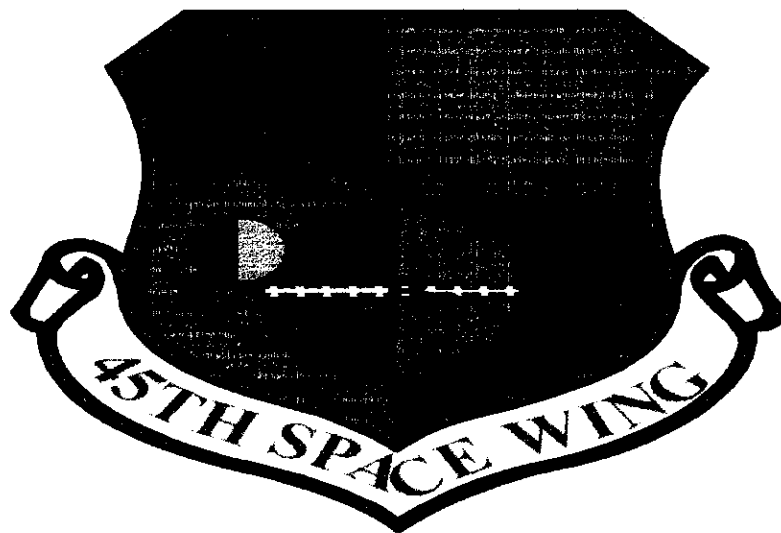


***ENVIRONMENTAL ASSESSMENT***  
***for***  
***DEVELOPMENT AND MAINTENANCE OF***  
***PATRICK AIR FORCE BASE, FLORIDA***

December 1997



***United States Department of the Air Force***  
***45 Civil Engineering Squadron (CES)***  
***Environmental Flight (CEV)***  
***Patrick Air Force Base, Florida***

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Prepared for:

United States Department of the Air Force  
45 Civil Engineering Squadron (CES)  
Environmental Flight (CEV)  
Patrick Air Force Base, Florida

Prepared by:

Vista Technologies  
5001 Technology Drive  
Huntsville, Alabama 35805

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE  
ENVIRONMENTAL ASSESSMENT FOR DEVELOPMENT AND  
MAINTENANCE OF  
PATRICK AIR FORCE BASE, FLORIDA**

Patrick AFB is the home of Headquarters, 45th Space Wing, a unit of the Air Force Space Command. From 1950 to the present, Patrick AFB has been responsible for launch, test, and support operations associated with the cruise missile program; ballistic missiles; the Apollo and Space Shuttle programs; and the Delta, Atlas, and Titan programs.

The U.S. Air Force - Patrick Air Force Base (AFB) proposes to implement an action in which facilities on the base would be demolished and constructed in support of current and future installation requirements. The operational mission of Patrick AFB would be maintained, and projects in the General Plan would be implemented, when funded. Environmental programs would be actively integrated with other planning and operational support processes. This alternative would provide efficient, environmentally sensitive, operational support at the installation and meet the installation's mission need for comprehensive planning. Best construction management practices such as comprehensive planning would be implemented to reduce and/or eliminate environmental impacts.

Alternatives considered in this Environmental Assessment (EA) include the proposed action and the no-action alternative. The no action alternative would be to maintain the existing facilities at Patrick AFB and not construct new facilities in support of changing operational requirements. The proposed action is the preferred alternative as it is the alternative in which supports current and future installation requirements. Published information was reviewed to determine the nature of related issues and concerns. The proposed action was analyzed in detail to determine which, if any, environmental resources would be impacted by the proposed action. The environmental resources examined include airspace, air quality, natural resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, socioeconomics, visual and aesthetics, and water resources.

Contingent on the summary of impacts incorporated in the EA, a Finding of No Significant Impact (FONSI) is issued based on accomplishments of any site or project specific permits, consultations, or mitigations before the start of any action.

The proposed action is currently deemed consistent with the Florida Coastal Management Program; the Air Force will ensure that the project continues to be consistent to the maximum extent possible.

