to the Federal Water Pollution Control Act of 1972, is administered by USEPA, and sets the basic structure for regulating discharges of pollutants into U.S. waters. The CWA requires USEPA to establish water quality standards for specified contaminants in surface waters and forbids the discharge of pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits are issued by USEPA or the appropriate state if it has assumed responsibility. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredge and fill material into waters of the United States. Section 404 permits are issued by the U.S. Army Corps of Engineers (USACE). Waters of the United States include interstate and intrastate lakes, rivers, streams, and wetlands that are used for commerce, recreation, industry, sources of fish, and other purposes. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Each agency should consider the impact on water quality from actions such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of pollutants as a result of facility occupation.

Section 303(d) of the CWA requires states and USEPA to identify waters not meeting state water-quality standards and to develop TMDLs. A TMDL is the maximum amount of a pollutant that a waterbody can receive and still be in compliance with state water-quality standards. After determining TMDLs for impaired waters, states are required to identify all point and nonpoint sources of pollution in a watershed that are contributing to the impairment and to develop an implementation plan that will allocate reductions to each source to meet the state standards. The TMDL program is currently the Nation's most comprehensive attempt to restore and improve water quality. The TMDL program does not explicitly require the protection of riparian areas. However, implementation of the TMDL plans typically calls for restoration of riparian areas as one of the required management measures for achieving reductions in nonpoint source pollutant loadings.

The Coastal Zone Management Act (CZMA) of 1972 declares a national policy to preserve, protect, and develop, and, where possible, restore or enhance the resources of the Nation's coastal zone. The coastal zone refers to the coastal waters and the adjacent shorelines including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches, and includes the Great Lakes. The CZMA encourages states to exercise their full authority over the coastal zone, through the development of land and water use programs in cooperation with Federal and local governments. States may apply for grants to help develop and implement management programs to achieve wise use of the land and water resources of the coastal zone. Development projects affecting land or water use or natural resources of a coastal zone, must ensure the project is, to the maximum extent practicable, consistent with the state's coastal zone management program.

The Safe Drinking Water Act (SDWA) of 1974 establishes a Federal program to monitor and increase the safety of all commercially and publicly supplied drinking water. Congress amended the SDWA in 1986, mandating dramatic changes in nationwide safeguards for drinking water and establishing new Federal enforcement responsibility on the part of USEPA. The 1986 amendments to the SDWA require USEPA to establish Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), and Best Available Technology (BAT) treatment techniques for organic, inorganic, radioactive, and microbial contaminants; and turbidity. MCLGs are maximum concentrations below which no negative human health effects are known to exist. The 1996 amendments set current Federal MCLs, MCLGs, and BATs for organic, inorganic, microbiological, and radiological contaminants in public drinking water supplies.

EO 11988, *Floodplain Management* (May 24, 1977), directs agencies to consider alternatives to avoid adverse effects and incompatible development in floodplains. An agency may locate a facility in a floodplain if the head of the agency finds there is no practicable alternative. If it is found there is no practicable alternative, the agency must minimize potential harm to the floodplain, and circulate a notice explaining why the action is to be located in the floodplain prior to taking action. Finally, new construction in a floodplain must apply accepted flood proofing and flood protection to include elevating structures above the base flood level rather than filling in land.

Biological Resources

The Endangered Species Act (ESA) of 1973 establishes a Federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. The ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened and endangered species. All Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of Critical Habitat for these species, unless the agency has been granted an exemption. The Secretary of the Interior, using the best available scientific data, determines which species are officially endangered or threatened, and the U.S. Fish and Wildlife Service (USFWS) maintains the list. A list of Federal endangered species can be obtained from the Endangered Species Division, USFWS (703-358-2171). States might also have their own lists of threatened and endangered species which can be obtained by calling the appropriate State Fish and Wildlife office. Some species, such as the bald eagle, also have laws specifically for their protection (e.g., Bald Eagle Protection Act).

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, implements treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless otherwise permitted by regulations, the MBTA makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. The MBTA also makes it unlawful to ship, transport or carry from one state, territory, or district to another, or through a foreign country, any bird, part, nest, or egg that was captured, killed, taken, shipped, transported, or carried contrary to the laws from where it was obtained; and import from Canada any bird, part, nest, or egg obtained contrary to the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to arrest, with or without a warrant, a person violating the MBTA.

EO 11514, *Protection and Enhancement of Environmental Quality* (March 5, 1970), states that the President, with assistance from the Council on Environmental Quality (CEQ), will lead a national effort to provide leadership in protecting and enhancing the environment for the purpose of sustaining and enriching human life. Federal agencies are directed to meet national environmental goals through their policies, programs, and plans. Agencies should also continually monitor and evaluate their activities to protect and enhance the quality of the environment. Consistent with NEPA, agencies are directed to share information about existing or potential environmental problems with all interested parties, including the public, in order to obtain their views.

EO 11990, *Protection of Wetlands* (May 24, 1977), directs agencies to consider alternatives to avoid adverse effects and incompatible development in wetlands. Federal agencies are to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland. Agencies should use economic and environmental data, agency mission statements, and any other pertinent information when deciding whether or not to build in wetlands. EO 11990 directs each agency to provide for early public review of plans for construction in wetlands.

EO 13186, *Conservation of Migratory Birds* (January 10, 2001), creates a more comprehensive strategy for the conservation of migratory birds by the Federal government. EO 13186 provides a specific framework for the Federal government's compliance with its treaty obligations to Canada, Mexico, Russia, and Japan. EO 13186 provides broad guidelines on conservation responsibilities and requires the development of more detailed guidance in a MOU. EO 13186 will be coordinated and implemented by the USFWS. The MOU will outline how Federal agencies will promote conservation of migratory birds. EO 13186 requires the support of various conservation planning efforts already in progress; incorporation of bird conservation considerations into agency planning, including NEPA analyses; and reporting annually on the level of take of migratory birds.

Cultural Resources

The National Historic Preservation Act (NHPA) of 1966 sets forth national policy to identify and preserve properties of state, local, and national significance. The NHPA establishes the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), and the National Register of Historic Places (NRHP). ACHP advises the President, Congress, and Federal agencies on historic preservation issues. Section 106 of the NHPA directs Federal agencies to take into account effects of their undertakings (actions and authorizations) on properties included in or eligible for the NRHP. Section 110 sets inventory, nomination, protection, and preservation responsibilities for federally owned cultural properties. Section 106 of the act is implemented by regulations of the ACHP, 36 CFR Part 800. Agencies should coordinate studies and documents prepared under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and compliance with one does not constitute compliance with the other. For example, actions which qualify for a categorical exclusion under NEPA might still require Section 106 review under NHPA. It is the responsibility of the agency official to identify properties in the area of potential effects, and whether they are included or eligible for inclusion in the NRHP. Section 110 of the NHPA requires Federal agencies to identify, evaluate, and nominate historic property under agency control to the NRHP.

The Archaeological Resource Protection Act (ARPA) of 1979 protects archaeological resources on public and American Indian lands. It provides felony-level penalties for the unauthorized excavation, removal, damage, alteration, or defacement of any archaeological resource, defined as material remains of past human life or activities which are at least 100 years old. Before archaeological resources are excavated or removed from public lands, the Federal land manager must issue a permit detailing the time, scope, location, and specific purpose of the proposed work. ARPA also fosters the exchange of information about archaeological resources between governmental agencies, the professional archaeological community, and private individuals. ARPA is implemented by regulations found in 43 CFR Part 7.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 establishes rights of American Indian tribes to claim ownership of certain "cultural items," defined as Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, held or controlled by Federal agencies. Cultural items discovered on Federal or tribal lands are, in order of primacy, the property of lineal descendants, if these can be determined, and then the tribe owning the land where the items were discovered or the tribe with the closest cultural affiliation with the items. Discoveries of cultural items on Federal or tribal land must be reported to the appropriate American Indian tribe and the Federal agency with jurisdiction over the land. If the discovery is made as a result of a land use, activity in the area must stop and the items must be protected pending the outcome of consultation with the affiliated tribe.

EO 11593, *Protection and Enhancement of the Cultural Environment* (May 13, 1971), directs the Federal government to provide leadership in the preservation, restoration, and maintenance of the historic and cultural environment. Federal agencies are required to locate and evaluate all Federal sites under their jurisdiction or control which might qualify for listing on the NRHP. Agencies must allow the ACHP to

comment on the alteration, demolition, sale, or transfer of property which is likely to meet the criteria for listing as determined by the Secretary of the Interior in consultation with the SHPO. Agencies must also initiate procedures to maintain federally owned sites listed on the NRHP.

The American Indian Religious Freedom Act of 1978 and Amendments of 1994 recognize that freedom of religion for all people is an inherent right, and traditional American Indian religions are an indispensable and irreplaceable part of Indian life. It also recognized the lack of Federal policy on this issue and made it the policy of the United States to protect and preserve the inherent right of religious freedom for Native Americans. The 1994 Amendments provide clear legal protection for the religious use of peyote cactus as a religious sacrament. Federal agencies are responsible for evaluating their actions and policies to determine if changes should be made to protect and preserve the religious cultural rights and practices of Native Americans. These evaluations must be made in consultation with native traditional religious leaders.

EO 13007, *Indian Sacred Sites* (May 24, 1996), provides that agencies managing Federal lands, to the extent practicable, permitted by law, and not inconsistent with agency functions, shall accommodate American Indian religious practitioners' access to and ceremonial use of American Indian sacred sites, shall avoid adversely affecting the physical integrity of such sites, and shall maintain the confidentiality of such sites. Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

EO 13287, *Preserve America* (March 3, 2003), orders Federal agencies to take a leadership role in protection, enhancement, and contemporary use of historic properties owned by the Federal government, and promote intergovernmental cooperation and partnerships for preservation and use of historic properties. EO 13287 established new accountability for agencies with respect to inventories and stewardship.

Socioeconomics and Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), directs Federal agencies to make achieving environmental justice part of their mission. Agencies must identify and address the adverse human health or environmental effects that its activities have on minority and low-income populations and develop agency wide environmental justice strategies. The strategy must list "programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations, ensure greater public participation, improve research and data collection relating to the health of and environment of minority populations and low-income populations, and identify differential patterns of consumption of natural resources among minority populations and low-income populations." A copy of the strategy and progress reports must be provided to the Federal Working Group on Environmental Justice. Responsibility for compliance with EO 12898 is with each Federal agency.

Hazardous Materials and Waste

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 authorizes USEPA to respond to spills and other releases of hazardous substances to the environment, and authorizes the National Oil and Hazardous Substances Pollution Contingency Plan. CERCLA also provides a Federal "Superfund" to respond to emergencies immediately. Although the "Superfund" provides funds for cleanup of sites where potentially responsible parties cannot be identified, USEPA is

authorized to recover funds through damages collected from responsible parties. This funding process places the economic burden for cleanup on polluters.

The Pollution Prevention Act (PPA) of 1990 encourages manufacturers to avoid the generation of pollution by modifying equipment and processes, redesigning products, substituting raw materials, and making improvements in management techniques, training, and inventory control. Consistent with pollution prevention principles, EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (January 24, 2007 [revoking EO 13148]) sets a goal for all Federal agencies that promotes environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and use of paper of at least 30 percent post-consumer fiber content. In addition, EO 13423 sets a goal that requires Federal agencies to ensure that they reduce the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of, increase diversion of solid waste as appropriate, and maintain cost effective waste prevention and recycling programs in their facilities. Additionally, in *Federal Register* Volume 58 Number 18 (January 29, 1993), CEQ provides guidance to Federal agencies on how to "incorporate pollution prevention principles, techniques, and mechanisms into their planning and decision making processes and to evaluate and report those efforts, as appropriate, in documents pursuant to NEPA."

The Resource Conservation and Recovery Act (RCRA) of 1976 is an amendment to the Solid Waste Disposal Act. RCRA authorizes USEPA to provide for "cradle-to-grave" management of hazardous waste and sets a framework for the management of nonhazardous municipal solid waste. Under RCRA, hazardous waste is controlled from generation to disposal through tracking and permitting systems, and restrictions and controls on the placement of waste on or into the land. Under RCRA, a waste is defined as hazardous if it is ignitable, corrosive, reactive, toxic, or listed by USEPA as being hazardous. With the Hazardous and Solid Waste Amendments (HSWA) of 1984, Congress targeted stricter standards for waste disposal and encouraged pollution prevention by prohibiting the land disposal of particular wastes. The HSWA amendments strengthen control of both hazardous and nonhazardous waste and emphasize the prevention of pollution of groundwater.

The Superfund Amendments and Reauthorization Act (SARA) of 1986 mandates strong clean-up standards and authorizes USEPA to use a variety of incentives to encourage settlements. Title III of SARA authorizes the Emergency Planning and Community Right to Know Act, which requires facility operators with "hazardous substances" or "extremely hazardous substances" to prepare comprehensive emergency plans and to report accidental releases. If a Federal agency acquires a contaminated site, it can be held liable for cleanup as the property owner/operator. A Federal agency can also incur liability if it leases a property, as the courts have found lessees liable as "owners." However, if the agency exercises due diligence by conducting a Phase I Environmental Site Assessment, it can claim the "innocent purchaser" defense under CERCLA. According to Title 42 United States Code (U.S.C.) 9601(35), the current owner/operator must show it undertook "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" before buying the property to use this defense.

The Toxic Substance Control Act (TSCA) of 1976 consists of four titles. Title I established requirements and authorities to identify and control toxic chemical hazards to human health and the environment. TSCA authorized USEPA to gather information on chemical risks, require companies to test chemicals for toxic effects, and regulate chemicals with unreasonable risk. TSCA also singled out polychlorinated biphenyls (PCBs) for regulation, and, as a result, PCBs are being phased out. PCBs are persistent when released into the environment and accumulate in the tissues of living organisms. They have been shown to cause adverse health effects on laboratory animals and could cause adverse health effects in humans. TSCA and its regulations govern the manufacture, processing, distribution, use, marking, storage, disposal, clean-up, and release reporting requirements for numerous chemicals like PCBs. TSCA Title II

provides statutory framework for "Asbestos Hazard Emergency Response," which applies only to schools. TSCA Title III, "Indoor Radon Abatement," states indoor air in buildings of the United States should be as free of radon as the outside ambient air. Federal agencies are required to conduct studies on the extent of radon contamination in buildings they own. TSCA Title IV, "Lead Exposure Reduction," directs Federal agencies to "conduct a comprehensive program to promote safe, effective, and affordable monitoring, detection, and abatement of lead-based paint and other lead exposure hazards." Further, any Federal agency having jurisdiction over a property or facility must comply with all Federal, state, interstate, and local requirements concerning lead-based paint.

APPENDIX B

PUBLIC INVOLVEMENT

Appendix B

Public Involvement

PUBLIC NOTICE

Notice of Availability
Draft Finding of No Significant Impact/ Finding of No Practicable Alternative for the Environmental Assessment Addressing the Emerald Breeze Resort, Santa Rosa Island, Fort Walton Beach, Fla.

In compliance with the National Environmental Policy Act, Eglin Air Force Base announces the availability of a Draft Environmental Assessment, Draft Finding of No Significant Impact and Draft Finding of No Practicable Alternative for the proposed Emerald Breeze Resort on Eglin AFB, Fla., for public review and comment.

The Proposed Action for the Emerald Breeze Resort Environmental Assessment is to enter into a long-term lease with a private developer for the purpose of constructing and operating a resort hotel and conference center on Eglin property at Test Area A-5 on Okaloosa Island that could provide a steady income stream to Eglin AFB. This project would be managed through the Enhanced Use Lease authority. Eglin would stipulate to the developer the need to maintain rooftop space for low-power receivers and passive sensor equipment for continued occasional use of the proposed site for test missions. The resort would be open for use by the general public, and a percentage of rooms will be available at a discounted rate for military and DOD use.

The results of the analysis in the Draft EA indicate that the Proposed Action would not have significant impact on the environment. In addition, as guided by Executive Order (EO) 11990, *Protection of Wetlands,* and EO 11988, *Floodplain Management*, the USAF hereby provides notice of the potential for wetland and floodplain impacts.

Your comments on this Draft EA, Draft FONSI and Draft FONPA are requested. Letters and other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided, including private addresses, will be used only to identify your desire to make a statement during the public comment period or to compile a mailing list to fulfill requests for copies of the Final EA or associated documents. However, only the names and respective comments of respondent individuals will be disclosed: personal home addresses and phone numbers will not be published in the Final EA.

Copies of the Draft EA and Draft FONSI/FONPA are available for review at the Fort Walton Beach Library, the Destin Library, the Crestview Library, and the Navarre Library. Public comments will be accepted through March 12, 2009.

Written comments and inquires on the Draft FONSI/FONPA and Draft EA should

THIS PAGE INTENTIONALLY LEFT BLANK

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Mark E. Stanley
Department of the Air Force
96 CEG/CEVH
501 DeLeon Street, Suite 101
Eglin Air Force Base, Florida 32542-5105

January 30, 2009

RE: DHR Project File Number: 2009-311
Proposed Demolition of Building 8502 (8OK2551) for the Construction of the Emerald Breeze Military Resort Along U.S. Highway 98
Eglin Air Force Base, Okaloosa County

Dear Mr. Stanley:

Our office reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties* and the implementing state regulations.

Based on the information provided and a review of our records, it is the opinion of this office that Building 8502 does not appear to meet the criteria for listing in the *National Register*. Therefore, no historic properties will be affected by this undertaking.

Please forward an archival or digital photograph of Building 8502 for our files. If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick P. Gaske

Frederick P. Gaske, Director, and
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6436
☐ Archaeological Research (850) 245-6444 • FAX: 245-6452
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437

FEB 19 2003

Colonel Michael R. Newberry
Director, Environmental Management
Eglin Air Force Base, Florida
501 DeLeon St., Suite 101
Eglin AFB, FL 32542-5133

REF: Programmatic Agreement for management of historic facilities at Eglin Air Force Base

Dear Colonel Newberry:

Enclosed are two copies of the executed Programmatic Agreement for the referenced program. By carrying out the terms of the Agreement, the Air Force will have fulfilled its responsibilities under Section 106 of the National Historic Preservation Act and the Council's regulations.

We appreciate your cooperation in reaching this Agreement. If you have any questions, please call Dr. Tom McCulloch at 202-606-8554.

Sincerely,

Don L. Klima
Director
Office of Federal Agency Programs

Enclosures

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

PROGRAMMATIC AGREEMENT
BETWEEN
THE AIR ARMAMENT CENTER, EGLIN AIR FORCE BASE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION AND
THE FLORIDA STATE HISTORIC PRESERVATION OFFICER

REGARDING THE PRESERVATION AND PROTECTION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES LOCATED AT EGLIN AIR FORCE BASE, FLORIDA

WHEREAS, the Air Armament Center (AAC), Eglin Air Force Base, Florida, the Florida State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) acknowledge that maintenance, construction, demolition, alteration, and repair of facilities and properties within Eglin AFB have the potential to affect historic properties included, or eligible for inclusion, in the National Register of Historic Places (NRHP);

WHEREAS, Eglin AFB's Cultural Resources Management Plan (CRMP) will establish policies, responsibilities and procedures for the protection of historic and cultural resources within Eglin AFB and reflects the intent of the Department of Defense to provide conscientious stewardship of historic and cultural resources located on properties owned or controlled by the Department of Defense;

WHEREAS, the CRMP will be designed to provide a framework within which historic and cultural resources at Eglin AFB are managed in a manner consistent with federal law and the mission of Eglin AFB and its tenants;

NOW, THEREFORE, the parties agree that undertakings which have the potential to affect historic properties within Eglin AFB shall be carried out in accordance with the CRMP and the following stipulations, in order to satisfy the requirements of Section 106 of the National Historic Preservation Act, 16 U.S.C. 470(f), and the Council's implementing regulation, 36 CFR Part 800, Protection of Historic Properties.

STIPULATIONS

1. PARTICIPANTS IN SECTION 106 PROCESS

AAC will ensure participants identified in 36 CFR Part 800.2(c) are included in the Section 106 consultation process, as appropriate.

2. STANDARDS AND GUIDELINES

AAC will ensure that all undertakings affecting historic properties will conform to *The Secretary's Standards for the Treatment of Historic Properties* (36 CFR Part 68) and applicable guidelines (Standards and Guidelines), incorporated herein by reference.

3. IMPLEMENTATION OF CRMP OBJECTIVES

AAC will implement the CRMP in consultation with the appropriate participants identified in 36 CFR Part 800.2(c).

4. IDENTIFICATION OF HISTORIC PROPERTIES AT EGLIN AFB

A. AAC will prepare a list of historic properties and a Historic Buildings Location Map of Eglin AFB within 60 days of the date of the execution of this Agreement and an Archaeological Sensitivity Map of Eglin AFB within 1 year of the date of execution of this Agreement:

(1) Historic Buildings Location Map. The Historic Buildings Location map will identify:

a. Historic structures included in, or eligible for inclusion in, the NRHP; and

b. Boundaries, or proposed boundaries of historic districts, which may be included in, or eligible for inclusion in, the NRHP.

(2) Archaeological Sensitivity Map. The Archaeological Sensitivity Map will identify:

a. Known archaeological sites included in, or eligible for inclusion in, the NRHP;

b. Areas in which currently unknown archaeological sites may be located which may be eligible for inclusion in the NRHP.

The location of all archaeological sites will remain confidential pursuant to 36 CFR 800.11(c).

B. The list and maps will be reviewed and updated annually by AAC in consultation with the SHPO. For the purpose of this Agreement, historic properties are defined in 36 CFR 800.16 (l) to be "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria. The term eligible for inclusion in the National Register includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria."