An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45 CES/CEV  
Patrick AFB, FL 32925

Brig Gen F. Randall Starbuck  
45th Space Wing Commander  
Environmental Protection Committee Chairman

F. Randall Starbuck

Approved Signature

F. RANDALL STARBUCK  
Brigadier General, USAF  
Commander

1 Jan 98

Date

## COMMANDER'S SUMMARY

This environmental assessment (EA) is an analysis of the potential consequences of implementing an action in which facilities on the base would be demolished and constructed in support of current and future installation requirements. This EA is prepared in accordance with Air Force Instruction 32-7061, *The Environmental Impact Analysis Process*, which implements the tasks and procedures for the Air Force Environmental Impact Analysis Process (EIAP). The Air Force EIAP implements the procedural provisions of the National Environmental Policy Act of 1969 and regulations established by the President's Council on Environmental Quality (40 Code of Federal Regulations 1500-1508).

The purpose of this action is to incorporate the concept of master planning (defined as planning for future installation development within a framework of component plans) into Patrick AFB activities. The action is needed to provide a comprehensive plan to synergistically incorporate Patrick AFB environmental planning operations with the General Plan of the Base Comprehensive Plan and ensure best management practices are followed. The operational mission of Patrick AFB would be maintained, and projects in the General Plan would be implemented, when funded. Future individual actions may still require detailed environmental analysis and recommendations of feasible alternatives prior to construction and/or implementation. Environmental programs would be integrated with other planning and operational support processes. This alternative would provide efficient, environmentally sensitive, operational support at the installation and meet the installations' mission need for comprehensive planning.

Alternatives considered in this EA include the proposed action and the no-action alternative. The proposed action is the preferred alternative as it is the alternative in which the general goals for the installation and the objectives of the goals described in the component plans would be accomplished.

Published information was reviewed to determine the nature of related issues and concerns. The analyses contained in Chapter 3 of the EA demonstrated that there are no significant impacts expected as a result of the proposed action. The following resources are shown to have impacts considered to be not significant and mitigable: airspace, air quality, natural resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, socioeconomics, visual and aesthetics, and water resources.

## LIST OF ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
AFB	Air Force Base
AFI	Air Force Instruction
AICUZ	Air Installation Compatibility Use Zone
ARPA	Archaeological Resource Protection Act
ARTCC	Air Route Traffic Control Center
bls	Below Land Surface
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Civil Engineering Squadron
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CATEX	Categorical Exclusion
DOD	Department of Defense
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulations
FDEP	Florida Department of Environmental Protection
FONSI	Finding of No Significant Impact
HF	High Frequency
IFR	Instrument Flight Rules
IRP	Installation Restoration Program
JP-4	Jet Fuel
Ldn	Day-Night Average Sound Level
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO <sub>2</sub>	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
OPLAN	Operations Plan
OSHA	Occupational Safety & Health Administration
Pb	Lead
PCB	Polychlorinated Biphenyl

pH	Measure of Acidity or Alkalinity
PM-10	Particulates Under 10 Microns in Diameter
POL	Petroleum, Oil, and Lubricants
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
ROI	Region Of Influence
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Officer
SO <sub>2</sub>	Sulfur Dioxide
UHF	Ultra High Frequency
U.S.	United States
U.S.C.	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USTs	Underground Storage Tanks
VFR	Visual Flight Rules
VHF	Very High Frequency

## UNITS OF MEASURE

dB	decibel(s)
ft	foot(feet)
gpd	gallons per day
kV	kilovolts
mgd	million gallons per day
ug/m <sup>3</sup>	microgram(s) per cubic meter
mg/m <sup>3</sup>	milligram(s) per cubic meter
ppm	part(s) per million

## TABLE OF CONTENTS

COMMANDER'S SUMMARY .....	ES-1
LIST OF ACRONYMS AND ABBREVIATIONS .....	i
TABLE OF CONTENTS .....	iii
 CHAPTER 1.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES .....	1-1
1.1 Structure of the Environmental Assessment .....	1-1
1.2 Description of the Proposed Action .....	1-1
1.2.1 Alternative 1 - Proposed Action .....	1-1
1.2.2 Alternative 2 - No-Action Alternative .....	1-2
1.3 Purpose and Need for the Action .....	1-2
1.4 Location of the Proposed Action .....	1-2
1.5 Background .....	1-2
1.5.1 History of Patrick AFB .....	1-2
1.5.2 Mission of Patrick AFB .....	1-5
1.6 Assessment Analysis .....	1-5
1.6.1 Programmatic Nature of the Environmental Assessment .....	1-5
1.6.2 Programmatic Evaluation Elements .....	1-6
1.6.3 Programmatic Analysis Procedures .....	1-6
1.6.4 Types of Environmental Documentation .....	1-7
1.6.5 Assumptions Regarding the Programmatic Analysis Procedure .....	1-8
1.6.6 Applicable Regulations and Compliance Procedures .....	1-8
1.7 Related Environmental Documentation .....	1-9
1.8 Agencies Involved in Environmental Analysis .....	1-9
1.9 Public Involvement .....	1-9
 CHAPTER 2.0 AFFECTED ENVIRONMENT .....	2-1
2.1 Airspace .....	2-3
2.2 Air Quality .....	2-5
2.3 Natural Resources .....	2-6
2.3.1 Vegetation .....	2-6
2.3.2 Wetlands .....	2-7
2.3.3 Fish and Wildlife .....	2-8
2.3.4 Threatened and Endangered Species .....	2-9
2.4 Cultural Resources .....	2-11
2.5 Geology and Soils .....	2-14
2.6 Hazardous Materials and Waste .....	2-15
2.6.1 Hazardous Materials .....	2-15
2.6.2 Installation Restoration Program (IRP) .....	2-17
2.6.3 Solid Waste .....	2-17
2.6.4 Hazardous Waste .....	2-19



2.7	Health and Safety .....	2-20
2.8	Infrastructure and Transportation .....	2-21
2.9	Land Use .....	2-23
2.10	Noise .....	2-27
2.11	Socioeconomics .....	2-28
2.12	Visual and Aesthetics .....	2-29
2.13	Water Resources .....	2-30
2.13.1	Surface Water .....	2-30
2.13.2	Groundwater .....	2-31
2.13.3	Stormwater/Wastewater .....	2-31
CHAPTER 3.0 ENVIRONMENTAL CONSEQUENCES .....		3-1
3.1	AIRSPACE .....	3-3
3.1.1	Proposed Action .....	3-3
3.1.2	No-Action Alternative .....	3-4
3.1.3	Cumulative Impacts .....	3-4
3.1.4	Mitigation Measures .....	3-4
3.2	AIR QUALITY .....	3-4
3.2.1	Proposed Action .....	3-5
3.2.2	No-Action Alternative .....	3-5
3.2.3	Cumulative Impacts .....	3-5
3.2.4	Mitigation Measures .....	3-5
3.3	NATURAL RESOURCES .....	3-6
3.3.1	Proposed Action .....	3-6
3.3.2	No-Action Alternative .....	3-7
3.3.3	Cumulative Impacts .....	3-7
3.3.4	Mitigation Measures .....	3-7
3.4	CULTURAL RESOURCES .....	3-7
3.4.1	Proposed Action .....	3-8
3.4.2	No-Action Alternative .....	3-8
3.4.3	Cumulative Impacts .....	3-8
3.4.4	Mitigation Measures .....	3-8
3.5	GEOLOGY AND SOILS .....	3-9
3.5.1	Proposed Action .....	3-9
3.5.2	No-Action Alternative .....	3-9
3.5.3	Cumulative Impacts .....	3-9
3.5.4	Mitigation Measures .....	3-9
3.6	HAZARDOUS MATERIALS AND WASTE .....	3-9
3.6.1	Proposed Action .....	3-10
3.6.2	No-Action Alternative .....	3-10
3.6.3	Cumulative Impacts .....	3-10
3.6.4	Mitigation Measures .....	3-10
3.7	HEALTH AND SAFETY .....	3-10
3.7.1	Proposed Action .....	3-10