5. EXEMPTED ACTIONS

The Base Historic Preservation Officer (BHPO) will serve as the liaison between the SHPO, Council, AAC and all other identified consulting parties. AAC's BHPO will, in consultation with the SHPO, establish a process that will ensure the actions described below are appropriately reviewed by the BHPO prior to any undertaking. When review has been completed by the BHPO, the following actions will be exempt from further consultations:

A. Maintenance, construction, demolition and ground disturbing activities which do not affect historic properties.

B. Maintenance, repair and/or replacement of existing subsurface structures and roads, runways and existing utilities, so long as any ground disturbing activities are performed within previous construction limits as the original work and do not adversely affect archaeological sites.

C. Any emergency work of the following description:

(1) Protection of the human health and/or the environment from damage or harm by hydrocarbon or hazardous materials;

(2) Prevention of imminent damage resulting from the threat of hurricane, tornado or other natural disaster;

(3) Stabilization necessitated by the threat of imminent structural failure (e.g. repair or replacement of building footings); and actions waived from the usual procedures of Section 106 compliance, pursuant to 36 CFR Part 800.12 (d).

D. Interior maintenance or repair performed in accordance with the Standards and Guidelines, which does not adversely affect the character-defining interior features or spaces of an historic property.

E. Routine maintenance of historic properties is defined as follows:

(1) Repainting (provided that surface preparation does not damage, erode or otherwise disfigure historic building materials);

(2) Repair or replacement in kind of less than 5% of total historic materials, finishes and features;

(3) Removal or in-kind replacement of non-historic materials, finishes and features;

(4) Removal of non-original intrusive surface applied elements such as exterior wall-mounted conduits, pipes, wiring and junction boxes;

(5) Replacement or installation of caulking and weather-stripping around windows, doors, walls and roofs;

(6) Repair and replacement in kind of deteriorated or damaged trim, hardware, doors, gutters, porches, steps, roofs or parts of a roof, and window or door screens;

(7) Replacement of glass, which shall in no case alter existing window material or form, and which may allow for the placement of double or triple glazed windowpanes with clear glazing, but shall not allow for the placement of tinted glass (which will require consultation);

(8) Maintenance of historic features such as frames, paneled or decorated jambs or moldings through surface treatments such as cleaning, rust removal, paint removal, and re-application of protective coating systems, which shall not include sandblasting for cleaning surfaces or removing rust or paint;

(9) Repair of historic window and door frames by patching, splicing, consolidating, or otherwise reinforcing or replacing those parts that are either extensively deteriorated or are missing, where the same configuration of panes or door panels will be retained;

F. The installation and maintenance of new security and fire protection equipment and materials, including fire detection systems, fire suppressant systems, security systems and security devices such as dead bolts, door locks, window latches, and door peepholes. (No original security devices will be removed.)

G. Routine landscaping and lawn maintenance or repair that does not adversely affect the exterior appearance or the character defining historic features or spaces of an historic property. Routine landscaping and lawn maintenance or repair includes the following:

(1) Normal mowing, pruning, shearing, watering and feeding;

(2) Limb or whole removal of vegetation, shrubs, or trees determined to be a safety hazard;

(3) Removal and replacement in kind of vegetation; and

(4) Maintenance and replacement in kind of planters, flowerbeds, sidewalks, walkways, fences and freestanding signage.

H. For the purposes of this Agreement, notwithstanding the above, the following types of activities shall not be considered routine maintenance when involving historic materials, finishes, and features of historic properties:

(1) Masonry cleaning and repair;

(2) Replacement of deteriorated materials, finishes and features with elements that do not conform to the Standards and Guidelines;

(3) Application of nontraditional or historically inappropriate masonry coatings, including the painting of previously unpainted historic masonry, masonry consolidants and waterproof/water repellent coatings; and

(4) Replacement of deteriorated materials, finishes and features which comprise more than 5% of the total area of a historic property.

I. For maintenance and repair activities not specifically identified above, consultations with the SHPO will be completed prior to initiating the undertaking.

J. The BHPO has the discretion to determine that a proposed activity, while generally qualifying as a maintenance or repair activity specifically identified above, may nonetheless present unique circumstances which, in the BHPO's discretion, mandate consultation. These unique circumstances may include, but are not limited to, instances where the activity:

(1) Is of greater scope or size than generally anticipated by this Agreement;

(2) Poses a potential for degradation (even though slight) of an already marginal or poor historic property; or

(3) Utilizes nontraditional, unproven technology and or materials.

6. REHABILITATION, LONG-TERM MAINTENANCE AND PRESERVATION OF HISTORIC STRUCTURES

A. Historic properties shall be preserved, maintained and rehabilitated in accordance with the recommended approaches in the Standards and Guidelines. For the purposes of this Agreement, the term "rehabilitation" shall include construction activities commonly referred to as "remodeling" and "renovation."

B. All design and construction documents developed pursuant to this Agreement shall be developed in consultation with the SHPO. Unless agreed to in advance on a project-specific basis, design submission documents prepared pursuant to this Agreement shall be made by AAC and submitted to the SHPO at the completion of the conceptual schematic, advanced schematic, design development and contract document phases of structural maintenance, repair and rehabilitation projects.

C. Rehabilitation of non-historic additions to individual historic properties or to non-contributing structures within historic districts identified in Stipulation 4(A), shall be subject to the provisions of Stipulation 7(A), below.

7. CONSTRUCTION

A. AAC shall ensure that all new construction within an historic district identified in Stipulation 4(A) shall be compatible with the scale, massing, color, and materials of the nearby historic properties and shall be designed in accordance with the recommended approaches to new construction set forth in the Standards and Guidelines. Construction not included within a district that may affect an historic property will be reviewed and forwarded by the base historic preservation officer to the SHPO on a case by case basis.

B. AAC shall ensure that the design of all construction affecting historic properties shall be assessed pursuant to 36 CFR Part 800.5. Unless a project-specific agreement has been reached between the AAC and the SHPO, design submission documents prepared pursuant to this Agreement shall be submitted for review at the completion of the conceptual schematic, advanced schematic, design development and contract document phases of construction projects.

C. If an adverse effect is found, AAC will consult further to resolve the adverse effect pursuant to 36 CFR Part 800.6.

8. DEMOLITION OF HISTORIC PROPERTIES

A. AAC will ensure that AAC or any tenant or host command does not inadvertently cause the demolition of an historic property. AAC will ensure that the following measures are completed prior to approving any actions that could cause the demolition of an historic property:

(1) A consultation package shall be prepared by AAC when an undertaking is proposed that may result in the demolition of an historic property. The consultation package shall document the reason(s) that the responsible command believes preservation of the historic property is not a prudent and feasible alternative to demolition, and shall be submitted to the SHPO for review. The SHPO shall have 30 days from the date of receipt for review.

(2) The consultation package shall include, in addition to measures in stipulation A, the following information:

a. The identification of, and location maps for, all affected historic properties, including clearly delineated boundaries for any affected historic district;

b. An assessment of the effects of the undertaking with regard to historic properties;

c. An analysis of reasonable alternative courses of action considered and the reasons for their rejection; and

d. A description of strategies proposed for mitigating adverse effect(s).

B. If the SHPO determines that AAC has not supported its decision to demolish, AAC (in conjunction with a tenant or host command, if necessary) will consult with the SHPO to develop alternatives to the demolition. The resolution of the adverse effect will continue pursuant to 36 CFR 800.6.

C. If demolition or alteration of historic properties is undertaken, AAC will include, in any Memorandum of Agreement concerning those actions, the stipulation that AAC, in consultation with the SHPO, will, prior to approving the undertaking, identify and, where appropriate, salvage any character-defining historic interior or exterior features of an historic property, when such salvage is reasonable, feasible and prudent.

9. RECORDATION OF HISTORIC PROPERTIES

In accordance with AFI 32-7065 and 32-9004, AAC will consult with the SHPO and the Advisory Council on Historic Preservation prior to the demolition of historic properties to determine whether recordation is necessary, and if so, at what level.

10. TREATMENT OF ARCHAEOLOGICAL PROPERTIES

A. In consultation with the SHPO, the AAC shall develop a program of archaeological survey to locate, inventory, and evaluate archaeological sites and shall establish a procedure for the protection and preservation of sites included in, or eligible for inclusion in, the NRHP.

B. If an undertaking at Eglin AFB will adversely effect an archaeological site, AAC will resolve the adverse effect pursuant to 36 CFR Part 800.6.

C. If historic properties are discovered during implementation of an undertaking, AAC will proceed pursuant to 36 CFR 800.13.

D. AAC shall actively ensure compliance with the Archaeological Resources Protection Act of 1979 (ARPA) and will advise all contract and Air Force personnel and resident dependents against illegal collection of cultural materials and the penalties for such collection imposed by the Act. Appropriate measures will be developed by AAC for the protection of historic properties from looting and vandalism and for protection under ARPA.

11. DISPUTE RESOLUTION

A. Should any of the signatories to this Agreement object within 30 days to any plans or specifications provided for review pursuant to this Agreement, AAC will consult with the objecting party to resolve the objection. If AAC determines that the objection cannot be resolved, AAC will invite the Council to review the relevant documentation pertaining to the issue in dispute. Within 15 days after receipt of all pertinent documentation, the Council will advise the consulting parties as to whether it will comment pursuant to 36 CFR 800.6(a)(1)(iii). Council comment provided in response to such a request will be taken into account by AAC in accordance with 36 CFR Part 800.6(c)(2) with reference to the subject of the dispute. Any recommendation

or comment provided by the Council will be understood to pertain only to the subject of the dispute.

12. PROJECT REVIEW, MONITORING, AND TECHNICAL ASSISTANCE

A. The BHPO shall provide to the SHPO for review, plans, specifications and other proposals for work as required pursuant to the terms of this Agreement. The SHPO shall provide comments to AAC within 30 working days of receipt of complete and sufficient project information delivered to:

Division of Historical Resources
Compliance Review Section
State Historic Preservation Office
R.A. Gray Building, Room 423
500 South Bronough Street
Tallahassee, Florida 32399-0250
(850) 245-6333
Fax (850) 245-6437

B. Documentation sufficient to enable professional evaluation of the proposed undertaking will accompany each review request. Any question regarding the sufficiency of documentation will be resolved through consultation with the SHPO.

C. If the SHPO objects to any element of a plan, specifications, or other proposals for work at Eglin AFB, AAC, in consultation with the SHPO, will consider alternatives to the proposed undertaking. The conclusion of these considerations will be documented in writing by AAC and provided to the SHPO.

D. Should substantial changes be proposed by AAC for plans and specifications previously reviewed by the SHPO, these changes shall be submitted for review and comment pursuant to the terms of the applicable Stipulation of this Agreement.

E. The SHPO shall provide technical assistance, consultation and expert advice when requested to do so by AAC to aid AAC in complying with the terms of this Agreement.

13. PROGRAM REVIEW

A. At the end of each state fiscal year, the SHPO or AAC may request a review of the terms and conditions of the Agreement, which may be amended following consultation between the parties.

B. AAC will provide the SHPO an opportunity to inspect work sites and project files to verify adherence to the stipulations of this Agreement. At the SHPO's request, but at least once per year, AAC shall provide information about, or access to all records concerning, undertakings that affect historic properties within Eglin AFB.

C. The BHPO will submit an annual report to the SHPO and the Council within 60 days of the anniversary of the execution of this Agreement. The report will describe the nature and status of the previous year's undertakings which were covered by the terms of this Agreement and reviewed by the BHPO. The report will describe actions taken to implement the terms of the

Agreement, provide suggestions, if appropriate, for modifying or amending the Agreement, and any recommendations for implementing the Agreement over the coming year.

Execution and implementation of this Programmatic Agreement evidences that the AAC has afforded the Council a reasonable opportunity to comment and that the AAC has taken into account the effects of all undertakings carried out under the terms of this Agreement.

FLORIDA STATE HISTORIC PRESERVATION OFFICER

BY: Janet Snyder Matthews DATE: 7/17/2002

TITLE: State Historic Preservation Officer

THE UNITED STATES AIR FORCE, AIR ARMAMENT CENTER

BY: Robert W Chedister DATE: 11 Aug 02

TITLE: Commander

ADVISORY COUNCIL ON HISTORIC PRESERVATION

BY: [signature] DATE: 2/14/03

(for) TITLE: Executive Director

Table B-1. Public Comments on the Draft Environmental Assessment

Commenter	Comment	Response to Comment
Tona Newland, Destin, Florida	I would like you to know that I think that a beach resort for the military and civilians would be wonderful located at site A-5. My husband, Claude Newland, his friend Lendy Edwards with the Rustic FACS, have organized many Viet Nam reunions in this area. We have also had reunions in Hawaii. There has always been an overwhelming response and preference to have future reunions in Fort Walton Beach on the island with lots of participation from the members, families, and friends. They love the beach, sunset cruises, and seafood. There is also the Gulfarium, and a fishing pier that extends into the Gulf of Mexico nearby.	Comment noted. Thank you for your comment.
Tona Newland, Destin, Florida	**[comment continued from above]** I hope that the plans would include a large room for gatherings in addition to conference rooms. In the past they have met at the Ramada Inn and the Oasis Room near the pool has been particularly popular for gatherings. Please consider something like that in your plans. People just love strolling along the beach. Most of the time there is some military gathering taking place at these beach hotels. We have even had a wedding at one of our reunions. Beach weddings are extremely popular here and the hotel should be prepared for that too. Perhaps a waterfront pavilion on the premises would be nice for such occasions.	Comment noted. Actual design would be at the discretion of the competitively selected Enhanced Use Lease (EUL) developer, with U.S. Air Force oversight.
Tona Newland, Destin, Florida	**[comment continued from above]** I think that a new Beach Resort would be perfect for hosting many military, family, and civic functions. Additionally, there are a lot of people who come to the area TDY or on business. I think that a computer/office area should also be considered with internet capability in the rooms if possible. I would like to see a beach concession food stand as well as a restaurant, beach chairs and umbrellas, restrooms with showers incase someone wants to go to the beach and later have dinner there. A recreational area for the children would be nice along with a gift shop, convenience store and perhaps a beauty shop.	Comment noted. Actual design would be at the discretion of the competitively selected Enhanced Use Lease (EUL) developer, with U.S. Air Force oversight.

Commenter	Comment	Response to Comment
Tona Newland, Destin, Florida	**[comment continued from above]** There is a bus shuttle which stops at the hotels and will take guests to the shopping centers and outlet malls in this area. There are some wonderful air parks and aviation museums to visit in addition to many popular golf courses. There is a picturesque harbor in nearby Destin with a large fishing fleet. There is a Harbor Walk at the foot of the William T. Marler Bridge (Destin Bridge). One can walk or fish from the bridge providing great opportunities for photographs overlooking the East Pass. The nearby bases have great recreational equipment including pontoons boats. On Thursday nights at the Harbor Walk there is a Military Appreciation Night honoring a soldier from one of the local bases which include USO/style entertainment and a fireworks display. (I would like to see a Luau or big shrimp boil. Fine dining set up on the beach at sunset would be nice for special occasions too. The possibilities are unlimited!)	Comment noted. Actual design would be at the discretion of the competitively selected Enhanced Use Lease (EUL) developer, with U.S. Air Force oversight.
Tona Newland, Destin, Florida	**[comment continued from above]** The Emerald Coast Convention Center is nearby if needed for some really large occasion, and it too attracts more guests to the area. The hotel would also be a nice place for people to stay if they have someone rehabilitating at one of the base hospitals. I believe rates could be adjusted for the need.	Comment noted. Thank you for your comment.
Tona Newland, Destin, Florida	**[comment continued from above]** Please have a swimming pool allowing the guests to swim or lounge if the water currents are too strong. I also recommend the use of tile as most of the condos have gone with that for low and easy maintenance. Many beach hotels have converted to condos allowing the guests to have cooking facilities, this is good in that some families prefer to cook rather than dine out encouraging lengthier visits. In the winter we have many "snowbird" or retirees enjoying our area and this would attract many retiree military and civilians for lengthier stays which would keep the occupancy up in the winter. (Be sure to include some shuffle boards and those park size chess games). Contracts could also be made with the airline crews or other businesses as they need rooms daily.	Comment noted. Actual design would be at the discretion of the competitively selected Enhanced Use Lease (EUL) developer, with U.S. Air Force oversight.

Commenter	Comment	Response to Comment
Tona Newland, Destin, Florida	**[comment continued from above]** I am very excited about the new Beach Resort. It would be such an asset to our area. I think it is a definite WIN, WIN!!! I will be waiting with great anticipation of the ground breaking. It will be FANTASTIC!	Comment noted. Thank you for your comment.
David B Rackliff, Gulf Breeze, Florida	Eglin Air Force Base proposes to enter into along-term "Enhanced Use Lease" (EUL) agreement with a private developer to establish a 250-unit resort on a 17.1 acre Gulf front property on Okaloosa Island (aka Santa Rosa Island). The subject documents consider various environmental and other effects predicted to result from this lease and find the proposal to be acceptable from each standpoint.	Comment noted. Thank you for your comment.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** These documents contain lengthy discussions of land use issues and regulatory compliance, but nowhere are we able to find clear acknowledgment of this important fact: the site is within the Gulf Islands National Seashore (GUIS), and surplus or unneeded federal land on Santa Rosa / Okaloosa Island is to be transferred to the Department of the Interior to be administered by the National Park Service in the event that it is no longer needed to fulfill a military function.	Thank you for your comment. The Gulf Island National Seashore legislation, 16 United States Code (U.S.C) section 459h-6 does state that any land that the Department of Defense (DOD) declares excess on Santa Rosa Island will revert to the Department of Interior (DOI) as part of the Gulf Island National Seashore. The proposed development site, test site A-5, is not and will not be declared excess due to the current and planned use of the site to meet range monitoring requirements of Eglin missions. The development of the site as an EUL will maintain, and may even enhance, the mission capability of the site while providing the Air Force with fair market value for the property. Through arrangements such as this, the Air Force is demonstrating good stewardship of its property for the US taxpayers by fully utilizing said property to the fullest extent possible. Text clarifying this fact was added to the EA in Section 2.3.1.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** Only in a short section refuting the option of selling rather than leasing the parcel (2.4.3.1) is this situation referenced obliquely: "Instead of constructing the proposed Emerald Breeze Resort under the EUL program as discussed in Section 2.3, the option of selling the proposed site outright to a developer or transferring ownership to another Federal agency was raised. Eglin AFB does not have the authority to sell property or transfer ownership."	Comment noted. As a public document, the Environmental Assessment should explain all options available, or explain why certain options are not available.

Commenter	Comment	Response to Comment
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** The EA attempts to justify this proposal as necessary to offset "unexpected strains on [U.S. Air Force] resources, including budget shortfalls, rising fuel prices, the costs of fighting the global war on terror, and restrictions on retiring weapon systems," and "Due to its prime beachfront and resort area location, the proposed site has been identified by the Air Force Real Property Agency as an underutilized U.S. Air Force (USAF) property with significant income potential that could benefit Eglin AFB." (1.1) The Department of Defense receives a vastly greater share of the federal budget than any other government sector, so this explanation rings hollow, to understate the matter.	Comment noted.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** Still more troubling, especially in combination with the above, is the very real potential for this argument to support similar "public-private partnerships" to develop other Eglin land on Santa Rosa / Okaloosa Island. According to the EA, the USAF is "transforming itself" to generate funding through "innovative business practices, such as EUL." (1.1) We do not agree that transformation of the USAF into a real estate concern is in the public interest.	Eglin AFB is not considering the development of other Eglin land on Santa Rosa island because it would interfere with important mission activities. Executive Order 13327 (February 4, 2004) declares that it is Federal Government policy to promote the efficient and economical use of Federal real property resources in accordance with their value as national assets and in the best interests of the Nation. One authority for enabling this policy is the EUL authority contained in the Military Leasing Act. The U.S. Air Force, Army, Navy and Veterans Administration are all actively supporting EUL opportunities as one means to satisfy the policy in Executive Order 13327 and return value to the American Warfighter.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** In evaluating another location for the resort development, the EA's makes a interesting distinction: "To the east and west of the strip of development on Santa Rosa Island is land owned by Eglin AFB (see Figure 1-1), which is undeveloped at the moment and there are no current plans for development. Further along Santa Rosa Island is the Gulf Islands National Seashore Park, which would not be developed." (2.4.3.2 and 4.1.1) Obviously, the Eglin wording is much more tentative.	Comment noted. Other Eglin AFB property on Santa Rosa Island is not suitable for development because development would interfere with critical mission functions.

Commenter	Comment	Response to Comment
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** Leasing of Eglin land to the east and west of this parcel for development is not discussed under Cumulative Effects (4.1), but why should we not suspect that it will soon be proposed? Like the subject parcel, this land is highly valuable beachfront in a popular tourist destination; it is underutilized; and the USAF considers itself in urgent need of funds.	Comment noted. Other Eglin AFB property on Santa Rosa Island is not suitable for development because development would interfere with critical mission operations. Therefore, leasing of other Eglin AFB land to the east or west is not discussed under Cumulative Effects as this is not a viable option and does not meet the "reasonably foreseeable" threshold in the Council on Environmental Quality (CEQ) regulations implementing NEPA at 40 C.F.R. part 1508.7.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** There are some troubling direct impacts to be expected from this proposal: negative effects on sea turtles, a difficult and possibly dangerous vehicle exit onto Highway 98 West, damage to (or destruction of) dunes severely eroded by recent hurricanes, increased demand on scarce potable water supplies, and the essentially absurdity of intense development on a barrier island.	Eglin AFB is in consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act regarding the potential effect of the proposed action on sensitive species. The Biological Assessment (see **Appendix H**) contains Best Management Practices (BMPs) that the developer would need to implement in order to avoid negative effects on sensitive species, including sea turtles. Regarding sea turtles specifically, the Biological Assessment states construction activities would occur at a minimum of 200 feet north of the mean high water line, therefore construction activities would occur well above the average sea turtle nest. The developer would also need to implement specific sea turtle BMPs specified by USFWS. Traffic impacts have been analyzed by an independent traffic engineer and recommendations are made within the EA regarding this issue. Highway connections would be under permit from Florida Department of Transportation after all appropriate studies are performed. Regarding dunes, as stated in the EA, if construction were to alter the dunes, the developer would be required to submit a dune restoration plan to Okaloosa County and subsequently restore the dunes. Therefore, if the dunes are restored from their current hurricane-eroded condition to a pre-hurricane state, there could be a net positive impact on dunes. According to the analysis, water supply would be sufficient to accommodate the proposed development. With respect to development of the barrier island, the proposed site is already highly degraded through past military development and use, and is flanked on each side by development similar to and compatible with the proposed project.