3.7.2	No-Action Alternative .....	3-11
3.7.3	Cumulative Impacts .....	3-11
3.7.4	Mitigation Measures .....	3-11
3.8	INFRASTRUCTURE AND TRANSPORTATION .....	3-11
3.8.1	Proposed Action .....	3-11
3.8.2	No-Action Alternative .....	3-12
3.8.3	Cumulative Impacts .....	3-12
3.8.4	Mitigation Measures .....	3-12
3.9	LAND USE .....	3-12
3.9.1	Proposed Action .....	3-12
3.9.2	No-Action Alternative .....	3-13
3.9.3	Cumulative Impacts .....	3-13
3.9.4	Mitigation Measures .....	3-13
3.10	NOISE .....	3-13
3.10.1	Proposed Action .....	3-13
3.10.2	No-Action Alternative .....	3-13
3.10.3	Cumulative Impacts .....	3-13
3.10.4	Mitigation Measures .....	3-14
3.11	SOCIOECONOMICS .....	3-14
3.11.1	Proposed Action .....	3-14
3.11.2	No-Action Alternative .....	3-14
3.11.3	Cumulative Impacts .....	3-15
3.11.4	Mitigation Measures .....	3-15
3.12	VISUAL AND AESTHETICS .....	3-15
3.12.1	Proposed Action .....	3-15
3.12.2	No-Action Alternative .....	3-15
3.12.3	Cumulative Impacts .....	3-15
3.12.4	Mitigation Measures .....	3-15
3.13	WATER RESOURCES .....	3-15
3.13.1	Proposed Action .....	3-16
3.13.2	No-Action Alternative .....	3-16
3.13.3	Cumulative Impacts .....	3-16
3.13.4	Mitigation Measures .....	3-16
3.14	CHANGES IN MISSION AND OPERATIONS .....	3-16
3.15	CUMULATIVE IMPACTS SUMMARY .....	3-17
3.16	MITIGATION MEASURES SUMMARY .....	3-17
3.17	CONFLICTS WITH FEDERAL, STATE, OR LOCAL LAND USE PLANS, POLICIES, AND CONTROLS .....	3-19
3.18	ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL .....	3-19
3.19	NATURAL OR DEPLETABLE RESOURCE REQUIREMENTS AND CONSERVATION POTENTIAL .....	3-19
3.20	ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED ...	3-19

3.21	RELATIONSHIP BETWEEN SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY .....	3-20
3.22	IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES ...	3-20
3.23	FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS .....	3-20
3.24	SUGGESTED ACTIONS TO ENHANCE THE PATRICK AFB ENVIRONMENT .....	3-20
3.25	CONDITIONS NORMALLY REQUIRING AN ENVIRONMENTAL IMPACT STATEMENT .....	3-21
CHAPTER 4.0 AREA DEVELOPMENT PLANS .....		4-1
CHAPTER 5.0 SUMMARY AND CONCLUSION .....		5-1
CHAPTER 6.0 LIST OF PREPARERS .....		6-1
CHAPTER 7.0 INDIVIDUALS/AGENCIES CONSULTED .....		7-1
CHAPTER 8.0 REFERENCES .....		8-1

## LIST OF FIGURES

1-1	Patrick AFB General Location Map .....	1-3
1-2	Patrick AFB Facility Layout .....	1-4
2-1	Patrick AFB Flight Tracks .....	2-4
2-2	Location of Existing and Former USTs at Patrick AFB .....	2-16
2-3	Composite Constraints .....	2-18
4-1	Facilities Development Plan .....	4-2

## LIST OF TABLES

2-1	Bulk Storage Facilities Issued Air Permits .....	2-6
2-2	Federally and State Listed Species and Species of Special Concern with Potential for Occurrence at Patrick AFB .....	2-10
2-3	Historic Buildings at Patrick AFB .....	2-13

## APPENDICES

A	Matrix of Existing Environmental Assessments
B	Overview of Patrick AFB General Plan
C	Discussion of Aerial Photographs
D	Applicable Laws and Regulations
E	Patrick AFB Component Plans

## **CHAPTER 1.0**

### **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

#### **1.1 STRUCTURE OF THE ENVIRONMENTAL ASSESSMENT**

This environmental assessment (EA) is prepared in accordance with Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, which implements the tasks and procedures for the Air Force Environmental Impact Analysis Process (EIAP). The Air Force EIAP implements the procedural provisions of the National Environmental Policy Act (NEPA) of 1969 and regulations established by the President's Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508).

Section 1.0 of this EA discusses the description of the proposed action and no-action alternative, introduces the purpose and need for the action, notes the location of the proposed action, discusses the history and mission of Patrick Air Force Base (AFB), discusses the assessment analysis procedure, notes the agencies involved in environmental analysis, and briefly discusses public involvement. Section 2.0 describes the affected environment at the location of the proposed action (Patrick AFB). Section 3.0 assesses the potential environmental consequences of implementing the proposed action and the no-action alternative and highlights cumulative impacts and mitigation measures for each resource. Section 4.0 highlights the conclusions of the assessment, and Section 5.0 contains a list of preparers for this EA. Section 6.0 lists the agencies, organizations, and individuals that were sent a copy of the EA. Section 7.0 contains a list of the references used to prepare this document. Appendix A contains a matrix of existing environmental assessments with copies of their respective Findings of No Significant Impact (FONSI). Appendix B contains an overview of the Patrick AFB General Plan and Design Projects List for 1996 - 1999. As part of this Programmatic Environmental Assessment, aerial photographs were taken of the entire base. A brief discussion of these photographs is provided in Appendix C. The photographs are on file at the Patrick AFB Environmental Planning Office. Appendix D contains a summary of applicable environmental laws and regulations, and Appendix E contains an overview of the Patrick AFB component plans.

References are presented in three ways. References presented after a period refer to the paragraph preceding the citation. References presented before a period refer only to the information in that sentence. References presented within a sentence refer specifically to the fact or title that they follow.

#### **1.2 DESCRIPTION OF THE PROPOSED ACTION**

##### **1.2.1 Alternative 1 - Proposed Action**

The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. The general goals for the installation outlined in the Patrick AFB Installation General Plan and the objectives of the goals described in the component plans would be

implemented to reduce and/or eliminate environmental impacts. Future individual actions may still require detailed environmental analysis and recommendations of feasible alternatives prior to construction and/or implementation. This alternative would provide efficient, environmentally sensitive operational support at the installation and meet the installations's mission need for comprehensive planning.

### **1.2.2 Alternative 2 - No-Action Alternative**

The no-action alternative would be to maintain the existing facilities at Patrick AFB and not construct new facilities in support of changing operational requirements. This alternative would provide for operational support of various Patrick AFB operations, but not at the efficiency available from the proposed action. The mission need for operational planning support could be met under this alternative but could not be done in a comprehensive, synergistic manner. In addition, a mission objective could be jeopardized if adequate support is not planned in a timely fashion.

## **1.3 PURPOSE AND NEED FOR THE ACTION**

The purpose and need for this action is to realign and improve the bases' allocatable space to meet constantly changing operational requirements. This would include demolishing unmaintainable facilities, renovating outdated facilities, and constructing new facilities, to meet the bases' short and long term needs for lodging, office, commercial and industrial space. The action is needed to provide a comprehensive plan to synergistically incorporate Patrick AFB environmental planning operations with the installation General Plan and ensure best management practices are followed.

## **1.4 LOCATION OF THE PROPOSED ACTION**

Patrick AFB is a U.S. Air Force Space Command installation hosting the 45th Space Wing. The installation, located approximately 40 miles east of Orlando, consists of 2,254 acres on a barrier island along the central east coast of Florida, just south of the city of Cocoa Beach in Brevard County. The 1,943 acre main base is bounded on the east by the Atlantic Ocean, on the west by the Banana River, and on the north and south by portions of urban Brevard County (Figure 1-1). A separate parcel of land consisting of 311 acres contains the bulk of the housing facilities for Patrick AFB and is located approximately one mile south of the main base (Figure 1-2).