Commenter	Comment	Response to Comment
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** However, our strongest objection to the proposal is that it could serve as a precedent to ignore or deny the conditions set forth in the establishing legislation for Gulf Islands National Seashore, enabling leasing of additional property as a means of evading the requirement that GUIS be given first refusal for any underutilized Eglin land on Santa Rosa / Okaloosa Island. It may be that the National Park Service would decline to accept a transfer of this isolated parcel, but this entire process has been invalidated by the USAF's failure to make that offer.	As stated in the comment response above, only Federal property on Santa Rosa Island that is deemed "in excess" would be transferred to the DOI. Since the proposed site is not in excess, an offer to transfer the land to the DOI is not required. The proposed site is not, and will not be declared excess because it is critical to ongoing Eglin AFB range missions. The Proposed Action, if implemented, would enhance the range test mission capability.
David B Rackliff, Gulf Breeze, Florida	**[comment continued from above]** For now, we urge selection of the "No Action" alternative. If the process is to be subsequently revisited, the first priority is to give GUIS, NPS and DOI the opportunity to claim this land. Thank you for the opportunity to comment for the record.	Comment noted. Thank you for your comment.
Vince Bruner, Fort Walton Beach, Florida	Let me be the first to say that despite all of the hours and all the struggles and all the risks, I love that hotel and the hotel business. That business, along with my law practice, has supported me and my family and helped put kids through college. Let me also say, that the military business that we have had with local service members related to missions at Eglin Air Force Base and Hurlburt Field have been invaluable. We would not have survived without the contribution from this sector to our overall gross revenue.	Comment noted.
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** Also, please understand that we have in the past and will continue to offer a significant discount for all military personnel whether they are on or off assignment for our hotel. I believe this is the case for all other hotels located on the island. That is just one of the reasons why your proposal to build the Emerald Breeze Resort doesn't make sense to me.	Comment noted.

Commenter	Comment	Response to Comment
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** The second reason, the Emerald Breeze Resort doesn't make sense, is because the intersection at Santa Rosa Boulevard and U.S. 98 is already very crowded. The extra traffic generated by a facility of this magnitude at the foot of this intersection might make it completely unworkable. I have long feared that some of the proposals to rework the intersection might come to fruition and seriously interfere with access to Santa Rosa Boulevard, which is the lifeline for our hotel. It is much better to be located on Highway 98, as your hotel would be, along with the Sheraton Four Points and the Ramada Inn. Currently, we still have a simple right turn on and left turn off situation for most of the traffic coming to our hotel from the intersection of Highway 98 and Santa Rosa Boulevard. Every revision of the intersection ever put forth makes this a much more complicated drive and I believe it would or could very nearly drive us out of business. Your resort would almost certainly require the intersection to be overhauled.	Entrance requirements for the state highway system are set by Florida Department of Transportation (FDOT). A connection to the state highway system requires a Driveway Connection Permit and, in some cases, a Drainage Connection Permit. Any new intersections require a traffic signal warrant study under FDOT and design under FDOT and National Transportation Safety Board standards. An independent impact assessment was performed by a skilled traffic engineer to determine the level of potential impact to the surrounding transportation system including the Highway 98/Santa Rosa Blvd. Intersection. This assessment determined that there would be no significant adverse effects to the Highway 98/Santa Rosa Blvd. intersection due to the proposed action. Any changes to this intersection in the future are not required for the operations of the proposed action and would be determined independently of the proposed action by the FDOT and local authorities.
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** The third reason that the Emerald Breeze Resort by Eglin, doesn't make sense, is because even thought the site may be considered "non-essential" to Eglin's mission today, no one knows what the future may hold. In fact, much of the air force land which is oceanfront between Navarre Beach and Destin might likewise be considered "non-essential". So could much of the land at Tyndall Air Force Base in Panama City. But we don't know what the future will hold for sure, especially with narco terrorism in Central and South America and the crime epidemic that is part of the drug traffic in these areas. Hostile Latin American governments, oil and gas exploration and the energy independence are all looking issues that may make our southern coast "essential" for our country's future well being and protection.	As discussed in Section 1.2 of the Draft EA, the proposed site was identified as underutilized, not "non-essential" or "excess." The proposed site is essential to the ongoing Eglin AFB range and test missions in that it is currently used for Eglin test missions, and these activities would continue if the proposed resort were to be constructed. The Eglin test missions would benefit from the height of the resort; these benefits would include a wider range and increased signal clarity. Text clarifying this fact was added to Section 2.3.1.

Commenter	Comment	Response to Comment
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** The fourth, and final, reason why the Emerald Breeze Resort does not make sense is because, this is America. The U.S. military may have set a bad precedent by having a similar resort in Orlando, or in some other resort community, but that doesn't make it right. And this is not a BX open only to military personnel. Our country is founded upon freedom, the freedom to compete fairly in an open market on a level playing field. Our government should be set up to foster the environment for its private citizens to get an education, gain a skill, find a job, start a business, make a living, raise a family and pay a fair tax for the government to provide for certain essential services, including providing for the common defense of our nation.	The U.S. Air Force is required to competitively procure a private developer that will be responsible for constructing and operating the proposed facilities in accordance with market conditions. All qualified developers are encouraged to compete in the selection process for EUL proposals.
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** But, it was never set up to encourage our government to go into business against its citizenry. It just wouldn't be fair. We pay some of the highest property taxes in the nation in Florida, and many of us have for years. Has Eglin paid these taxes in the past or would they in the future? Thanks to citizens like me, who have paid their taxes, Eglin already owns their land free and clear. Will they pay mortgage interest, as I do? Will they have trouble finding a mortgage lender when the term of their loan expires, as I likely will in today's market? What "overhead" will you experience, compared to mine? And there are a number of other taxes that I have had to pay and will have to pay in the future that Eglin never has and never will, as the owner of the property. How can I compete?	The U.S. Air Force plays no role in financing EUL proposals or in assisting the selected developer in securing financing. EUL financing is the responsibility of the private developers, who are subject to market conditions. Under the EUL program, the developer would be required to pay bed tax, ad valorem property taxes on improvements, retail sales tax, and personal tangible property tax. Therefore, the proposed EUL project has the potential to increase the Okaloosa County tax base from property that currently generates not tax revenue.

Commenter	Comment	Response to Comment
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** Putting large chunks of gulf front back "onto the market" at this point in our region's development is unfair to large numbers of property owners in the region who have invested based upon the scarcity of ocean front property in the panhandle. I would venture to say that this parcel was a "non-essential" in the early 1960's, when there was virtually no significant gulf front development, as it is today. In other words, it is way too late in the game to start unloading your ocean front property in a market that is largely overdeveloped already. Everyone will be asking, what will Eglin do next and whose business will be affected by that decision. How will it affect traffic, congestion, and quality of life? No one will know.	Eglin AFB is not interested in a larger program of putting large chunks of gulf front back "onto the market." However, the U.S. Air Force is responsible for management and stewardship of its real property assets in accordance with Executive Order 13327 (February 4, 2004), which declares that it is Federal Government policy to promote the efficient and economical use of Federal real property resources in accordance with their value as national assets and in the best interests of the Nation.
Vince Bruner, Fort Walton Beach, Florida	**[comment continued from above]** I would therefore, respectfully, request you consider my object to this proposal.	Comment noted. Thank you for your comment.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX C

PHOTO DOCUMENTATION OF THE PROPOSED SITE



Figure C-1. Center of Proposed Site Viewing North to U.S. Highway 98



Figure C-2. Center of Proposed Site Viewing Northwest at Adjacent Commercial Development



Figure C-3. Center of Proposed Site Viewing South Towards Gulf of Mexico (beyond dunes)



Figure C-4. Center of Proposed Site Viewing East towards Sheraton Hotel Resort



Figure C-5. Center of Proposed Site Viewing Southwest towards Waterscape Resort and Gulf of Mexico



Figure C-6. West Side of Building 8502 in Middle of Proposed Site



Figure C-7. Antennae Structure in Middle of Proposed Site



Figure C-8. East Side of Building 8502 Viewing North to U.S. Highway 98



Figure C-9. East Side of Building 8502 Viewing West towards Waterscape Resort



Figure C-10. North Side of Building 8502 Viewing South towards Gulf of Mexico



Figure C-11. Wetlands on West Side of Access Road – Waterscape Resort in Background



Figure C-12. Wetlands on East Side of Access Road – Sheraton Resort in Background



Figure C-13. Vegetated Dunes Viewing Northeast from Gulf of Mexico towards Proposed Site



Figure C-14. View from Sand Dunes on Proposed Site, Viewing Gulf of Mexico and Beachfront Activity



Figure C-15. View from Sand Dunes on Proposed Site Looking North to U.S. Highway 98 – Roof of Building 9502 Can Be Seen at Top of Vegetation



Figure C-16. View from Sand Dunes on Proposed Site Looking Northwest



Figure C-17. Beach at Proposed Site Viewing Northwest – Waterscape Resort Can Be Seen Along with Beach Development Continuing West



Figure C-18. View from Sand Dunes on Proposed Site Viewing East towards Sheraton Resort

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX D

CALCULATIONS TO SUPPORT THE NOISE IMPACT ANALYSES

Appendix D

Calculations to Support the Noise Impact Analyses

Distance Calculations

dB2=dB1-10*(a)LOG(R2/R1)
a=conventional drop-off rate coefficient, 2.0 for point source, no ground or atmospheric absorption
R1= distance of 50 feet
R2= distance to source

Average noise level from grading, paving, and building construction = 88.7 dB

Persons accessing the condominium resort complex directly to the west, and the Four Points Sheraton Resort directly to the east. The complex and Sheraton resort are approximately 100 feet from construction activities.
dB2=dB1-10*(2)LOG(100/50)

= 82.7 dB

Persons accessing the Emerald Coast Conference Center, approximately 450 feet northeast of construction.
dB2=dB1-10*(2)LOG(450/50)

= 69.6 dB

Persons accessing the "Gulfarium", approximately 600 feet east of construction.
dB2=dB1-10*(2)LOG(600/50)

= 67.1 dB

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX E

CALCULATIONS TO SUPPORT THE AIR QUALITY IMPACT ANALYSES

Summary	Summarizes total emissions by calendar year.
Combustion	Estimates emissions from non-road equipment exhaust as well as painting.
Fugitive	Estimates fine particulate emissions from earthmoving, vehicle traffic, and windblown dust
Grading	Estimates the number of days of site preparation, to be used for estimating heavy equipment exhaust and earthmoving dust emissions
Stationary Sources	Estimates emissions from diesel-powered generators for back-up power and natural gas boilers for heating and operation of laundry facilities.
Commuter Emissions	Estimates emissions from patron vehicle operations.
AQCR Tier Report	Summarizes total emissions for the Mohave-Yuma Intrastate AQCR Tier Reports for 2001, to be used to compare project to regional emissions.

Air Quality Emissions from Proposed Action

		NO_x (ton)	VOC (ton)	CO (ton)	SO_2 (ton)	PM_{10} (ton)	$PM_{2.5}$ (ton)	CO_2 (ton)
CY2010	Construction Combustion	6.416	1.135	2.776	0.431	0.447	0.434	733.305
	Construction Fugitive Dust	-	-	-	-	17.364	1.246	-
	TOTAL CY2010	***6.416***	***1.135***	***2.776***	***0.431***	***17.811***	***1.680***	***733.305***

Note: Total CY2010 $PM_{10}/_{2.5}$ fugitive dust emissions are assuming USEPA 50% control efficiencies.

		NO_x (ton)	VOC (ton)	CO (ton)	SO_2 (ton)	PM_{10} (ton)	$PM_{2.5}$ (ton)	CO_2 (ton)
CY2011 and Beyond	Commuter Emissions	49.940	6.303	46.226	0.0540	1.803	1.557	5,727.264
	Stationary Source Emissions	7.297	0.567	2.242	0.4157	0.519	0.491	1,519.673
	TOTAL CY2011 and Beyond	***57.237***	***6.870***	***48.468***	***0.470***	***2.322***	***2.048***	***7,246.937***

Since future year budgets were not readily available, actual 2001 air emissions inventories for the counties were used as an approximation of the regional inventory. Because the Proposed Action is several orders of magnitude below significance, the conclusion would be the same, regardless of whether future year budget data set were used.

Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate Air Quality Control Region

	Point and Area Sources Combined					
Year	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2001	393,759	312,507	1,842,768	384,684	336,547	137,698

Source: USEPA-AirData NET Tier Report (http://www.epa.gov/air/data/geosel.html). Site visited on 3 November 2008.

Determination Significance (Significance Threshold = 10%)

CY2010

	Point and Area Sources Combined					
	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Regional Emissions	393,759	312,507	1,842,768	384,684	336,547	137,698
CY2010 Emissions	6.4158	1.1348	2.7761	0.4310	17.8113	1.680
CY2010 %	**0.0016%**	**0.0004%**	**0.0002%**	**0.0001%**	**0.0053%**	**0.0012%**

Determination Significance (Significance Threshold = 10%)

CY2011 and Beyond

	Point and Area Sources Combined					
	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Regional Emissions	393,759	312,507	1,842,768	384,684	336,547	137,698
CY2011 and Beyond Emissions	57.2370	6.8701	48.4684	0.4697	2.3221	2.0478
CY2009 %	**0.0145%**	**0.0022%**	**0.0026%**	**0.00012%**	**0.0007%**	**0.0015%**

Combustion Emissions

Combustion Emissions of VOC, NO_x, SO_2, CO, $PM_{2.5}$, $PM_{10,}$ and CO_2 due to Construction

Includes:
Assumption: Constuction corridor for access road improvements is 19.09 miles long by 60 feet wide.
Assumption: Constuction corridor for new access road construction is 9.56 miles long by 60 feet wide.
Assumption: Construction corridor for vehicle fence and new access road is 9.04 miles long by 60 feet wide.

100% of Construct Lodging, lobby, and Conference Facility	522,720 ft^2	3.00	acres
100% of Construct Restaurant/Bar	43,560 ft^2	1.00	acres
100% of Construct Gift Shop	4,356 ft^2	0.10	acres
100% of Construct Water Park	21,780 ft^2	0.50	acres
100% of Construct Swimming Pool	21,780 ft^2	0.50	acres
100% of Construct Parking Lots	130,680 ft^2	3.00	acres
100% of Construct Sidewalks, Pathways, and Courtyards	21,780 ft^2	0.50	acres
100% Demolish Building	1,040 ft^2	0.02	acres
100% Demolish Existing Parking Lot and Foundations	43,560 ft^2	1.00	acres

Total Building Construction Area:	635,976 ft^2
Total Demolished Area:	44,600 ft^2
Total Paved Area:	130,680 ft^2
Total Disturbed Area:	374,616 ft^2
Construction Duration:	1 year
Annual Construction Activity:	260 days/yr

Emission Factors Used for Construction Equipment

References: Guide to Air Quality Assessment, SMAQMD, 2004; and U.S. EPA NONROAD Emissions Model, Version 2005.0.0
Emission factors are taken from the NONROAD model and were provided to e²M by Larry Landman of the Air Quality and Modeling Center (Landman.Larry@epamail.epa.gov) on 12/14/07. Factors provided are for the weighted average US fleet for CY2007.
Assumptions regarding the type and number of equipment are from SMAQMD Table 3-1 unless otherwise noted.

Grading

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Bulldozer	1	13.60	0.96	5.50	1.02	0.89	0.87	1456.90
Motor Grader	1	9.69	0.73	3.20	0.80	0.66	0.64	1141.65
Water Truck	1	18.36	0.89	7.00	1.64	1.00	0.97	2342.98
Total per 10 acres of activity	3	41.64	2.58	15.71	0.83	2.55	2.47	4941.53

a) The SMAQMD 2004 guidance suggests a default equipment fleet for each activity, assuming 10 acres of that activity, (e.g., 10 acres of grading, 10 acres of paving, etc.). The default equipment fleet is increased for each 10 acre increment in the size of the construction project. That is, a 26 acre project would round to 30 acres and the fleet size would be three times the default fleet for a 10 acre project.
b) The SMAQMD 2004 reference lists emission factors for reactive organic gas (ROG). For the purposes of this worksheet ROG = VOC. The NONROAD model contains emissions factors for total HC and for VOC. The factors used here are the VOC factors.
c) The NONROAD emission factors assume that the average fuel burned in nonroad trucks is 1100 ppm sulfur. Trucks that would be used for the Proposed Actions will all be fueled by highway grade diesel fuel which cannot exceed 500 ppm sulfur. These estimates therefore over-estimate SO2 emissions by more than a factor of two.
d) Typical equipment fleet for building construction was not itemized in SMAQMD 2004 guidance. The equipment list above was assumed based on SMAQMD 1994 guidance.

PROJECT-SPECIFIC EMISSION FACTOR SUMMARY

Source	Equipment Multiplier*	Project-Specific Emission Factors (lb/day)						
		NO_x	VOC	CO	SO_2**	PM_{10}	$PM_{2.5}$	CO_2
Grading Equipment	1	41.641	2.577	15.710	0.833	2.546	2.469	4941.526

*The equipment multiplier is an integer that represents units of 10 acres for purposes of estimating the number of equipment required for the project.

**Emission factor is from the evaporation of solvents during painting, per "Air Quality Thresholds of Significance", SMAQMD, 1994

Example: SMAQMD Emission Factor for Grading Equipment NOx = (Total Grading NOx per 10 acre)*(Equipment Multiplier)

Summary of Input Parameters

	Total Area (ft^2)	Total Area (acres)	Total Days	
Grading:	374,616	8.60	5	(from "CY2010 Grading" worksheet)

Total Project Emissions by Activity (lbs)

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Grading Equipment	208.21	12.88	78.55	4.16	12.73	12.35	24,708
Total Emissions (lbs):	**12,831.59**	**2,269.61**	**5,552.15**	**862.02**	**894.56**	**867.73**	**1,466,610**

Results: Total Project Annual Emission Rates

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Total Project Emissions (lbs)	12,831.59	2,269.61	5,552.15	862.02	894.56	867.73	1,466,610
Total Project Emissions (tons)	6.4158	1.1348	2.7761	0.4310	0.4473	0.4339	733.3049

Construction Fugitive Dust Emissions

Construction Fugitive Dust Emission Factors

	Emission Factor	Units	Source
General Construction Activities	0.19	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.42	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006
$PM_{2.5}$ Emissions			
$PM_{2.5}$ Multiplier	0.10	(10% of PM_{10} emissions assumed to be $PM_{2.5}$)	EPA 2001; EPA 2006
Control Efficiency	0.50	(assume 50% control efficiency for PM_{10} and $PM_{2.5}$ emissions)	EPA 2001; EPA 2006

Project Assumptions

New Road Construction (0.42 ton PM_{10}/acre-month)

Duration of Construction Project	12	months
Area	3	acres

Construction Activities (0.19 ton PM_{10}/acre-month)

Duration of Construction Project	12	months
Area	8.6	acres

	Project Emissions (tons/year)			
	PM_{10} uncontrolled	**PM_{10} controlled**	**$PM_{2.5}$ uncontrolled**	**$PM_{2.5}$ controlled**
New Road Construction	15.12	7.56	1.51	0.76
Construction Activities	19.61	9.80	0.98	0.49
Total	**34.73**	**17.36**	**2.49**	**1.25**

Construction Fugitive Dust Emission Factors

General Construction Activities Emission Factor

0.19 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM_{10}/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM_{10}/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM_{10}/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM_{10}/acre-month) and 75% of the average emission factor (0.11 ton PM_{10}/acre-month). The 0.19 ton PM_{10}/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM_{10}/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particulate (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District as well as the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas.

New Road Construction Emission Factor

0.42 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

$PM_{2.5}$ Multiplier **0.10**

$PM_{2.5}$ emissions are estimated by applying a particle size multiplier of 0.10 to PM_{10} emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM_{10} and $PM_{2.5}$ **0.50**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas (EPA 2006). Wetting controls will be applied during project construction.

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999.* EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants.* Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1).* Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

Grading Schedule

Estimate of time required to grade a specified area.

Input Parameters

Construction area: 8.60 acres/yr (from Combustion Worksheet)

Qty Equipment: 3.00 (calculated based on 3 pieces of equipment for every 10 acres)

Assumptions.

Terrain is mostly flat.
An average of 6" soil is excavated from one half of the site and backfilled to the other half of the site; no soil is hauled off-site or borrowed.
200 hp bulldozers are used for site clearing.
300 hp bulldozers are used for stripping, excavation, and backfill.
Vibratory drum rollers are used for compacting.
Stripping, Excavation, Backfill and Compaction require an average of two passes each.
Excavation and Backfill are assumed to involve only half of the site.

Calculation of days required for one piece of equipment to grade the specified area.

Reference: Means Heavy Construction Cost Data, 19th Ed., R. S. Means, 2005.

Means Line No.	Operation	Description	Output	Units	Acres per equip-day)	equip-days per acre	Acres/yr (project-specific)	Equip-days per year
2230 200 0550	Site Clearing	Dozer & rake, medium brush	8	acre/day	8	0.13	8.60	1.08
2230 500 0300	Stripping	Topsoil & stockpiling, adverse soil	1,650	cu. yd/day	2.05	0.49	8.60	4.20
2315 432 5220	Excavation	Bulk, open site, common earth, 150' haul	800	cu. yd/day	0.99	1.01	4.30	4.34
2315 120 5220	Backfill	Structural, common earth, 150' haul	1,950	cu. yd/day	2.42	0.41	4.30	1.78
2315 310 5020	Compaction	Vibrating roller, 6 " lifts, 3 passes	2,300	cu. yd/day	2.85	0.35	8.60	3.02
TOTAL								14.41

Calculation of days required for the indicated pieces of equipment to grade the designated acreage.

(Equip)(day)/yr: 14.41
Qty Equipment: 3.00
Grading days/yr: 4.80

Emissions from Diesel Powered Generators and Boilers

Diesel Powered Generator Emission Factors

NO_x	4.41	lb/MMBtu
VOC	0.36	lb/MMBtu
CO	0.95	lb/MMBtu
SO_x	0.29	lb/MMBtu
PM_{10}	0.31	lb/MMBtu
$PM_{2.5}$	0.29	lb/MMBtu
CO_2	164	lb/MMBtu

Note: Generators horsepower output capacity is only 0.363 percent efficient (AP-42 Chapter 3.3).
Source: USEPA AP-42 Volume I, Stationary Internal Combustion Sources, Table 3.3-1 (http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf)
As per Appendix A of SCAQMD's "Final Methodology to Calculate PM2.5 and PM2.5 Significance Thresholds" (October 2006), the PM2.5/PM10 fraction for gasoline combustion is assumed to be 0.920 for off-road diesel equipment.

Emissions from Generators

The Proposed Action would require six diesel powered generators to power construction equipment. These generators would operate approximately 8 hours per day for 60 working days.

Number of Generators	2	
Maximum Hours of Operation	300	hrs/yr
Total Generator Capacity	670.5	hp
Hourly Rate	4.7040	MMBtu/hr
Annual Use	2,822	MMBtu/yr

Example: 1hp=0.002546966 MMBtu/Hr
Hourly Rate (MMBtu) = (7670.5 Hp/0.363)*(0.002546699 MMBtu/hr) = 4.7040 MMBtu/hr
Annual Use (MMBtu) = (Number of Generators * Maximum Hours of Operation * Hourly Rate) = (2*300*4.7040) = 2,822 MMBtu/yr

Emissions (Diesel)

NO_x	6.223	tpy
VOC	0.508	tpy
CO	1.341	tpy
SO_x	0.409	tpy
PM_{10}	0.437	tpy
$PM_{2.5}$	0.409	tpy
CO_2	231.438	tpy

Example: Total NOx Emissions = (Annual MMBtu/year*(EF)/2000 = (2,822*4.41)/2000 = 6.223 tpy

Hourly Emissions per Natural Gas Boilers at Emerald Breeze Resort

2 Number of Natural Gas Boilers
1,250,000 Btu/hr natural gas boiler

Criteria Pollutants	AP-42 Emission Factor[1] (lb/MM cu ft)	Heating Value[2] (Btu/cu ft)	Hourly Emissions[3] (lb/hr)
Carbon Monoxide	84.0	1020	0.103
Nitrogen Oxides	100.0	1020	0.123
Particulate Matter	7.6	1020	0.0093
Particulate Matter <10mm[4]	7.6	1020	0.0093
Particulate Matter <2.5mm[4]	7.6	1020	0.0093
Sulfur Oxides	0.6	1020	0.00074
Volatile Organic Compounds	5.5	1020	0.0067
Carbon Dioxide	120000	1020	147.059

[1] Emission factors from AP-42 Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion and Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion for Small Boilers (<100 MM Btu/hr) (July 1998).

[2] Heating Value (HV) from AP-42 Section 1.4 Natural Gas Combustion (July 1998).

[3] The following equation was used to calculate hourly emissions for each pollutant:
Hourly emissions (lb/hr) = Boiler Size (Btu/hr) * EF (lb/MM cu ft) * 1/HV (Btu/cu ft) / 1000000

where: EF = Emission Factor

[4] Particulate matter <10mm and particulate matter <2.5mm are subsets of particulate matter.

Potential Annual Emissions from Natrual Gas Boilers

Criteria Pollutants	Hourly Emissions (lb/hr)	Maximum Operating Hours per Year[1]	Annual Emissions[2] (ton/yr)
Carbon Monoxide	0.103	8,760	0.90
Nitrogen Oxides	0.123	8,760	1.07
Particulate Matter	0.0093	8,760	0.08
Particulate Matter <10mm[3]	0.0093	8,760	0.08
Particulate Matter <2.5mm[3]	0.0093	8,760	0.08
Sulfur Oxides	0.00074	8,760	0.01
Volatile Organic Compounds	0.0067	8,760	0.06
Carbon Dioxide	147.0588	8,760	1,288.24

[1] The boiler operates 24 hours per day, 7 days per week, 52 weeks per year.

[2] The following equation was used to calculate annual emissions for each pollutant:
Annual emissions (ton/yr) = Hourly emissions (lb/hr) * 8760 (hr/yr) / 2000 (lb/ton)

[3] Particulate matter <10mm and particulate matter <2.5mm are subsets of particulate matter.

Commuter Vehicle Emissions

An average hotel employees 0.9 employees/room: 250 x 0.9 = 225 employees
Average room occupancy is 83%: 250 x 0.83 = 208 occupied rooms on average
An occupied room generates the following trips:
Weekday Daily: 8.92 trips/occ room x 208 occ rooms = 1,855 weekday daily trips
Weekday AM Peak Hour: 0.67 trips/occ room x 208 occ rooms = 139 weekday AM Peak Hour trips
Weekday PM Peak Hour: 0.70 trips/occ room x 208 occ rooms = 146 weekday PM Peak Hour trips
Saturday Daily: 10.5 trips/occ room x 208 occ rooms = 2,184 weekday daily trips
Saturday busiest hour for Hotel: 0.87 trips/occ room x 208 occ rooms = 181 Saturday busiest hour for hotel trips

Workers: Employees that work at the proposed EBR complex are assumed to live within the MPPCSMI AQCR, so there would be no net increase in criteria pollutants from workers.

Patrons: average daily travel (round-trip) would be 20 miles = (1,855*20)+(2,184*20) = 80,780 miles/week or 11,540 miles per average day.

Project Assumptions:

208 patron vehicles per day
11,540 average miles traveled by patron vehicles per day, round trip
365 days per year
>8,500 Largest class of maintenance vehicle used

Annual Vehicle Miles Traveled (VMT): **4,212,100 miles/year**
Vehicle Year: 2008

Emissions Factors (in pounds/mile)						
NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
2.37E-02	2.99E-03	2.19E-02	2.56E-05	8.56E-04	7.39E-04	2.72E+00

Source: South Coast Air Quality Management District. EMFAC 2007 (ver 2.3) On-Road Emissions Factors. Last updated November 9, 2007. Available online: <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>. Accessed January 23, 2008.

Note: Assumed that ROG = VOC, for purposes of analysis.

Estimated Air Pollutant Emissions Associated with Commuter Vehicles (2011 and beyond):

Proposed Emissions (in tons per year)						
NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
49.940	6.303	46.226	0.0540	1.803	1.557	5,727.264

Emissions in tons/year = (Vehicle miles/year) * (Emissions Factor in pounds/mile) * (1 ton/2000 pounds)

Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate Air Quality Control Region

			Area Source Emissions						Point Source Emissions					
Row #	State	County	CO	NOx	PM10	PM2.5	SO2	VOC	CO	NOx	PM10	PM2.5	SO2	VOC
1	FL	Bay Co	82,289	5,639	7,930	4,430	696	10,557	5,372	9,243	2,079	1,688	22,045	2,186
2	FL	Calhoun Co	34,573	1,269	4,816	2,934	222	2,136	0	0	0	0	0	0
3	FL	Escambia Co	128,513	12,034	11,470	4,420	1,072	29,592	3,765	17,496	18,102	13,174	45,739	1,284
4	FL	Gulf Co	37,409	1,258	4,258	2,858	219	3,596	19.5	92.5	63.6	55.1	1.33	45.3
5	FL	Holmes Co	27,497	1,840	3,840	2,011	185	1,908	0	0	0	0	0	0
6	FL	Jackson Co	55,251	4,566	8,799	3,739	379	4,997	134	1,114	464	269	2,686	269
7	FL	Okaloosa Co	100,247	7,073	8,927	4,830	671	11,110	48,490	1,406	5,304	5,303	15.4	8,384
8	FL	Santa Rosa Co	96,750	6,851	12,547	6,032	592	10,874	937	5,561	408	371	3,581	541
9	FL	Walton Co	82,106	4,669	8,934	5,423	493	6,543	39.9	21.1	1.84	0.55	11.8	20.4
10	FL	Washington Co	41,631	2,487	4,685	2,888	268	2,910	142	850	1.43	1.43	7.64	41.5
11	AL	Baldwin Co	91,250	9,428	17,122	4,406	1,572	14,377	192	167	53.4	40	120	315
12	AL	Escambia Co	24,564	3,262	5,355	1,322	623	2,909	14,280	2,522	954	782	25,268	1,601
13	AL	Mobile Co	150,652	31,184	17,921	4,487	9,938	28,781	16,848	38,951	5,992	4,878	82,121	9,754
1	MS	Adams Co	15,729	3,781	4,517	1,236	537	3,201	267	1,165	1,364	988	1,464	1,994
2	MS	Amite Co	7,959	885	2,780	685	57.7	891	653	78.6	409	317	3.9	611
3	MS	Claiborne Co	7,474	3,076	2,463	716	500	1,133	245	75.4	205	154	11.4	245
4	MS	Clarke Co	12,603	1,884	2,736	705	111	1,523	979	1,371	122	108	2,385	733
5	MS	Copiah Co	15,654	2,021	3,459	840	97.4	1,951	161	177	526	334	107	500
6	MS	Covington Co	7,609	1,023	2,880	645	56.2	1,248	315	1,599	114	59.1	90.8	533
7	MS	Forrest Co	29,340	3,468	4,048	1,025	180	4,888	1,043	2,483	560	365	278	1,407
8	MS	Franklin Co	5,650	516	1,853	526	32	583	175	34.9	286	218	0.85	398
9	MS	George Co	8,417	1,020	2,935	684	51	1,078	11.8	13.6	6.72	1.69	42.2	8.26
10	MS	Greene Co	7,624	825	2,117	587	52.7	758	91.6	68.6	325	231	103	214
11	MS	Hancock Co	22,601	2,610	4,108	1,174	139	3,445	1,963	4,329	132	91.1	72.7	284
12	MS	Harrison Co	76,081	8,508	9,166	2,473	585	14,392	765	17,790	2,596	1,988	38,886	2,117
13	MS	Hinds Co	96,982	11,603	11,022	2,363	616	18,162	1,176	2,893	1,132	696	328	1,450
14	MS	Jackson Co	60,283	13,920	8,178	2,504	1,504	23,362	7,092	21,504	3,837	3,149	40,997	2,483
15	MS	Jasper Co	11,753	1,582	3,127	769	78.8	1,336	681	2,142	141	119	4.18	566
16	MS	Jefferson Co	5,850	2,893	2,170	654	493	751	948	3,422	11.1	8.76	0.02	204
17	MS	Jefferson Davis Co	6,585	764	2,451	528	37.4	1,006	102	1,345	0	0	0	63
18	MS	Jones Co	30,728	3,917	7,142	1,614	179	4,941	2,515	13,913	1,447	1,173	246	1,715
19	MS	Lamar Co	18,469	2,469	4,345	1,015	116	2,187	282	6,307	786	508	9,060	109
20	MS	Lauderdale Co	39,653	4,707	6,017	1,435	225	6,088	87.1	250	479	288	11.6	1,427
21	MS	Lawrence Co	6,892	817	2,426	571	46.6	904	16.4	23.8	1,204	1,030	3,822	192
22	MS	Lincoln Co	17,724	2,428	4,185	985	131	2,275	35.8	51.9	314	196	0.16	121
23	MS	Madison Co	31,905	3,937	8,459	1,966	189	4,824	71.9	11.8	76.6	61.4	0.41	439
24	MS	Marion Co	11,114	1,288	3,615	818	67.1	1,663	291	168	384	257	95.4	747
25	MS	Newton Co	12,471	1,731	3,086	717	76.7	1,840	510	63.1	245	173	2.38	408
26	MS	Pearl River Co	25,785	3,174	5,601	1,375	149	3,242	99.9	66.1	186	87.8	106	373
27	MS	Perry Co	7,175	855	2,115	564	53.1	753	5,705	3,401	1,279	1,161	5,980	603
28	MS	Pike Co	20,253	2,742	4,746	1,044	133	3,029	2,892	655	1,564	1,375	290	1,035
29	MS	Rankin Co	51,804	5,699	10,385	2,592	296	6,590	1,851	1,297	985	772	26,577	833
30	MS	Scott Co	16,420	2,334	3,332	787	111	1,993	190	210	440	266	161	626
31	MS	Simpson Co	10,820	1,403	3,778	867	77.6	1,521	3.5	3.3	92.4	40.1	26.7	2.6
32	MS	Smith Co	6,320	685	2,821	663	41.9	819	1,004	300	765	564	20.8	1,375
33	MS	Stone Co	6,108	672	1,642	434	45.4	772	3,410	238	1,122	865	36	272
34	MS	Walthall Co	7,028	875	2,814	612	49.9	955	291	956	124	94.8	3.89	180

Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate Air Quality Control Region

			Area Source Emissions						Point Source Emissions					
Row #	State	County	CO	NOx	PM10	PM2.5	SO2	VOC	CO	NOx	PM10	PM2.5	SO2	VOC
35	MS	Warren Co	23,929	7,633	5,916	1,522	1,002	4,630	2,026	24,067	5,180	4,046	45,688	1,690
36	MS	Wayne Co	10,396	1,201	2,833	745	81.1	1,556	1,998	385	487	376	556	618
37	MS	Wilkinson Co	6,619	2,964	2,225	675	501	909	61.2	6.8	99.7	79.6	0.34	0.99
Grand Total			1,712,539	203,470	274,097	88,895	25,630	261,489	130,229	190,289	62,450	48,803	359,054	51,018

SOURCE:
http://www.epa.gov/air/data/geosel.html
USEPA - AirData NET Tier Report
*Net Air pollution sources (area and point) in tons per year (2001)
Site visited on 3 November 2008.

Mobile (Alabama)-Pensacola-Panama City (Florida)-Southern Mississippi Interstate AQCR (40 CFR 81.68)

APPENDIX F

COASTAL ZONE MANAGEMENT ACT CONSISTENCY COORDINATION

Appendix F

Coastal Zone Management Act Consistency Coordination

Introduction

This document provides the State of Florida with the U.S. Air Force's Consistency Determination under CZMA Section 307 and 15 C.F.R. Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 C.F.R. Section 930.39 and Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, as amended, and its implementing regulations at 15 C.F.R. Part 930.

This determination addresses the Proposed Action for design and construction of the Emerald Breeze Resort, Florida (**Figure 1**).

Proposed Federal Agency Action:

Eglin AFB proposes to enter into a long-term lease of Eglin real property under Enhanced Use Lease (EUL) authority for the purpose of constructing and operating a resort hotel and conference center that could provide a steady income stream to Eglin AFB. Under the Proposed Action, the USAF would enter into a long-term EUL with a private developer chosen through a competitive selection process, with the intent that the developer construct and operate the resort.

The Proposed Action consists of constructing a resort complex consisting of hotel facilities (e.g., parking, lodging, lobby, and conference areas), restaurants, bars, swimming pools, and light retail. The resort complex would be similar in size and facilities to resorts along U.S. Highway 98. Although the EUL developer could propose more or fewer guest rooms in the resort, the Proposed Action assumes 250 guest rooms. The existing Test Site A-5 facility, asphalt driveway and parking lots, foundations, and utility infrastructure would be demolished to make space for proposed development.

The proposed resort complex would be constructed by private developers. The developers would be required to integrate green design wherever feasible through the use of energy- and water-efficient building techniques and equipment, the use of recycled materials, and the avoidance or enhancement of existing environmental features of the proposed site. Examples might include low-impact design stormwater collection and treatment structures that integrate into the landscape and recycle water back to groundwater; finding uses for recycled water such as fountains or irrigation systems; installing native landscape or xeric landscape design features; maintaining the maximum amount of open space feasible; and, where feasible, use of solar or other alternative energy sources and use of green building design principles.

Parking would be constructed on the outer perimeters of the resort complex in compliance with Okaloosa County Development Design and Implementation Standards (Okaloosa County undated a). Section 6.04.02 specifies that hotels shall provide one parking space per hotel room plus one parking space per three employees present onsite during the busiest shift. It is estimated that this will result in approximately 300 parking spaces being required. In addition to the area taken up by resort facilities and parking, approximately 0.5 acres, would be used for sidewalks, pathways, courtyards, walking zones, and other elements required to tie the resort complex together. The balance of the 17.1-acre site would be used for landscaping or open green space, and beach access. The estimated areas for individual components of the proposed resort are presented in **Table 1**.

Table 1. Emerald Breeze Resort Assumptions

Resort Facilities and Infrastructure	Size (Acres)
Lodging, Lobby, and Conference Facilities	3.0
Restaurants/Bars	1.0
Gift Shop	0.1
Water Park	0.5
Swimming Pools	0.5
Parking Lots	3.0
Sidewalks, Pathways, and Courtyards	0.5
Landscaping and Open Space	5.0
Open Beach Area	3.5
Total	**17.1**

A portion of the roof will be made available for Eglin AFB range instrumentation with dedicated offices for range personnel and equipment. The USAF would require this instrumentation, offices, and equipment to maintain its Test Site A-5 mission. Most of the rooms at the resort will be for public use with a select number of room blocks dedicated for DOD and USAF personnel. All utilities will originate from city and county infrastructure availability.

Federal Review

Statutes addressed as part of the Florida Coastal Zone Management Program consistency review and considered in the analysis of the Proposed Action are discussed in the following table.

Pursuant to 15 C.F.R. § 930.41, the Florida State Clearinghouse has 60 days from receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension, in writing, under 15 C.F.R. § 930.41(b). Florida's concurrence will be presumed if Eglin AFB does not receive its response on the 60th day from receipt of this determination.

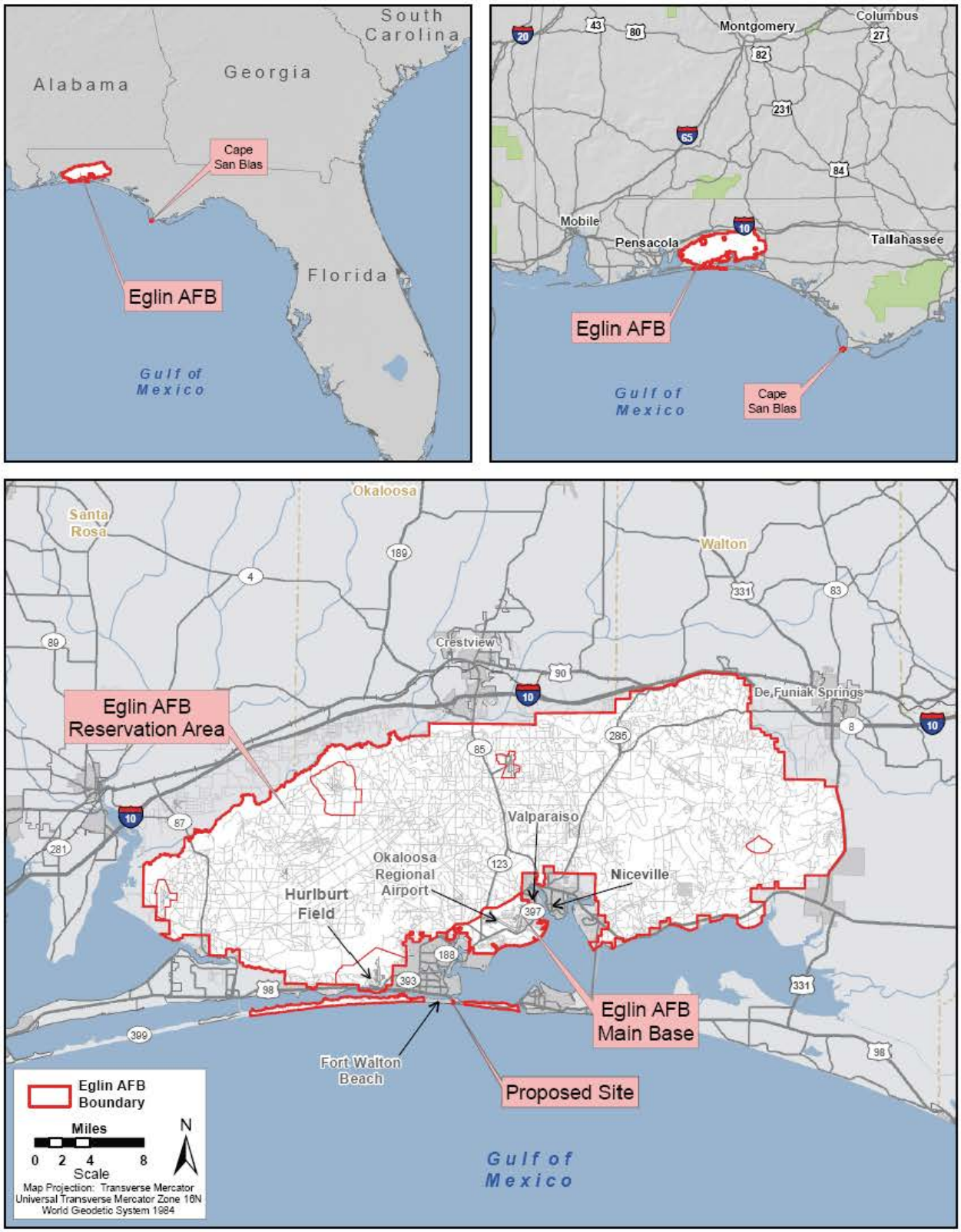


Figure 1. Regional Location of Eglin Air Force Base



Figure 2. Proposed Site of the Emerald Breeze Resort

Florida Coastal Management Program Consistency Review

Statute	Consistency	Scope
Chapter 161 *Beach and Shore Preservation*	The Proposed Action would not affect beach and shore management, specifically as it pertains to: • The Coastal Construction Permit Program. • The Coastal Construction Control Line (CCCL) Permit Program. • The Coastal Zone Protection Program.	Authorizes the Bureau of Beaches and Coastal Systems within DEP to regulate construction on or seaward of the states' beaches.
Chapter 163, Part II *Growth Policy; County and Municipal Planning; Land Development Regulation*	The Proposed Action would not affect local government comprehensive plans.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 *State and Regional Planning*	Construction of the proposed project would be anticipated to have no adverse effects on the surrounding transportation system. The full occupancy of the proposed resort would be expected to have no significant adverse effects on traffic operations in the vicinity of the site. State and regional agencies will be provided the opportunity to review the EA. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding state plans for water use, land development or transportation.	Details state-level planning requirements. Requires the development of special statewide plans governing water use, land development, and transportation.
Chapter 252 *Emergency Management*	The Proposed Action would not affect the state's vulnerability to natural disasters. The Proposed Action would not affect emergency response and evacuation procedures.	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and manmade disasters.
Chapter 253 *State Lands*	Should the proposal for the resort include structures in the ocean, such as a pier, jetty, or similar type of structure, the Proposed Action would occur on federal property as well as sovereign submerged lands. If this occurs, a Joint Coastal Permit would be obtained prior to any potential impact to state submerged land. Eglin's	Addresses the state's administration of public lands and property of this state and provides direction regarding the acquisition, disposal, and management of all state lands.