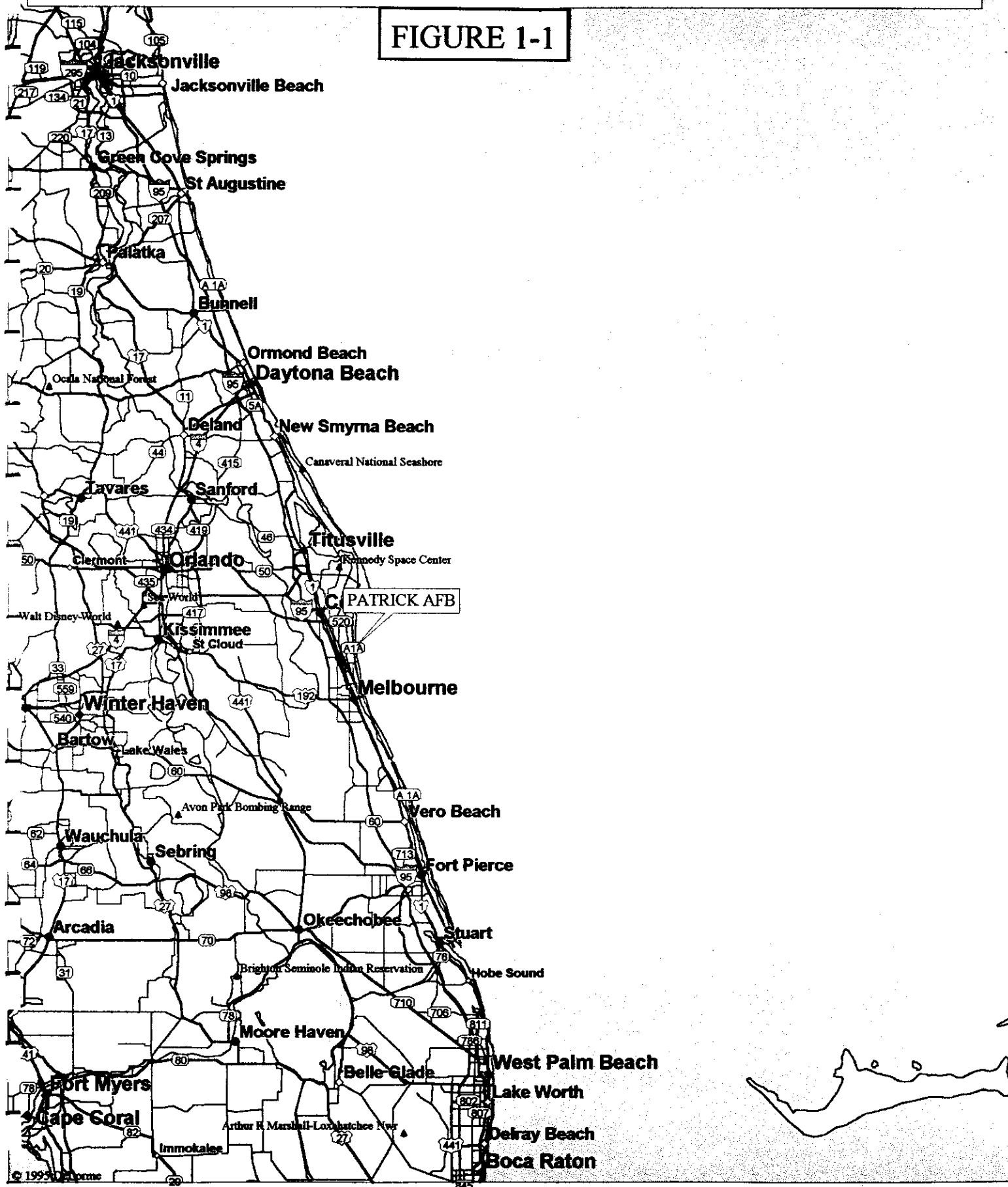
## **1.5 BACKGROUND**

### **1.5.1 History of Patrick AFB**

Patrick AFB was established in 1940 by the U.S. Navy as the Banana River Naval Air Station. The facility served as an active base for antisubmarine sea-patrol planes during World War II. It was deactivated in 1947 and transferred to the Air Force in 1948. The installation was given its present name in 1950 in honor of Major General Mason M. Patrick, chief of the U.S. Army Air Service from 1921 to 1927. In 1950, the Air Force began developing the Eastern Test Range.