	Water Resources Section, 96th CEG/CEVCE, would coordinate all applicable permits in accordance with the Florida Administrative Code (FAC). Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding state land.	
Chapter 258 *State Parks and Preserves*	The Proposed Action would not affect state parks, recreational areas and aquatic preserves.	Addresses administration and management of state parks and preserves (Chapter 258).
Chapter 259 *Land Acquisition for Conservation or Recreation*	The Proposed Action would not affect tourism and/or outdoor recreation.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands (Chapter 259).
Chapter 260 *Recreational Trails System*	The Proposed Action would not include the acquisition of land and would not affect the Greenways and Trails Program.	Authorizes acquisition of land to create a recreational trails system and to facilitate management of the system (Chapter 260).
Chapter 375 *Multipurpose Outdoor Recreation; Land Acquisition, Management, and Conservation*	The Proposed Action would not affect opportunities for recreation on state lands.	Develops comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate need for additional recreational opportunities, and propose means to meet the identified needs (Chapter 375).
Chapter 267 *Historical Resources*	The Proposed Action would not affect cultural resources of the state. However, in the event that additional archaeological resources are inadvertently discovered during construction, 96th CEG/CEVH, Cultural Resources Branch would be notified immediately and further ground-disturbing activities would cease in that area. Identified resources would be managed in compliance with Federal law and Air Force regulations.	Addresses management and preservation of the state's archaeological and historical resources.
Chapter 288 *Commercial Development and Capital Improvements*	The Proposed Action would not affect future business opportunities on state lands, or the promotion of tourism in the region.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 *Transportation Administration*	Construction of the proposed project would be anticipated to have no adverse effects on the surrounding transportation system. The full occupancy of the proposed resort would be expected to have no significant adverse effects on traffic operations in the	Addresses the state's policy concerning transportation administration (Chapter 334).

	vicinity of the site. Therefore, the Proposed Action would not affect transportation.	
Chapter 339 *Transportation Finance and Planning*	The Proposed Action would not affect the finance and planning needs of the state's transportation system.	Addresses the finance and planning needs of the state's transportation system (Chapter 339).
Chapter 370 *Saltwater Fisheries*	The Proposed Action would not affect saltwater fisheries.	Addresses management and protection of the state's saltwater fisheries.
Chapter 372 *Wildlife*	Eglin is conducting an Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) to address potential impacts to federally listed species. In discussions with the USFWS, Eglin NRS has determined that the Proposed Action is "Not Likely to Adversely Affect" these species if the following conditions are met: 1) All lighting in the facility and parking areas be kept to a minimum and lights must be sea turtle friendly; 2) boardwalks would be considered to preserve existing and future dune systems; 3) Existing dune systems and vegetation remain untouched to the greatest extent possible; 4) Predator control measures would be implemented (i.e. predator proof trash cans); and 5) the USFWS would be part of the design process for site layout and construction of the facility. Therefore, the Proposed Action would be consistent with the State's policies concerning wildlife resource management.	Addresses the management of the wildlife resources of the state.
Chapter 373 *Water Resources*	The Proposed Action may require an Environmental Resource Permit (ERP) from the Northwest Florida Water Management District (NWFWMD). Eglin's Water Resources Section, 96th CEG/CEVCE, would coordinate all applicable permits in accordance with the Florida Administrative Code (FAC). The Proposed Action would increase the potential for impact from the increased rate and volume of stormwater runoff, due to an increase in impervious surface area. Best Management Practices such as erosion and sediment controls and stormwater management measures would be implemented to control erosion and stormwater runoff.	Addresses the state's policy concerning water resources.

	Applicable permitting requirements would be satisfied in accordance with 62-346 of the FAC and National Pollutant Discharge Elimination System (NPDES). Eglin AFB would submit a notice of intent to use the generic permit for stormwater discharge under the NPDES program prior to project initiation according to Section 403.0885, Florida Statutes (FS). All potential impacts to water resources from construction activities are further addressed in Chapter 3, Section 6.3 of the EA. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the water resources of the state.	
Chapter 376 *Pollutant Discharge Prevention and Removal*	Any construction area larger than one acre would require a NPDES General Permit under 40 CFR 122.26(b) (14) (x). A stormwater pollution prevention plan would also be required under the NPDES permit before beginning construction activities. Asbestos debris may be generated as a result of proposed building demolition activities. Proper disposal of asbestos wastes would be conducted as directed by the National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61.40–157]. Contractor personnel would be trained and certified. Lead-based paint debris may be generated as a result of proposed building demolition activities. Proper disposal of lead-containing wastes would also be conducted in accordance with state and federal regulations, including the Toxic Substances Control Act of 1976 (TSCA) and Occupational Safety and Health Administration (OSHA). Potential impacts from hazardous materials and waste are further addressed in Chapter 3, Section 11.3 of the EA. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding the transfer, storage, or transportation of pollutants.	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.
Chapter 377 *Energy Resources*	Coordination with all utility providers prior to demolition or construction would	Addresses regulation, planning, and development of oil and gas resources of

	minimize any potential impacts to existing utility infrastructure associated with disruption of buried utility lines. Areas with existing utilities would provide tie-ins for new lines, and new utility infrastructure would be coordinated with utility providers. There would be no adverse impact to electricity or natural gas utility infrastructure associated with the implementation of the Proposed Action. Impacts from the increase/decrease in utilities are further addressed in Chapter 3, Section 10.3 of the EA. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding energy resources of the state.	the state.
Chapter 380 *Land and Water Management*	The Proposed Action would not affect development of state lands with regional (i.e. more than one county) impacts. The Proposed Action would not use state funds for infrastructure planning, designing or construction.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 *Public Health, General Provisions*	The Proposed Action would not affect public health.	Establishes public policy concerning the state's public health system.
Chapter 388 *Mosquito Control*	The Proposed Action would not affect mosquito control efforts.	Addresses mosquito control effort in the state.
Chapter 403 *Environmental Control*	Eglin's Water Resources Section, 96th CEG/CEVCE, would coordinate all applicable permits in accordance with the Florida Administrative Code (FAC). The Proposed Action may require an Environmental Resource Permit (ERP) from the Northwest Florida Water Management District (NWFWMD). All potential impacts to water resources from construction activities are further addressed in Chapter 3, Section 6.3 of the EA. Eglin AFB would take reasonable precautions to minimize fugitive particulate (dust) emissions during any demolition, construction, or renovation activities in accordance with FAC 62-296. Issuance of an air construction permit from FDEP would be required prior to beginning the proposed construction activities (F.A.C. 62-210.300). All potential impacts to air quality from construction activities are further	Establishes public policy concerning environmental control in the state.

	addressed in Chapter 3, Section 3.3 of the EA. Coordination of contractors with all local county and private landfill operators prior to construction would minimize any potential impacts associated with disposal of demolition or construction debris. Solid waste is further addressed in Chapter 3, Section 10.3 of the EA. Therefore, the Proposed Action would be consistent with Florida's statutes and regulations regarding water quality, air quality, pollution control, solid waste management, or other environmental control efforts.	
Chapter 582 *Soil and Water Conservation*	All applicable Best Management Practices (BMPs) may include temporary sediment basins, sediment fencing, revegetation for ground stabilization, or stormwater management measures would be implemented to minimize erosion and storm water run-off, and to regulate sediment control. Therefore, the Proposed Action should not affect soil and water conservation efforts.	Provides for the control and prevention of soil erosion.

Florida Department of
Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

March 23, 2009

Mr. Michael Spaits
Department of the Air Force
96 CEG/CEV
501 DeLeon Street, Suite 101
Eglin AFB, FL 32542-5133

RE: Department of the Air Force - Draft Environmental Assessment Addressing the Proposed Emerald Breeze Resort Enhanced Use Lease Project on Santa Rosa Island, Eglin Air Force Base - Fort Walton Beach, Okaloosa County, Florida.
SAI # FL200901234558C

Dear Mr. Spaits:

The Florida State Clearinghouse has coordinated a review of the Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; Section 403.061(40), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended.

The Northwest Florida Water Management District (NWFWMD) staff recognizes that the proposed use is sited on a parcel that is altered and is isolated from other more ecologically intact U.S. Air Force barrier island parcels. The site and encompassing area, however, are subject to a number of resource constraints and concerns, including: a Water Resource Caution Area subject to a regional water supply plan; nearby Surface Water Improvement and Management program priority waters of the NWFWMD; Gulf Islands National Seashore, designated Outstanding Florida Waters; FEMA Special Flood Hazard Area; coastal dune and scrub habitat with listed species; and the potential adverse effects of further intensive development of the barrier island. Given these resource constraints, staff recommends that the site be designated for less intensive and rehabilitative uses, such as conservation and restoration with recreational access. Suitable management could be from Gulf Islands National Seashore or a local parks and recreation program. The NWFWMD advises that the site plan should incorporate and demonstrate low impact development practices irrespective of the ultimate use. Please refer to the enclosed NWFWMD memorandum for further details.

The Florida Department of Environmental Protection's (DEP) Northwest District office in Pensacola advises that, in addition to addressing the NWFWMD's concerns, the proposed project will require permitting for both potable water and domestic wastewater lines. If the connection size exceeds 12 inches, permitting will fall under the authority of the DEP. Please contact Mr. John Pope at (850) 595-8300, ext. 1145 regarding potable water permitting questions and Mr. Bill Evans at ext. 1153 for questions regarding domestic wastewater permitting.

The DEP also advises that, depending on when permit applications are submitted for review, unavoidable impacts to isolated wetlands may also require permits. House Bill 7163 called for the creation and implementation of the Environmental Resource Permitting (ERP) program for the geographic area of the NWFWMD. It did so with the requirement that the program be implemented in two phases. Phase I, stormwater regulations, was implemented on October 1, 2007. Phase II, dredge and fill regulations, is tentatively scheduled for implementation in July of 2009. Please contact the NWFWMD's Environmental Resource Permitting Office in Crestview at (850) 683-5044 prior to permit submission to determine rule status and appropriate permitting authority.

The Florida Fish and Wildlife Conservation Commission (FWC) advises that five state-listed shorebird species are known to inhabit beaches in the vicinity of the project site. In order to avoid a wildlife take and the need to apply for an Incidental Take Permit under Chapters 68A-1 and 68A-27, *Florida Administrative Code*, during shorebird nesting season, the project manager should contact the FWC Regional Biologist to determine if shorebird nesting is occurring on the beach construction site. In addition, four species of sea turtles are known to nest on beaches near this site. Staff recommends implementation of the guidelines developed to minimize the impact of coastal development on sea turtle habitat, nesting females, nests and hatchlings. Please refer to the enclosed FWC letter for additional information.

West Florida Regional Planning Council (WFRPC) staff has provided comments on the project's potential impacts to barrier island systems and resources. Staff has expressed concerns regarding the loss and degradation of primary dunes, interdunal areas, secondary dunes, and other coastal listed species habitats resulting from continued development and uncontrolled beach assess. The WFRPC recommends that Eglin AFB protect and restore area dune systems and beach habitats to the greatest extent possible. Please see the enclosed WFRPC memo for further comments and recommendations.

Based on the information contained in the Draft EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP). The issues identified by our reviewing agencies must, however, be addressed prior to project implementation.

The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Lori E. Cox at (850) 245-2187.

Yours sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lec
Enclosures

cc: Duncan Cairns, NWFWMD
Darryl Boudreau, DEP, Northwest District
Mary Ann Poole, FWC
John Gallagher, WFRPC
Stephen Pyle, e2M

Project Information	
Project:	FL200901234558C
Comments Due:	03/02/2009
Letter Due:	03/23/2009
Description:	DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT ADDRESSING THE PROPOSED EMERALD BREEZE RESORT ENHANCED USE LEASE PROJECT ON SANTA ROSA ISLAND, EGLIN AIR FORCE BASE - FORT WALTON BEACH, OKALOOSA COUNTY, FLORIDA.
Keywords:	USAF - EMERALD BREEZE RESORT EUL ON SANTA ROSA ISLAND, EGLIN AFB - OKALOOSA CO.
CFDA #:	12.200

Agency Comments:

WEST FLORIDA RPC - WEST FLORIDA REGIONAL PLANNING COUNCIL

WFRPC staff has provided comments on the project's potential impacts to barrier island systems and resources. Staff has expressed concerns regarding the loss and degradation of primary dunes, interdunal areas, secondary dunes and other coastal listed species habitats resulting from continued development and uncontrolled beach assess. The WFRPC recommends that Eglin AFB protect and restore area dune systems and beach habitats to the greatest extent possible.

OKALOOSA - OKALOOSA COUNTY

COMMUNITY AFFAIRS - FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS

DCA has reviewed this application and has no concerns or comments.

FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

The FWC advises that five state-listed shorebird species are known to inhabit beaches in the vicinity of the project site. In order to avoid a wildlife take and the need to apply for an Incidental Take Permit under Chapters 68A-1 and 68A-27, F.A.C., during shorebird nesting season, the project manager should contact the FWC's Regional Biologist to determine if shorebird nesting is occurring on the beach construction site. In addition, four species of sea turtles are known to nest on beaches near this site. Staff recommends implementation of the guidelines developed to minimize the impact of coastal development on sea turtle habitat, nesting females, nests and hatchlings.

STATE - FLORIDA DEPARTMENT OF STATE

No Comment/Consistent

TRANSPORTATION - FLORIDA DEPARTMENT OF TRANSPORTATION

No Comment

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

The DEP Northwest District office in Pensacola advises that in addition to addressing the NWFWMD's concerns, the proposed project will require permitting for both potable water and domestic wastewater. If the connection size exceeds 12", permitting will fall under the authority of the DEP. Please contact Mr. John Pope at (850) 595-8300, ext. 1145 regarding potable water permitting questions and Mr. Bill Evans at ext. 1153 for questions regarding domestic wastewater permitting. The DEP also advises that, depending on when permit applications are submitted for review, unavoidable impacts to isolated wetlands may also require permits. House Bill 7163 called for the creation and implementation of the Environmental Resource Permitting (ERP) program for the geographic area of the NWFWMD. It did so with the requirement that the

program be implemented in two phases. Phase I, stormwater regulations, was implemented on October 1, 2007. Phase II, dredge and fill regulations, is tentatively scheduled for implementation in July of 2009. Please contact the NWFWMD's Environmental Resource Permitting Office in Crestview at (850) 683-5044 prior to permit submission to determine rule status and appropriate permitting authority.
NORTHWEST FLORIDA WMD - NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
NWFWMD staff recognizes that the proposed use is sited on a parcel that is altered and is isolated from other more ecologically intact USAF barrier island parcels. The site and encompassing area, however, are subject to a number of resource constraints and concerns, including: a Water Resource Caution Area subject to a regional water supply plan; nearby Surface Water Improvement and Management program priority waters of the NWFWMD; Gulf Islands National Seashore, designated Outstanding Florida Waters; FEMA Special Flood Hazard Area; coastal dune and scrub habitat with listed species; and the potential adverse effects of further intensive development of the barrier island. Given these resource constraints, staff recommends that the site be designated for less intensive and rehabilitative uses, such as conservation and restoration with recreational access. Suitable management could be from Gulf Islands National Seashore or a local parks and recreation program. The NWFWMD advises that, regardless of the ultimate use, the site plan should incorporate and demonstrate low impact development practices. Please see the enclosed NWFWMD memorandum for additional comments and recommendations.

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

Visit the Clearinghouse Home Page to query other projects.

Copyright
Disclaimer
Privacy Statement

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

MEMORANDUM

TO: Duncan Cairns, Chief, Bureau of Environmental and Resource Planning

FROM: Leigh Brooks, Water Resource Planner

THRU: Paul Thorpe, Director, Resource Planning Section

DATE: February 12, 2009

SUBJECT: Draft Environmental Assessment for Proposed Emerald Breeze Resort Enhanced Use Lease Project on Santa Rosa Island, Eglin Air Force Base SAI #: FL200901234558C

The proposed action consists of development of a resort hotel and conference center on U.S. Air Force (USAF) property on Santa Rosa Island in Fort Walton Beach, Okaloosa County. The development would be accomplished by a private lessee, resulting in 250 guest rooms and associated facilities, a portion of which would be reserved for USAF use. A primary purpose identified is generation of additional income for the USAF. The project site is adjacent to commercial and other intensive land uses.

It is recognized that the proposed use is sited on a parcel that is altered and is isolated from other more ecologically intact USAF barrier island parcels. The site and encompassing area, however, are subject to a number of resource constraints and concerns. Among these are the following:

- The site is within a Water Resource Caution Area and is subject to a regional water supply plan. The environmental assessment (EA) should therefore identify potable water demand that would be generated by the proposed use and the adequacy of existing water supplies for this purpose.
- Nearby estuarine waters are Surface Water Improvement and Management program priority waters of the District. On the Gulf side is Gulf Islands National Seashore, designated an Outstanding Florida Water.
- The barrier island has an elevation near sea level and is subject to storm surge inundation and eventual sea level rise. Most of the parcel is within the FEMA Special Flood Hazard Area. This coastline is also listed by the FDEP Bureau of Beaches and Coastal Systems as an area of critical beach erosion.
- The site contains coastal dune and scrub habitat important for various plants and animals, much of which has already been lost due to development. At-risk species include Cruise's Goldenaster and Godfrey's Goldenaster (both state ranked S2 and state listed endangered), piping plover and shore-nesting birds, sea turtles, and the Santa Rosa Beach mouse. Protecting and restoring remaining habitat will help build resiliency for the ecosystem to adapt to natural hazards.
- Intensive development of barrier islands should be discouraged because of their dynamic nature and function of buffering inland areas from storm effects and long-term erosion. Further intensive development at this site would likely diminish such function and expose additional people and structures.
- Intensive development on this site would appear to increase long-term public funding needs for beach renourishment and site protection. Given this, the EA should evaluate the availability of public sources of funding for these purposes. The possibility of dedicating income generated from the site lease for this purpose should be evaluated.

Given these resource constraints, it is recommended that the site be designated for less intensive and rehabilitative uses, such as conservation and restoration with recreational access. Suitable management could be from Gulf Islands National Seashore or a local parks and recreation program.

Regardless of the ultimate use, it is recommended that the site plan incorporate and demonstrate low impact development practices, including but not limited to the following:

- Minimized impervious area to limit runoff and maintain onsite recharge. This should include pervious surfaces for public access and other parking areas and driveways.
- Exceptional stormwater treatment, such as retention, infiltration, and bioretention appropriate to site conditions.
- Sea turtle-friendly lighting.
- Installation of high-efficiency (low volume) plumbing fixtures, appliances, and other water conserving devices.
- Application of xeriscape principles for landscaped areas. Natural vegetation should be incorporated into the landscape design to the extent practicable, and plants native to Santa Rosa Island used for new plantings. Vegetation should not normally be irrigated once established.
- Coastal scrub and dune restoration and protection.
- Limited access pathway(s) leading to beach.
- Any at-risk plant species should be protected or relocated prior to development.
- Commitment to a living shoreline rather than coastal armoring.
- Building design that incorporates higher levels of protection against increasing storm intensity and surge.

Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chair
Miami

Kathy Barco
Vice-Chair
Jacksonville

Ronald M. Bergeron
Fort Lauderdale

Richard A. Corbett
Tampa

Dwight Stephenson
Delray Beach

Kenneth W. Wright
Winter Park

Brian S. Yablonski
Tallahassee

Executive Staff
Kenneth D. Haddad
Executive Director

Nick Wiley
Assistant Executive Director

Karen Ventimiglia
Deputy Chief of Staff

Office of Policy and Stakeholder Coordination
Mary Ann Poole
Director

(850) 410-5272
(850) 922-5679 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: (850) 488-4676

Hearing/speech impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com

March 5, 2009

RECEIVED
MAR 06 2009
DEP Office of Intergovt'l Programs

Ms. Lauren Milligan
Florida State Clearinghouse
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, FL 32399-3000

RE: Okaloosa Co., SAI #FL200901234558C, Emerald Breeze Resort Environmental Assessment, Santa Rosa Island, Fort Walton Beach

Dear Ms. Milligan:

The Division of Habitat and Species Conservation, Species Conservation and Planning Section, of the Florida Fish and Wildlife Conservation Commission, of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated agency comments on the Emerald Breeze Resort Environmental Assessment (EA), and provides the following comments under the National Environmental Policy Act and the Coastal Zone Management Act/Florida Coastal Management Program.

Project Description

Eglin Air Force Base proposes to enter into a long-term lease agreement with a private entity in order to construct a gulf-front resort on Santa Rosa Island, Fort Walton Beach, in Okaloosa County. The reason for this action is for the military to make use of a property that has been identified as "underutilized" and which has significant potential to provide income that could benefit the base. The resort would consist of 33-unit condominium complex and a 216-room Sheraton resort on 17.1 acres fronting 595 linear feet along the Gulf of Mexico. Of the 17.1 acres, 5 would be used for landscaping and open space, while 3.5 would be "open beach area" (Table 2-1 on p. 2-5 of the EA). Associated amenities would include a parking lot that would accommodate approximately 300 vehicles, restaurants, bars, swimming pools, and some retail. The project would be required to use green design wherever feasible.

Issues and Recommendations

Shorebirds

Five state-listed shorebird species are known to inhabit the beaches in the vicinity of the project site: the least tern (*Sterna antillarum*, Threatened), snowy plover (*Charadrius alexandrius*, Threatened), piping plover (*Charadrius melodus*, Threatened), American oystercatcher (*Haematopus palliatus*, Species of Special Concern), and black skimmer (*Rhynchops niger*, Species of Species Concern). The piping plover is only known to winter in the area, whereas the remaining species will breed and nest in the area as well.

Rules relating to state-listed wildlife species are provided in Chapter 68A-27 of the Florida Administrative Code (section 68A-27.004 for Threatened species and section 68A-27.005 for Species of Special Concern). Unless an Incidental Take Permit is obtained from the FWC, these sections state: "No person shall pursue, molest, harm,

harass, capture, possess, or sell any of the endangered species included in this subsection, or parts thereof or their nests or eggs." Molestation includes flushing listed birds off their nests or disturbing birds during courtship. Construction activities (including, but not limited to, clearing, filling, building, grading, paving, landscaping, utility installation, or transportation or storage of equipment) within the area containing least tern, snowy plover, piping plover, American oystercatcher, or black skimmer habitat could result in take of these species. In addition, nearly all native bird species (including those that are not state listed) are protected from take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712).

The FWC has the authority to ensure protection of shorebirds in accordance with Article IV, Section 9 of the Florida Constitution; section 379.1025 (previously section 372.021), Florida Statutes; and section 68A-1.002, Florida Administrative Code. Under these laws, FWC is obligated to ensure that no take (as defined by Chapter 68A-1, Florida Administrative Code) of shorebirds occurs on the beach, including during conduct of state-authorized construction activities. Section 68A-1.1004(85) defines take as: "Take – The term shall include taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any wildlife or freshwater fish, or their nests or eggs by any means whether or not such actions result in obtaining possession of such wildlife or freshwater fish or their nests or eggs."

In order to avoid take (and potentially the need to apply for an Incidental Take Permit), the following items should be implemented during any construction on the beach authorized under sections 161.053 or 161.054, Florida Statutes.

1. Prior to any construction activity seaward of the primary dune during shorebird nesting season (February 15 through September 1 on the Gulf of Mexico coast and the Panhandle), the permittee should contact FWC's Regional Biologist to determine if shorebird nesting is occurring on their project site.

    a. The permittee should arrange for daily nesting surveys prior to project commencement throughout the construction period or through August.
    b. Surveys for detecting nesting activity should be completed prior to movement of equipment, operation of vehicles, or other activities that could potentially disrupt nesting behavior or cause harm to the birds or their eggs or young.
    c. The FWC Regional Biologist should be notified within 24 hours if a scrape or eggs are observed.
    d. A protective buffer zone, up to 300 feet wide if possible, should be created around any nests or colonial nesting areas. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
    e. The width of the buffer zone shall be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
    f. FWC staff may assist the permittee with posting buffer zones with clearly marked signs around the perimeter.

2. Observations of nesting shorebirds within the project area can be submitted to the Florida Beach-Nesting Bird Website at www.wildflorida.org/shorebirds/ .

Sea Turtles

In addition, four species of sea turtles are known to nest on the beaches in the vicinity of the project site: the loggerhead sea turtle (*Caretta caretta*, Threatened), green sea turtle (*Chelonia mydas*, Endangered), leatherback sea turtle *(Dermochelys coriacea*, Endangered, and Kemp's ridley sea turtle (*Lepidochelys kempii*, Endangered). In addition to the above-mentioned state-listed wildlife protection rules, sea turtles are protected under Florida Statute 379.2431 (1), the Marine Turtle Protection Act.

In the Florida Panhandle, most sea turtle nesting occurs May 1 through October 31. Coastal construction, exterior lighting, and other activities on the beach can interfere with the behavior of nesting sea turtles and their hatchlings. Heavy equipment on the beach can destroy existing nests, create ridges in the sand that act as physical barriers for nesting sea turtles and their hatchlings, and can even act as barriers themselves if left out on the beach. Coastal lights can prevent sea turtle nesting attempts, disorient female sea turtles trying to return to the ocean after laying their eggs, and confuse emerging sea turtle hatchlings as they attempt to orient toward the ocean. Objects left on the beach at night, such as beach furniture, also hinder nesting attempts and can entangle or entrap nesting sea turtles and their hatchlings. As such, the following guidelines have been developed to minimize the impact of coastal development on sea turtles:

1. All new coastal construction should be sited in such a way to minimize the footprint, which reduces impacts to existing coastal habitat and all associated wildlife.

2. No operation, transportation, or storage of equipment or materials is authorized seaward of the dune crest or existing permanent or temporary rigid coastal structure during the marine turtle nesting season, May 1 through October 31.

3. All exterior lighting must meet the FWC-Approved Sea Turtle Lighting Guidelines. All exterior fixtures are expected to be low mounted, full cutoff, and downward directed. In addition, all fixtures are expected to be lamped with low wattage, long wavelength bulbs, such as LPS or red or amber LED. All windows and doors within line of sight of the beach must have tinted glass or film with a visible light transmittance value of 45% or less. The permittee will be expected to submit a lighting fixture schedule and manufacturer cut sheets for all proposed lighting to FWC for review and approval. Please note that balcony lights on the beach and shore-perpendicular sides of the building above ground level are not recommended. Decorative lighting not necessary for human safety will not be approved.

4. FWC recommends that any pool be located such that any lights on the pool deck will not be visible from the beach. This can be done by locating the pool on the landward side of the structure. Siting a pool on the seaward side of a building can be problematic since lights on the pool deck must be minimized to reduce impacts to marine turtles but still must meet the requirements for public safety.

5. Beach cleaning and beach furniture left on the beach overnight can interfere with sea turtles attempting to nest. The permittee will be expected to provide a plan for any beach furniture or other activities planned for the adjacent beach. Beach cleaning using mechanical equipment can damage sea turtle nests, and can also require additional permitting by the Florida Department of Environmental Protection's Bureau of Beaches and Coastal Systems. The permittee will be expected to describe any plans for maintaining the beach seaward of the hotel.

6. In addition to the above considerations, please note that marine turtles also receive federal protection. For more information, please contact Ms. Lorna Patrick of the U.S. Fish and Wildlife Service's Panama City field office at 850-769-0552.

Summary

Provided these recommendations are followed, we do not find this project, as proposed, to be inconsistent with Chapter 372 (now Chapter 379), Florida Statutes, as included in the Florida Coastal Management Program. If you would like to coordinate further on our recommendations, please contact me by phone at 850-410-5272 or by email at maryann.poole@MyFWC.com. If you have any questions regarding the recommendations in this letter, please feel free to contact Dr. John G. Himes by phone at 850-265-3676, extension 222, or by email at John.Himes@myFWC.com.

Sincerely,

Mary Ann Poole

Mary Ann Poole, Director
Office of Policy and Stakeholder Coordination

map/jgh
ENV 1-3-2
Emerald Breeze Resort_1943

cc: Dr. Brad Gruver (FWC Endangered Species Coordinator)
Ms. Robin Boughton (FWC Bird Taxa Coordinator)
Ms. Laurinda Brown (FWC sea turtle biologist)
Ms. Lorna Patrick (USFWS sea turtle biologist), Lorna_Patrick@fws.gov
Ms. Patricia Kelly (USFWS shorebird biologist), Patricia_Kelly@fws.gov
Stephen G. Pyle, Engineering-Environmental Management, Inc.,
2751 Prosperity Ave., Suite 200, Fairfax, VA 22031

West Florida Regional Planning Council

OK 103-1-29-09

Bill Dozier, Chairman
Cindy Frakes, Vice-Chairman

Terry A. Joseph, Executive Director

FAX TRANSMITTAL (S) **Total # of Pages (including cover): 4**

TO: STATE CLEARINGHOUSE ▪ FAX: (850) 245-2190/(850) 245-2189
Phone: 850-245-2161

DATE: Wednesday, March 04, 2009

FROM: John Gallagher, Director, Housing & Homeland Security & Emergency Mgmt.
John.Gallagher@wfrpc.org

SUBJECT: State Clearinghouse Review(s) Fax Transmittals:

SAI #	Project Description	RPC #
FL200901234558C	Draft Environmental Assessment, Proposed Emerald Resort Enhanced Use Lease, Eglin AFB, Santa Rosa Island, Ft. Walton Beach	OK 103 1-29-09

	No Comments – Generally consistent with the WFSRPP
X	Comments Attached

If you have any questions, please call.

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.332-7976 • 1.800.226.8914 • F: 850.637-1923
4081 East Olive Road, Suite A; Pensacola, FL 32514
651 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

OK 103-1-29-09

West Florida Regional Planning Council

Bill Dozier, Chairman
Cindy Frakes, Vice-Chairman

Terry A. Joseph, Executive Director

MEMORANDUM

To: Mr. Mike Spatis, 96 CEG/CEV, 501 DeLeon Street, Suite 101, Eglin AFB, FL 32542-5133

Ms. Laura Milligan, Florida Clearinghouse, 3900 Commonwealth Blvd, MS 47, Tallahassee, FL 32399-3000

From: Mary F. Gutierrez, Environmental Planner, West Florida Regional Planning Council

Date: Thursday, February 26, 2009

Subject: Department of the Air Force Draft Environmental Assessment addressing the proposed Emerald Breeze resort enhanced use lease project on Santa Rosa Island, Eglin Air Force Base, Fort Walton Beach, Okaloosa County. RPC# OK 103-1-29-09, FL200901234558C

Project: The proposal is for the Emerald Breeze Resort Environmental Assessment to enter into a long-term lease with a private developer for the purpose of constructing and operating a resort hotel and conference center on Eglin AFB property at Test Area A-5 on Okaloosa Island that could provide a steady income stream to Eglin AFB. This project would be managed through the Enhanced Use Lease authority.

FYI: Santa Rosa Island (aka Okaloosa Island) is a barrier island. Barrier islands are not static structures. They are extremely dynamic systems that are constantly changing and moving. Barrier islands buffer the coastline they front from the wave and storm energies of the open ocean. The beaches on barrier islands offer little resistance to storm waves, allowing them to effectively absorb and dissipate the immense forces that confront them. Although the winds can cause extensive damage, most hurricane-related deaths are due to storm surge. The storm surge causes a rapid increase in water level, and can reach heights of more than 20 feet and stretch along the coast for 50 to 100 miles. One of the most important features of a barrier island can be found on its landward side. If allowed to remain in its natural state, barrier islands along the coast allow estuarine conditions: bays, lagoons and marshes to form behind them. These estuaries are very productive areas, which are important in the life cycle of many open ocean species.

Barrier islands offer habitat and food for the several species, including four species of sea turtles and the Piping plover. Habitat loss and degradation are two of the main threats to successful long-term conservation of these species. Primary factors causing habitat loss and degradation include development and uncontrolled beach access. Significant portions of the primary dunes, interdunal areas, and secondary and scrub dune on private lands have been heavily impacted by development of high-rise buildings, residences, businesses, other infrastructures, and landscaping associated with these developments.

The sea turtle nesting season in Florida runs from May through October on the Gulf coast. Each year thousands of hatchling turtles emerge from their nests along the southeast U.S. coast and enter the Atlantic Ocean. Sadly, only an estimated one in 1,000 to 10,000 will survive to adulthood. The natural

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.595.8910 • 1.800.226.8914 • F: 850.595.8967
651 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

obstacles faced by young and adult sea turtles are staggering, but it is the increasing threats caused by humans that are driving them to extinction. Today, all sea turtles found in U.S. waters are federally listed as endangered, except for the loggerhead, which is listed as threatened. Nesting turtles once had no trouble finding a quiet, dark beach on which to nest, but now they must compete with tourists, businesses and coastal residents for use of the beach. U.S. beaches are rapidly being lined with seaside condominiums, houses and hotels. Lights from these developments discourage females from nesting and cause hatchlings to become disoriented and wander inland, where they often die of dehydration or predation.

Human use of nesting beaches can result in negative impacts to nesting turtles, incubating egg clutches and hatchlings. The most serious threat caused by increased human presence on the beach is the disturbance to nesting females. Nighttime human activity can prevent sea turtles from emerging on the beach or even cause females to stop nesting and return to the ocean.

Although Piping plovers breed only in three geographic regions of North America: the Atlantic Coast, the Northern Great Plains, and the Great Lakes, piping plovers from all three breeding populations winter along South Atlantic, Gulf Coast, and Caribbean beaches and barrier islands, primarily on intertidal beaches with sand and/or mud flats with no or very sparse vegetation.

Plovers arrive at their wintering grounds from mid-July through late October. Plovers feed on exposed wet sand in wash zones; intertidal ocean beach; wrack lines; wash over passes; mud-, sand-, and algal flats; and shorelines of streams, ephemeral ponds, lagoons, and salt marshes by probing for invertebrates at or just below the surface. They use beaches adjacent to foraging areas for roosting and preening. Small sand dunes, debris, and sparse vegetation within adjacent beaches provide shelter from wind and extreme temperatures. As with other species, primary factors causing habitat loss and degradation include development and uncontrolled beach access.

Based on the information provided, the Council would like to make the following recommendations. Please note that the recommendations below are based on the Strategic Regional Policy Plan, established under Chapter 93-206, Laws of Florida. Responses to these recommendations are not required.

However, please provide clarification on the perception that requires unneeded Eglin acreage to be turned over to a/the national park

Priority 3: Protection of Coastal and Marine Resources

Goal 1: Protect beach and dune systems from the undesirable affects of development.

Goal 2: Have 50% of eroded beaches and dunes restored and stabilized to reestablish a functioning dune system.

Policy 2.1: Prohibit development that accelerates or has the potential to accelerate erosion of shoreline.

Policy 2.5: Restore the primary dune system where it is damaged and discourage activities that would destabilize the system.

Goal 3: Protect coastal land and water systems from inappropriate development and human activities determined to be intrusive or damaging to natural resources and/or water quality.

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.595.8910 • 1.800.226.8914 • F: 850.595.8967
651 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

2009-226

COUNTY: OKALOOSA

DATE: 1/22/2009
COMMENTS DUE DATE: 3/2/2009
CLEARANCE DUE DATE: 3/23/2009
SAI#: FL200901234558C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	NORTHWEST FLORIDA WMD		
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
X STATE			
TRANSPORTATION			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

_ **Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.**

X **Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.**

_ **Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.**

_ **Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.**

Project Description:

DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT ADDRESSING THE PROPOSED EMERALD BREEZE RESORT ENHANCED USE LEASE PROJECT ON SANTA ROSA ISLAND, EGLIN AIR FORCE BASE - FORT WALTON BEACH, OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA
- ☑ No Comment
- ☐ Comment Attached
- ☐ Not Applicable

Federal Consistency
- ☑ No Comment/Consistent
- ☐ Consistent/Comments Attached
- ☐ Inconsistent/Comments Attached
- ☐ Not Applicable

From:
Division/Bureau: Division of Historical Resources / Bureau of Historic Preservation

Reviewer: Katie Peterson — Laura A. Kammerer, Deputy SHPO

Date: 2/2/09 — 2.2.2009

RECEIVED
2009 JAN 27 A 9:41
BUREAU OF HISTORIC PRESERVATION

RECEIVED
FEB 04 2009
DEP Office of Intergovt'l Programs

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX G

CALCULATIONS TO SUPPORT THE TRAFFIC IMPACT ANALYSES

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Vogelsang
Agency/Co.: OV Consulting
Date Performed: 11/6/2008
Analysis Time Period: PM Peak Hour w/site
Intersection: Site/98
Jurisdiction: Okaloosa County
Units: U. S. Customary
Analysis Year: Build out
Project ID: Emerald Breeze Resort EA
East/West Street: Hwy 98
North/South Street: Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1835	39	33	2665	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		1835	39	33	2665	
Percent Heavy Vehicles		--	--	0	--	--
Median Type	Undivided					
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		Yes			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	40		34			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	40		34			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?			No			
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		33	40		34			
C(m) (vph)		577	5		567			
v/c		0.06	8.00		0.06			
95% queue length		0.18	6.64		0.19			
Control Delay		11.6			11.8			
LOS		B	F		B			
Approach Delay								
Approach LOS				F				

HCS2000: Unsignalized Intersections Release 4.1c

Chris Vogelsang
Ordonez and Vogelsang, LLC
1701 Wynkoop St Ste 127
Denver, CO 80202

Phone: 303-898-8042 Fax: 720-554-7630
E-Mail: chris@ovllc.com

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst: Chris Vogelsang
Agency/Co.: OV Consulting
Date Performed: 11/6/2008
Analysis Time Period: PM Peak Hour w/site
Intersection: Site/98
Jurisdiction: Okaloosa County
Units: U. S. Customary
Analysis Year: Build out

Project ID: Emerald Breeze Resort EA
East/West Street: Hwy 98
North/South Street: Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street Movements	1 L	2 T	3 R	4 L	5 T	6 R
Volume		1835	39	33	2665	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		459	10	8	666	
Hourly Flow Rate, HFR		1835	39	33	2665	
Percent Heavy Vehicles		--	--	0	--	--
Median Type	Undivided					
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		Yes			No	

Minor Street Movements	7 L	8 T	9 R	10 L	11 T	12 R
Volume	40		34			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	10		8			
Hourly Flow Rate, HFR	40		34			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?			No			
Lanes	1		1			
Configuration	L		R			

Pedestrian Volumes and Adjustments

Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data

	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn	0	1700	3	0	120	40	700
Through	1835	1700	3	75	120	40	700
S5 Left-Turn							
Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation

Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)		4.1	7.5		6.9			
t(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)		0	0		0			
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)		0.00	0.70		0.00			
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage		4.1	6.8		6.9			
2-stage								

Follow-Up Time Calculations

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
t(f,base)		2.20	3.50		3.30			
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)		0	0		0			
t(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
V prog	1835	0		
Total Saturation Flow Rate, s (vph)	3400	3400		
Arrival Type	3	3		
Effective Green, g (sec)	75	0		
Cycle Length, C (sec)	120	120		
Rp (from Exhibit 16-11)	1.000	1.000		
Proportion vehicles arriving on green P	0.625	0.000		
g(q1)	24.3	0.0		
g(q2)	28.5	0.0		
g(q)	52.8	0.0		

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
alpha	0.500			
beta	0.667			
Travel time, t(a) (sec)	11.905			
Smoothing Factor, F	0.201			
Proportion of conflicting flow, f	0.979	0.000		
Max platooned flow, V(c,max)	3329	0		
Min platooned flow, V(c,min)	2000	2000		
Duration of blocked period, t(p)	57.7	0.0		
Proportion time blocked, p	0.481		0.000	

Computation 3-Platoon Event Periods	Result
p(2)	0.481
p(5)	0.000
p(dom)	0.481
p(subo)	0.000
Constrained or unconstrained?	U

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Stage II
p(1)			
p(4)	0.519		
p(7)	0.519		
p(8)			
p(9)	0.519		
p(10)			
p(11)			
p(12)			

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
V c,x		1874	3233		918			
s		3400	3400		3400			
Px		0.519	0.519		0.519			
V c,u,x		462	3078		0			
C r,x		1110	10		1091			
C plat,x		577	5		567			

Two-Stage Process

	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)								
s	3400	3400						
P(x)								
V(c,u,x)								
C(r,x)								
C(plat,x)								

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows	918	
Potential Capacity	567	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	567	
Probability of Queue free St.	0.94	1.00
Step 2: LT from Major St.	**4**	**1**
Conflicting Flows	1874	
Potential Capacity	577	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	577	
Probability of Queue free St.	0.94	1.00
Maj L-Shared Prob Q free St.		
Step 3: TH from Minor St.	**8**	**11**
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.94	0.94
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	**7**	**10**
Conflicting Flows	3233	
Potential Capacity	5	
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor		0.94
Maj. L, Min T Adj. Imp Factor.		0.96
Cap. Adj. factor due to Impeding mvmnt	0.94	0.90
Movement Capacity	5	

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.94	0.94
Movement Capacity		
Result for 2 stage process:		
a		
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	**7**	**10**
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		

Cap. Adj. factor due to Impeding mvmnt			
Movement Capacity			
Part 3 - Single Stage			
Conflicting Flows	3233		
Potential Capacity	5		
Pedestrian Impedance Factor	1.00	1.00	
Maj. L, Min T Impedance factor		0.94	
Maj. L, Min T Adj. Imp Factor.		0.96	
Cap. Adj. factor due to Impeding mvmnt	0.94	0.90	
Movement Capacity	5		
Results for Two-stage process:			
a			
y			
C t	5		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	40		34			
Movement Capacity (vph)	5		567			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep	5		567			
Volume	40		34			
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		33	40		34			
C(m) (vph)		577	5		567			
v/c		0.06	8.00		0.06			
95% queue length		0.18	6.64		0.19			
Control Delay		11.6			11.8			
LOS		B	F		B			
Approach Delay								
Approach LOS				F				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	1.00	0.94
v(il), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(il), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4		11.6
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX H

BIOLOGICAL ASSESSMENT

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 96TH AIR BASE WING (AFMC)
EGLIN AIR FORCE BASE FLORIDA

RECEIVED
MAR 16 2009

MAR 12 2009

Mr. Stephen M. Seiber
Chief, Natural Resources Section
96 CEG/CEVSN
501 De Leon Street, Suite 101
Eglin AFB FL 32542-5133

Ms. Janet Mizzi
U.S. Fish and Wildlife Service
1601 Balboa Avenue
Panama City FL 32405

Dear Ms. Mizzi:

The following information is being submitted to fulfill requirements under Section 7 of the Endangered Species Act (ESA). This biological assessment discusses potential impacts to sea turtles and piping plovers along with their respective habitats associated with the construction of the Emerald Breeze Resort on Santa Rosa Island (SRI) at Test Site A-5, Eglin Air Force Base (AFB), Florida. Additionally, shorebird nesting areas and the Santa Rosa beach mouse are considered.

Description of the Proposed Action

Eglin AFB proposes to enter into a long-term lease of Eglin real property under Enhanced Use Lease (EUL) authority for the purpose of constructing and operating a resort hotel and conference center that could provide a steady income stream to Eglin AFB. Under the Proposed Action, the USAF would enter into a long-term EUL with a private developer chosen through a competitive selection process, with the intent that the developer construct and operate the resort.

The Proposed Action involves construction of a resort complex consisting of hotel facilities (e.g., parking, lodging, lobby, and conference areas), restaurants, bars, swimming pools, and light retail. The resort complex would be similar in size and facilities to resorts along U.S. Highway 98. Although the EUL developer could propose more or fewer guest rooms in the resort, the Proposed Action assumes 250 guest rooms. The existing Test Site A-5 facility, asphalt driveway and parking lots, foundations, and utility infrastructure would be demolished to make space for proposed development.

The proposed resort complex would be constructed by private developers. The developers would be required to integrate green design wherever feasible through the use of energy- and water-efficient building techniques and equipment, the use of recycled materials, and the avoidance or enhancement of existing environmental features of the proposed site. Examples might include low-impact design stormwater collection and

treatment structures that integrate into the landscape and recycle water back to groundwater; finding uses for recycled water such as fountains or irrigation systems; installing native landscape or xeric landscape design features; maintaining the maximum amount of open space feasible; and, where feasible, use of solar or other alternative energy sources and use of green building design principles.

Parking would be constructed on the outer perimeters of the resort complex in compliance with Okaloosa County Development Design and Implementation Standards. Section 6.04.02 specifies that hotels shall provide one parking space per hotel room plus one parking space per three employees present onsite during the busiest shift. It is estimated that this will result in approximately 300 parking spaces being required. In addition to the area taken up by resort facilities and parking, approximately 0.5 acres, would be used for sidewalks, pathways, courtyards, walking zones, and other elements required to tie the resort complex together. The balance of the 17.1-acre site would be used for landscaping or open green space, and beach access. The estimated areas for individual components of the proposed resort are presented in Table 1.

Table 1. Emerald Breeze Resort Assumptions

Resort Facilities and Infrastructure	Size (Acres)
Lodging, Lobby, and Conference Facilities	3.0
Restaurants/Bars	1.0
Gift Shop	0.1
Water Park	0.5
Swimming Pools	0.5
Parking Lots	3.0
Sidewalks, Pathways, and Courtyards	0.5
Landscaping and Open Space	5.0
Open Beach Area	3.5
Total	**17.1**

A portion of the roof will be made available for Eglin AFB range instrumentation with dedicated offices for range personnel and equipment. The USAF would require this instrumentation, offices, and equipment to maintain its Test Site A-5 mission. Most of the rooms at the resort will be for public use with a select number of room blocks dedicated for U.S. Air Force (USAF) and other Department of Defense (DOD) personnel. All utilities will originate from city and county infrastructure availability.

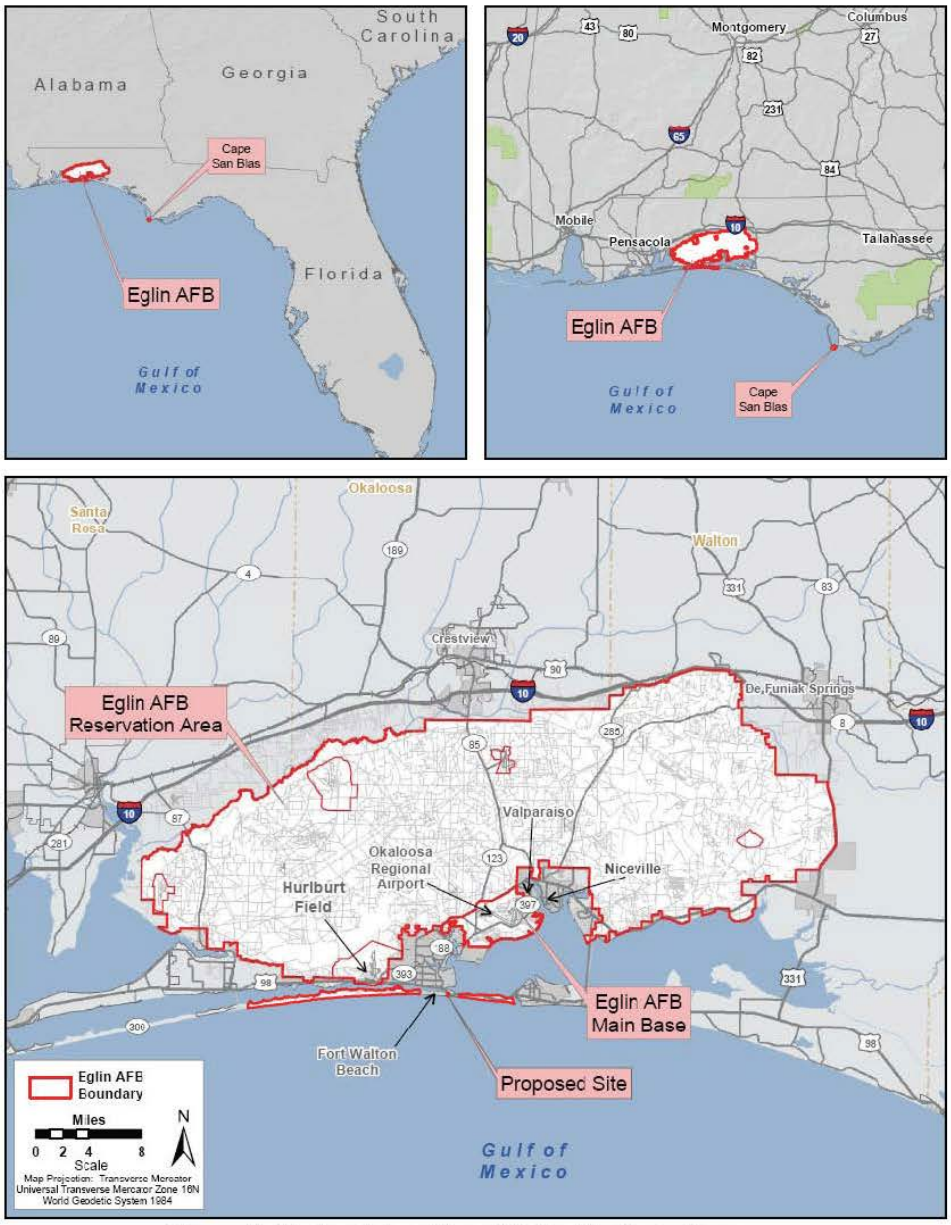


Figure 1. Regional Location of Eglin Air Force Base



Figure 2. Proposed Site of the Emerald Breeze Resort

Biological Information

Five federally listed endangered (E) and threatened (T) species are known to occur within the project area. Additionally, several shorebird nesting areas and habitat for the Santa Rosa beach mouse are located on SRI. Eglin Natural Resources Section (NRS) has made a No Effect determination for the Florida perforate lichen. The following list indicates those federally listed species considered for this action:

Common Name	Scientific Name	Federal Status
Atlantic Green Sea Turtle	*Chelonia mydas*	E
Atlantic Loggerhead Sea Turtle	*Caretta caretta*	T
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	E
Leatherback Sea Turtle	*Dermochelys coriacea*	E
Piping Plover	*Charadrius melodus*	T

There are five species of marine turtles found in the Gulf of Mexico (GOM); four species are known to nest on SRI beaches. These species are the Atlantic green sea turtle, Atlantic loggerhead sea turtle, Kemp's ridley sea turtle and the leatherback sea turtle. However, the majority of nests on SRI are from loggerhead sea turtles. The sea turtle nesting and hatching season in northwest Florida occurs from 01 May through 31 October, with most hatching between mid-August and mid-October.

These protected species are also considered:

Common Name	Scientific Name	State Status
Santa Rosa beach mouse	*Peromyscus polionotus leucocephalus*	FNAI-Tracked Species

Shorebirds and Wading Birds

Common Name	Scientific Name	State Status
Snowy plover	*Charadrius alexandrinus*	Threatened
Least tern	*Sterna antillarum*	Threatened
Little blue heron	*Egretta caerulea*	Species of Special Concern
Tricolor heron	*Egretta tricolor*	Species of Special Concern
Snowy egret	*Egretta thula*	Species of Special Concern
White ibis	*Eudocimus albus*	Species of Special Concern
American oystercatcher	*Haematopus palliates*	Species of Special Concern
Black skimmer	*Rhynchopsniger*	Species of Special Concern
Great egret	*Ardea alba*	FNAI-Tracked Species
Wilson's plover	*Charadrius wilsonia*	FNAI-Tracked Species
Caspian tern	*Sterna caspia*	FNAI-Tracked Species
Royal tern	*Sterna maxima*	FNAI-Tracked Species
Sandwich tern	*Sterna sandvicensis*	FNAI-Tracked Species

Atlantic Green Sea Turtle

The green sea turtle was listed as federally threatened on 28 July 1978 in all its eastern range of North America, except in Florida where it is listed as endangered. It is

also state-listed as endangered. In the United States, it nests on southern Florida beaches with a few exceptions in the northern GOM and North Carolina (USFWS, 2005). The officially recognized nesting and hatching season for the green sea turtle extends from 01 May through 31 October in Florida's panhandle. Nesting in the panhandle, however, has been consistently documented as an every other year event since 1990, with incubation periods ranging from sixty to ninety days. However, the 2004 sea turtle nesting season did not result in any green sea turtle nests as predicted. Eglin AFB SRI property supports the highest number of green sea turtle nests in northwest Florida. Primarily a tropical herbivore, the juveniles are frequently found in the GOM in areas where there is an abundance of seagrass (USFWS, 2005).

Atlantic Loggerhead Sea Turtle

The loggerhead turtle, federally and state-listed as threatened, gained its status on 28 July 1978. Loggerhead nests in Florida account for ninety percent of all loggerhead nests in the United States. From March through June, adult loggerheads congregate in the nearshore and offshore waters of the GOM to mate. Their nesting sites are on the numerous barrier islands and beaches between the Florida Keys and the northern GOM. Nesting females approach SRI in the spring and summer to dig their nests between the high tide mark and the dune line and sometimes between dunes. Nest incubation averages seventy-one days (using 1998-2004 data). These turtles are the most commonly seen sea turtles in the southeastern United States and may be found near underwater structures and reefs (USFWS, 2005). The diet of loggerheads consists of gastropods, mollusks, coelenterates, and cephalopods.

Kemp's Ridley Sea Turtle

The Kemp's ridley sea turtle (*Lepidochelys kempii*) was listed as endangered on 02 December 1970. The range of the Kemp's ridley includes the Gulf coasts of Mexico and the U.S., and the Atlantic coast of North America as far north as Nova Scotia and Newfoundland. In addition, rare nesting events have been reported in Florida, Alabama, Georgia, South Carolina, and North Carolina. Hatchlings, after leaving the nesting beach, are believed to become entrained in eddies within the Gulf of Mexico, where they are dispersed within the Gulf and Atlantic by oceanic surface currents until they reach about 7.9 inches in length, at which size they enter coastal shallow water habitats (Ogren 1989). Outside of nesting, adult Kemp's ridleys spend most of their time in the Gulf.

Leatherback Sea Turtle

The leatherback sea turtle was originally listed as federally endangered on 02 June 1970 and is considered a state-listed endangered species. This species commonly nests along the shorelines of the Atlantic, Pacific, and Indian Oceans. Only infrequent nesting activity has been documented for the leatherback in northwest Florida. The officially recognized nesting and hatching season for the leatherback extends from 01 March through 30 September, with nest incubation ranging from sixty to seventy-five days. Until the spring of 2000, the only confirmed leatherbacks nesting in northwest Florida were in Franklin and Gulf Counties. In May and June 2000, leatherback nesting activity

was documented for the first time in Okaloosa County on Eglin's portion of SRI. The leatherback feeds primarily on jellyfish, but occasionally will eat sea urchins, squid, crustaceans, tunicates, fish, blue-green algae, and floating seaweed (USFWS, 2005).

Piping Plover

The piping plover (*Charadrius melodus*) is listed as "threatened" by both the State of Florida and federally. Piping plovers are commonly documented during winter in the Florida panhandle, with the highest numbers of birds occurring in Franklin, Gulf, and Bay counties. Even though Florida has not been considered a primary wintering area for piping plover, diminishing habitat along other Gulf coast areas may be affording the piping plover new wintering grounds in Florida. These wintering grounds are still considered less suitable, thus forcing the piping plover to utilize isolated patches. As a result, critical habitat has been designated for piping plovers along the Gulf coast of Florida, a portion of which covers SRI.

Piping plovers are found in non-breeding (migration and wintering) habitats along the Gulf of Mexico as early as mid-July and leave by mid-May. Piping plovers are known to forage in exposed wet sand areas such as wash zones, intertidal ocean beachfronts, wrack lines, washover passes, mud and sand flats, ephemeral ponds, and salt marshes. They are also known to use adjacent areas for sheltering in dunes, debris, and sparse vegetation. Although it is possible that plovers could use any one of these habitat types at any time during the non-breeding season, studies have shown that non-breeding plovers spend 76 percent of their time foraging for invertebrates found just below the surface of wet sand (Johnson and Baldassarre, 1988).

Prior to 2006, Eglin Natural Resources Section (NRS) staff and volunteers conducted periodic surveys during the non-breeding season and volunteer personnel have periodically conducted shorebird surveys on SRI during the non-breeding season. These surveys included participation in the International Piping Plover Census in January of 1991, 1996, 2001, and 2006. Piping plovers were not sighted on Eglin's SRI property during any of these official surveys. Beginning in 2006, Eglin NRS has conducted routine shorebird monitoring throughout the year according to piping and snowy plover winter survey guidelines provided by the U.S. Fish and Wildlife Service (USFWS). These guidelines combine the survey protocol from the International Piping Plover Census and the International Shorebirds Survey (ISS) (USFWS, 2005).

Other Species Considered:

Shorebirds and Wading Birds

Shorebird nesting season at SRI runs from 01 April through 31 August. During this period, Eglin NRS conducts semi-monthly shorebird surveys to collect data regarding the populations of the protected species. Although natural forces including hurricane activity continually change the landscape of SRI, Eglin NRS annually observes and documents areas that appear to be preferred by nesting shorebirds. In an attempt to designate and

protect these areas, Eglin NRS posts signs to discourage foot traffic and AF operational activities. Typical shorebirds found on SRI include the snowy plover (*Charadruis alexandrinus*), state listed as threatened; little blue heron (*Egretta caerulea*), a state species of special concern; snowy egret (*Egretta thula*), a state species of special concern; black skimmer (*Rhynchops niger*), a state species of special concern; the least tern (*Sterna antillarum*), state listed as threatened; the tricolor heron (*Egretta tricolor*), a state species of special concern; and the white ibis (*Eudocimus albus*), a state species of special concern.

Santa Rosa Beach Mouse

The Santa Rosa beach mouse (*Peromyscus polionotus leucocephalus*) is one of seven extant beach mouse subspecies, five of which inhabit the panhandle of Northwest Florida. Of the five Gulf subspecies, the Santa Rosa subspecies is the only one not currently listed by either the state or the federal government. Beach mice are mostly nocturnal, and burrow nests in dunes. They inhabit frontal dune and scrub habitat within the coastal dune ecosystem on SRI, preferring sand covered slopes with patches of grasses and herbs, and their diet consists of seeds and fruits of beach plants, as well as insects (Bird, 2003). The Santa Rosa subspecies population, which occurs only on SRI, was decimated after the storm surge from Hurricane Opal in 1995 destroyed a significant amount of dune habitat. Beginning in 1996, track-count surveys conducted by Eglin NRS personnel indicated a forty percent increase in population from 1996 to 2001 (U.S. Air Force, 2002).

Hurricane Ivan in 2004, as well as hurricanes Dennis and Katrina in 2005, again decimated a large percentage of the dune habitat. Beginning in 2004, Eglin NRS increased survey frequency and began conducting monthly surveys to determine the severity of the impact to the population. Since then, preliminary results indicate that beach mice are still present, but additional data is required to determine the status of the current population. To supplement monthly track-count surveys, Eglin NRS has also incorporated the Florida Fish and Wildlife Conservation Commission (FWC) tracking tube survey protocol. Beginning in February of 2007, monthly tracking tube surveys now provide data regarding the presence/absence of beach mice in varied ecosystems on Eglin's portion of SRI. This tracking tube method has been developed as a potential alternative to survey for presence/absence of the species. By maintaining both survey types, Eglin NRS hopes to provide comparative data regarding the subjectivity of each method. In addition to these monthly surveys, Eglin also continues to support the USFWS annual beach mouse trapping and tagging efforts.

While the most devastating losses to beach mouse populations result from storm surges from hurricanes and tropical storms, other significant threats include predation by feral cats and loss of dune habitat from recreational foot traffic on public-access beaches. Eglin NRS is working to improve protection of dunes by promoting public awareness. These efforts include the installation of signs and barriers to discourage foot traffic in protected areas, the posting of educational signs at beach access locations on the public portion of SRI, and the dissemination of informational literature.

Determination of Impacts

Sea Turtles

The main potential threats to sea turtle nests on Eglin beaches are from artificial lighting, vehicular driving, nest predation, and other activities that may disturb beach/dune habitats and destroy nests. Impacts to sea turtle hatchlings are known to occur from the creation of ruts or impediments on the beach. Turtle hatchlings can easily become trapped in tire tracks or depressions created by humans or other animals and cannot reach the water.

As of 2008, Eglin AFB has documented 407 loggerhead nests, 131 green nests, 3 leatherback nests and 3 Kemp's ridley nests on SRI (restricted and public portions combined). SRI nesting data was obtained from 1989-2008 for loggerhead and green species of sea turtles to determine the average distance of the nest from the mean high water line. This data was calculated for 429 of the 538 total nests because measurements were not recorded for the other 112 nests. On average, loggerhead and green sea turtles crawl inland 52 and 56 feet from the mean high water line before digging their nests in the sand. In rare occurrences, sea turtles have been known to travel as far as 200 feet inland of the mean high water line. Construction activities would occur at a minimum of 200 feet north of the mean high water line, therefore construction activities would occur well above the average sea turtle nest. Heavy machinery may be required during construction activities; however, no activity is anticipated to be directly on the beach.

Eglin AFB property on SRI contains approximately 17 miles of shoreline, beginning at the western jetty at Destin East Pass and extending to Test Area A-18 in Santa Rosa County. Of those 17 miles of shoreline, approximately 0.12 mile of shoreline has the potential to be impacted from construction activities. Data was analyzed for the 544 total nests on SRI for all 17 miles of shoreline. Therefore, the probability of a sea turtle laying a nest within this area (0.12 mile) within the next 19 years is less than 2 percent. In addition, Eglin Natural Resources has never documented a sea turtle nest within this 0.12 mile of shoreline at Test Area A-5 which is surrounded by developed areas.

The following avoidance and minimization measures would be followed during construction of the Emerald Breeze Resort:

- All work completed between 01 May and 31 October will be done during daylight hours only
- All known sea turtle nests would be marked and protected in accordance with established Eglin Natural Resources Section protocol
- No daytime (sunrise to sunset) beach driving or equipment operation related to construction operations will occur on Gulf beachfront before completion of daily sea turtle nest survey from 01 May to 31 October.
- All ruts on the beach (if any) will be removed before sunset. All rut removal will be performed in the late afternoon or as soon as operations are completed,

whichever is before sunset. Rut removal may be completed by hand using a heavy-duty "garden" rake that penetrates no more than 3 inches deep into the sand. Additional hand-raking may be required to fill in deep ruts. At no time shall raking be conducted within marked nest areas.

- All lighting associated with construction activities or night security lights will be "sea turtle friendly" lighting.
- Although unlikely, if a sea turtle nest is laid within the construction area, all operations will cease and Eglin Natural Resources Section will be contacted immediately. The marked nest will be protected from potential threats associated with construction operations.
- If a nest occurs within 0.5 mile from the construction area, a series of stakes and highly visible survey ribbon or string would be installed to establish a radius surrounding the nest. No activity would occur within this area, nor would any activity occur that could result in impacts to the nest. Nest sites would be inspected daily to ensure nest markers remain in place and that the nest has not been disturbed.
- If a sea turtle crawl is seen on the beach with no associated marked nest, Natural Resources staff shall be contacted immediately. Care shall be taken not to disturb the crawl and/or nest site.
- Eglin Natural Resources must ensure personnel involved in construction operations understand sea turtle protection and the specific requirements contained herein
- All personnel involved in performing the work would familiarize themselves with all requirements

Additionally, the following management requirements associated with the design and construction of the Emerald Breeze Resort will be implemented by the proponent:

- All lighting used in the facility and parking areas is to be kept to a minimum and would be "sea turtle friendly" following the Florida Fish and Wildlife Conservation Commission (FWC) Sea Turtle Friendly Lighting Guidelines
- Boardwalks would be considered to preserve existing and future dune systems; keeping as much of the existing dune systems and vegetation as feasible
- Predator control measures are implemented (i.e. predator proof trash cans)
- The U.S. Fish and Wildlife Service would be part of the design review process for site layout and construction of the facility

The main potential threats to sea turtles associated with the construction activities are beach disturbance, lighting and impediments on the beach. With proper avoidance and minimization measures as well as the above management requirements, Eglin NRS

believes the construction of the Emerald Breeze Resort on SRI is **not likely to adversely affect** sea turtles.

Piping Plover

Piping plovers can be expected to leave northern breeding grounds and arrive in wintering habitat as early as mid-July and return north again to breed in March (USFWS, 2001). Although only a small section of SRI has been designated as critical habitat near Test Area A-18, piping plovers may be found any place that affords proper foraging and sheltering resources. Piping plovers are known to forage in exposed wet sand areas such as wash zones, intertidal ocean beachfronts, wrack lines, washover passes, mud and sand flats, ephemeral ponds, and salt marshes.

Research indicates that patterns of piping plover habitat usage can be very complex and plovers could feasibly use several locations on the island for foraging, roosting, or sheltering at any time, day or night (U.S. Air Force, 2007). Therefore, if the Proposed Action takes place during the piping plover non-breeding period, it is possible that piping plovers may be present in the action area and impacts could occur. It is possible, though highly unlikely, that construction work could cause direct physical impact to an individual plover if the bird attempted to land in a work area. It is more likely that construction activities would serve to flush the bird from the area, possibly causing stress and extra caloric expenditure. The disturbance generated by construction activities would be sufficient to keep piping plovers from foraging in the work area during the course of the operation. During this time, displaced plovers may simply move on to undisturbed foraging areas. Displacement would be temporary and localized. Eglin NRS believes the Proposed Action is not expected to pose a threat to piping plovers and therefore is **not likely to adversely affect** the piping plover.

Within property administered by Eglin, piping plover critical habitat is situated on the north shore of SRI approximately 14 miles west of the proposed construction site. Construction activities would not occur in or near designated critical habitat, therefore the Proposed Action would have **no effect** on piping plover critical habitat on SRI.

Other species considered:

Shorebirds and Wading Birds and Shorebird Nesting Areas

Some shorebirds may be temporarily displaced as a result of noise from equipment and personnel during construction activities. Colonies or individual nests of several state-listed shorebird species (least terns, southeastern snowy plovers, and black skimmers) are usually found along the rack line or other suitable habitat along the beach and have the potential to occur within the proposed action area. Land-based activities near shorebird nesting areas may result in a flush/startle response. During nesting season, this may result in a potentially increased vulnerability of eggs and chicks to predation. However, foraging species would typically move on to other areas, while nesting species would return after the general disturbance was over. These activities would also likely

scare other species such as predators (e.g. feral cats, coyotes, etc.) from the area, thus reducing the chances of nest predation should nesting birds be flushed.

To minimize the potential for impacts to shorebirds, Eglin NRS would conduct a pre-work survey for nesting shorebirds. Staging of equipment or supplies would be located outside all known shorebird nesting sites. With these avoidance and minimization measures in place, Eglin NRS has determined that the Proposed Action would have minimal impact on shorebirds and their nesting areas.

Santa Rosa Beach Mouse

There is a low potential for direct impacts to the Santa Rosa beach mouse from Emerald Breeze Resort construction activities. Beach mice tend to spend most of their time in burrows in the dunes during daylight when construction activities would be taking place. The construction site would mainly reside within a previously disturbed area where Test Site A-5 is currently located. In addition, boardwalks would be considered in the design of the resort to preserve existing and future dune systems; keeping as much of the existing dune systems and vegetation as feasible. Therefore, Eglin NRS has determined that the Proposed Action would have minimal impact on the Santa Rosa beach mouse.

Conclusion

Eglin NRS has determined that potential impacts to federally listed species from the proposed activities on SRI are minimal if the above avoidance and minimization measures and management requirements are followed. These measures would serve to mitigate potential impacts from construction activities. Therefore Eglin NRS has determined that Emerald Breeze Resort construction activities are **not likely to adversely affect** sea turtles and piping plovers.

Eglin AFB would notify the USFWS immediately if it modifies any of the actions considered in this Proposed Action or if additional information on listed species becomes available, as the USFWS may require a reinitiation of consultation. If impact to listed species occurs beyond what Eglin has considered in this assessment, all operations would cease and Eglin would notify the USFWS. Prior to commencement of activities, Eglin would implement any modifications or conditions resulting from consultation with the USFWS. Eglin NRS believes this fulfills all requirements of the ESA, and no further action is necessary. If you have any questions regarding this letter or any of the proposed activities, please do not hesitate to contact either Mr. Bob Miller (850) 883-1153 or myself at (850) 882-8391.

Sincerely,

STEPHEN M. SEIBER YF-02
Chief, Natural Resources Section

REFERENCES:

Bird, B. L., 2003. Effects of Predatory Risk, Vegetation Structure, and Artificial Lighting on the Foraging Behavior of Beach Mice. Thesis presented to the Graduate School of the University of Florida.

Johnson and Baldassarre, 1988. Aspects of the wintering ecology of piping plovers in coastal Alabama. Wilson Bulletin 100:214-233

Ogren, L. 1989. Status report of the green turtle. Pages 89-94 in Ogren, L., F. Berry, K. Bjorndal, H. Kumph, R. Mast, G. Medina, H. Reichart, and R. Witham (eds.). Proceedings of the 2nd Western Atlantic Turtle Symposium. NOAA Technical Memorandum NMFS-SEFC-226, http://www.biodiversitylibrary.org/item/22748.

U.S. Air Force, 2002. *Integrated Natural Resources Management Plan (INRMP) 2002-2006*. AAC/EMSN, Department of the Air Force, Eglin AFB, Florida. May 2002.

U.S. Air Force, 2007. Integrated Natural Resources Management Plan (INRMP). 96 CEG/CEVSN, Department of the Air Force, Eglin AFB, Florida. September 2007.

U.S. Fish and Wildlife Service (USFWS), 2001. USFWS Endangered Species Website: Critical Habitat of the Piping Plover, http://pipingplover.fws.gov/.

U.S. Fish and Wildlife Service (USFWS), 2005. USFWS Endangered Species Website: http://endangered.fws.gov/.

INFORMAL CONSULTATION REGARDING

IMPACTS TO FEDERALLY LISTED SPECIES
RESULTING FROM THE CONSTRUCTION OF THE EMERALD BREEZE RESORT
SANTA ROSA ISLAND, EGLIN AFB FL

Prepared by: Kelly Knight 3/3/09
Kelly Knight — Date
Environmental Scientist, SAIC
Eglin Natural Resources Section

Reviewed by:

Robert J Miller 3/4/09
Bob Miller — Date
Endangered Species Biologist
Eglin Natural Resources Section

Bruce Hagedorn 3/9/09
Bruce Hagedorn — Date
Chief, Wildlife Element
Eglin Natural Resources Section

Stephen M. Seiber 3/11/09
Stephen M. Seiber — Date
Chief, Eglin Natural Resources Section

USFWS CONCURRENCE:

Project Leader — Date
U.S. Fish and Wildlife Service
Panama City, FL

FWS Log No. 2009-I-0133

APPENDIX I

OPERATIONAL REQUIREMENTS AND BEST MANAGEMENT PRACTICES

Appendix I

Operational Requirements and Best Management Practices (BMPs)

Operational Requirements and Best Management Practices (BMPs)	
Resource	
Sea Turtles	Four species of sea turtle are known to nest on beaches near the proposed site. Implementation of guidelines developed to minimize the impact of coastal development on sea turtle habitat, nesting females, nests and hatchlings, is recommended.
	All new coastal construction should be sited in such a way that the footprint is minimized and potential impacts to existing coastal habitat and all associated wildlife are reduced.
	No operation, transportation, or storage of equipment or materials is authorized seaward of the dune crest or existing permanent or temporary rigid coastal structure during the marine turtle nesting season, May 1 through October 31.
	All exterior lighting must meet the Florida Fish and Wildlife Conservation Commission- (FWC) Approved Sea Turtle Lighting Guidelines stated below. The permittee must submit a lighting fixture schedule and manufacturer cut sheets for all proposed lighting to FWC for review and approval.
	All exterior fixtures on the seaward and the shore perpendicular sides of the building (and on the landward side of the building if they are visible from the beach) should be well shielded, full cutoff, downward directed type fixtures.
	Lighting used for construction sites which are visible from and adjacent to marine turtle nesting beaches must be long wave length lights. For example, those that produce light that measures greater than 580 nanometers on a spectroscope.
	Bright white light, such as metal halide, halogen, fluorescent, mercury vapor and incandescent lamps would not be approved. Filters are unreliable and not allowed.
	Limited use of shorter wavelength lights may be approved in areas where direct and indirect light or glow could not possibly be visible from the beach upon approval by FWC.
	ACCEPTABLE LIGHTING: • Low mounted, full cutoff, and downward directed. • All fixtures are expected to be lamped with low wattage, long wavelength bulbs such as: - Low Pressure Sodium (LPS) 18w, 35w - Amber or Red LED (true red or true amber, diodes, NOT filters); Turtle Safe Lighting, Inc (TSL) coated, compact fluorescent (CF) lamps (maximum 13 watts) (filter sleeves and dichroic filters are not allowed); other lighting sources that produce light of 580 nm or longer.

Operational Requirements and Best Management Practices (BMPs)	
Resource (continued)	
Sea Turtles (cont'd.)	Interior swimming pool and pool deck lights shall be turned off, while the pool is closed, during sea turtle nesting season (May 1st – October 31st). The use of an automatic timer is acceptable. This may be specified in the notes section on the drawing and should be included in the Florida Department of Environmental Protection (FDEP) Permit Conditions.
	FWC recommends that a pool be located such that any lights on the pool deck would not be visible from the beach. This can be accomplished by locating the pool on the landward side of the structure. Siting a pool on the seaward side of a building can be problematic since lights n the pool deck must be minimized to reduce impacts to marine turtles but still must meet the requirements for public safety.
	Tinted glass or film with a visible light transmittance value of 45 percent or less shall be applied to all windows and doors within line of sight of the beach. This includes the seaward and shore-perpendicular sides of the structure. This may be specified in the notes section on the Lighting Plan architectural drawing and should be included in the FDEP Permit Conditions.
	THE FOLLOWING ARE NOT ALLOWED: • Private balcony lights • Up lights • Tree strap downlights • Decorative lighting, not necessary for human safety or security • Pond lights • Dune walkover lighting • Fountain lights on beach or shore perpendicular side of structure.
	If lighting is on perimeter of pool deck, it must be mounted directed away from beach.
	There must be 180° to 270° beach side shields on any fixture on the perimeter of a pool deck, immediately adjacent to the beach or within line site of the beach
	If a parking garage is not fully enclosed with solid walls, without windows, louvers, or screens so that the interior is not visible from any section of beach, only low pressure sodium (LPS) lamps shall be used. Additional shields may be necessary if parking is above ground level.
	Submerged lights are only allowed on the landward side of any structure and only if fully shielded from the beach by the structure.
	Lighting in the facility and parking areas shall be kept to a minimum and shall be sea turtle friendly.
	The permittee would be expected to provide a plan for any beach furniture or other activities planned for the adjacent beach. Beach cleaning using mechanical equipment can damage sea turtle nests, and can also require additional permitting by the FDEP's Bureau of Beaches and Coastal Systems. The permittee would be expected to describe any plans for maintaining the beach seaward of the hotel.
	Marine turtles receive federal protection. For more information, please contact Ms. Lorna Patrick of the U.S. Fish and Wildlife Service (USFWS) Panama City Field Office as 850-769-0552.

Operational Requirements and Best Management Practices (BMPs)	
Resource (continued)	
Wildlife	A plan for stopping construction activities when wildlife is encountered should be implemented to allow less-mobile species to be moved or otherwise avoid effects from construction equipment.
	Predator control measures would be implemented (i.e., predator proof trash cans).
	The USFWS would review the final design for site layout and construction of the facility.
Shorebirds	The Florida Fish and Wildlife Conservation Commission (FWC) advises that five state-listed shorebird species are known to inhabit beaches in the vicinity of the project site. In order to avoid a wildlife take and the need to apply for an Incidental Take Permit, during shorebird nesting season (February 15 through September 1), the project manager should contact the FWC Regional Biologist to determine if shorebird nesting is occurring on the beach construction site.
	Daily nesting surveys should be conducted throughout the construction period or through August.
	Surveys for detecting nesting activity should be completed prior to movement of equipment, operation of vehicles, or other activities that could potentially disrupt nesting behavior or cause harm to the birds or their eggs or young.
	The FWC Regional Biologist shall be notified within 24 hours if a scrape or eggs are observed.
	A protective buffer zone, up to 300 feet wide if possible, should be created around any nests or colonial nesting areas. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
	The width of the buffer zone should be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
	FWC staff may assist the permittee with posting buffer zones with clearly marked signs around the perimeter.
	Observation of nesting shorebirds within the project area can be submitted to the Florida Beach Nesting Bird Website at www.wildflorida.org/shorebirds.
Dunes and Vegetation	Access pathways leading to the beach should be limited. Boardwalks shall be considered to preserve existing and future dune systems
	As much as possible, the existing dune systems and vegetation would be kept intact.
	Xeriscape design principles in landscaping shall be used. Natural vegetation should be incorporated into the landscape design to the extent practicable, and plants native to Santa Rosa Island used for new plantings. Vegetation should not normally be irrigated once established.
Cultural	In the event that archaeological resources are inadvertently discovered during construction, 96th CEG/CEVH, Cultural Resources Branch would be notified immediately and further ground disturbing activities would cease in that area. Identified resources would be managed in compliance with Federal law and Air Force regulations.

Operational Requirements and Best Management Practices (BMPs)	
	The developer is required to notify 96 CEG/CEVH of any fill borrow locations prior to acquiring fill material from such locations in order for 96 CEG//CEVH to determine the potential presence of archeological resources in the borrow area. Similarly, any excavated material from the site must be placed in areas pre-approved for such use in order to avoid impact to cultural resources.
Permits	
Water Resources	An Environmental Resource Permit (ERP) for construction storm water discharges would be required from the Northwest Florida Water Management District (NWFWMD). BMPs for control of erosion and sedimentation would be implemented in accordance with Federal, state and local statutes. BMPs could include temporary sediment basins, sediment fencing, or revegetation for ground stabilization. Please contact the NWFWMD's Environmental Resources Permitting Office in Crestview at (850) 683-5044 prior to permit submission.
	In addition to the ERP permit, a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges from large construction sites would be required through the FDEP.
	A permit under Section 404 of the Clean Water Act (CWA) would be required, in addition to state water quality certification review under Section 401 of the CWA prior to any impacts to the onsite jurisdictional wetlands.
	Subsequent to completion of construction, the developer of the proposed resort would be required to file a transfer request form with the NWFWMD, transferring the ERP from a construction phase permit to an operational phase permit. The purpose of the operational phase ERP is to minimize potential flooding and contamination as a result of the increase in impervious surfaces. The ERP Program would also require a permit for impacts on wetlands, although the wetland ERP (Phase II of the ERP Program) is expected to be in effect no sooner than July 2009.
	The resort developer would need to coordinate with Okaloosa County to determine potential municipal separate storm sewer system (MS4) BMPs that might be required under the respective MS4 storm water management plans. Examples of MS4 BMPs include construction storm water management, and post-construction practices, such as installing storm water retention ponds or infiltration basins, periodic checks for illicit discharges (e.g., dumping used oil into parking lot gutter systems), and reviewing storm water management education materials from the respective MS4 permit holders (i.e., Eglin AFB and Okaloosa County).
	A Consumptive Use Permit is required from the NWFWMD for the drilling and use of water wells, including water used for irrigation or other consumption.
	The developer is required to implement runoff control by minimizing clearing and stabilizing drainageways.
	The developer is required to implement erosion control by stabilizing exposed soils, protecting steep slopes, protecting waterways, and phasing construction.
	The developer is required to implement sediment control by installing perimeter controls, sediment trapping devices, and inlet protection.
	The developer is required to implement good housekeeping to include general construction site waste management, a spill prevention and control plan, and establishing appropriate vehicle maintenance and washing areas.

Operational Requirements and Best Management Practices (BMPs)	
	The developer is required to maintain adequate personnel training and documentation.
	The developer is required to revegetate impacted areas.
Permits (continued)	
Water Resources (cont'd.)	Examples of nonstructural BMPs could include the following: • Automobile maintenance restricted to specific contained areas • Vehicle washing restricted to specific contained areas • Landscaping and lawn care to minimize the application of fertilizers, pesticides, and herbicides • Street and parking lot sweeping to remove small quantities of dry chemicals and solids from areas exposed to rainfall or stormwater runoff • Hazardous materials storage with spill containment.
	The proposed project requires permitting for both potable water and domestic waste lines. If the connection size exceeds 12 inches, permitting would fall under the authority of the FDEP. For potable water permitting questions please contact Mr. John Pope at (850) 595-8300 extension 1145. For domestic wastewater permitting questions please contact Mr. Bill Evans at (850) 595-8300 extension 1153.
	The site is within a Water Resource Caution Area and is subject to a regional water supply plan. The potable water demand should be identified for this proposed use and the adequacy of the existing water supplies for this purpose.
	The developer must minimize impervious area to limit runoff and maintain onsite recharge. This should include pervious surfaces for public access and other parking areas and driveways.
	The developer shall implement exceptional stormwater treatment, such as retention, infiltration, and bioretention appropriate to site conditions.
	The developer must install high-efficiency (low volume) plumbing fixtures, appliances, and other water conserving devices.
Stormwater	Any construction area larger than one acre would require a NPDES General Permit under 40 CFR 122.26(b) (14) (x). A stormwater pollution prevention plan would also be required under the NPDES permit before beginning construction activities.
Hazardous Materials	Asbestos debris may be generated as a result of proposed building demolition activities. Proper disposal of asbestos wastes would be conducted as directed by the National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61.40–157]. Contractor personnel must be trained and certified.
	Lead-based paint debris may be generated as a result of proposed building demolition activities. Proper disposal of lead containing wastes would also be conducted in accordance with state and federal regulations, including the Toxic Substances Control Act of 1976 (TSCA) and Occupational Safety and Health Act (OSHA).

Operational Requirements and Best Management Practices (BMPs)	
Air Quality	Although a fugitive dust permit is not required since the site is less than 25 acres, a fugitive dust control plan should be developed to mitigate unnecessary dust emissions. Once specific design elements are known, the Proposed Action needs to be reviewed for a determination of whether potential new air emissions are within the limits of the Eglin AFB Clean Air Act (CAA) Title V permit. Additionally, the Proposed Action might require a determination of the applicability of New Source Review or Prevention of Significant Deterioration requirements under the CAA.
Permits (continued)	
Air Quality (cont'd.)	New emergency generators that operate under limited conditions, such as a power outage and minor maintenance, are required to submit notification to the FDEP and would not require an air operating permit. Operation of natural gas boilers for heating would be coordinated with FDEP for potential operational permits.
	The developer shall take reasonable precautions to minimize fugitive particulate (dust) emissions during any demolition, construction, or renovation activities in accordance with Florida Administrative Code (F.A.C.) 62-296. Issuance of an air construction permit from FDEP would be required prior to beginning the proposed construction activities (F.A.C. 62-210.300).
Traffic	A connection to the state highway system requires a Driveway Connection Permit and, in some cases, a Drainage Connection Permit. The developer must coordinate these permits.
	Any new intersections require a traffic signal warrant study under Florida Department of Transportation (FDOT) and design under FDOT and National Transportation Safety Board standards. The developer must coordinate any such required studies.
Hazardous Waste	The net change in hazardous materials and wastes from the proposed resort, if any, might require a permit under the Resource Conservation and Recovery Act (RCRA).
	The resort developers would work with state regulators to manage all hazardous materials and wastes in accordance with state rules and regulations for Process Safety Management of Highly Hazardous Chemicals; Occupational Safety and Health Standards, Chemical Safety; Hazards Communication; and Fire Prevention.
State Land	Should the proposal for the resort include structures in the ocean, such as a pier, jetty, or similar type of structure, the Proposed Action would occur on federal property as well as sovereign submerged lands. If this occurs, a Joint Coastal Permit would be obtained prior to any potential impact to state submerged land. The developer is required to coordinate with Eglin's Water Resources Section, 96th CEG/CEVCE on application of any such permits.
Consultations	
	Should the proposal for the resort include structures in the ocean, such as a pier, jetty, or similar type of structure, the developer would need to coordinate with Eglin AFB for consultation with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). NMFS is responsible for stewardship of marine species protected under the ESA, in addition to marine mammals under the Marine Mammal Protection Act (16 United States Code [U.S.C.] § 1361 et seq.).