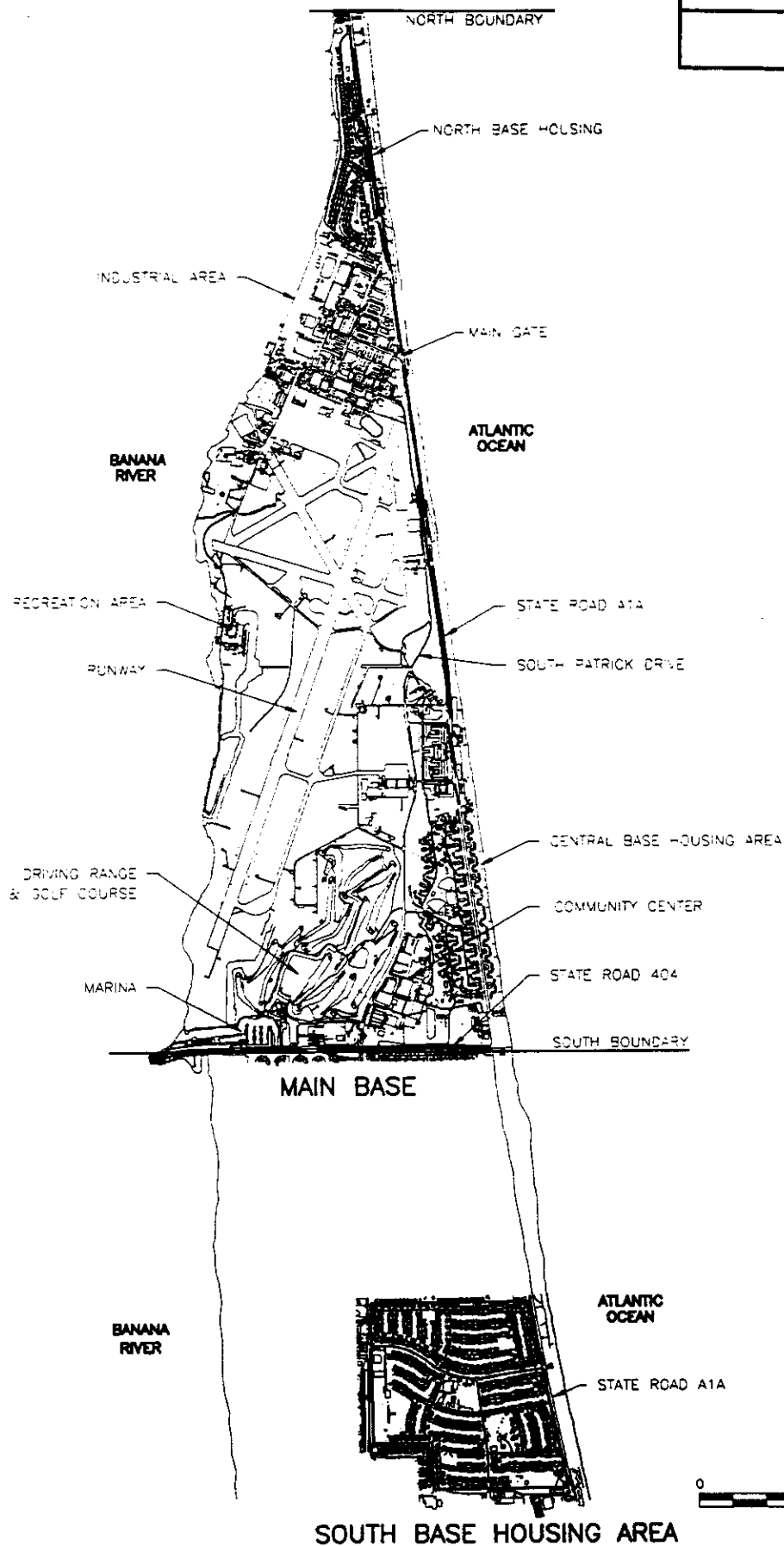
# PATRICK AFB GENERAL LOCATION

FIGURE 1-1



# FACILITY LAYOUT PATRICK AFB

FIGURE 1-2



The Eastern Test Range had three tracking sites in operation at Cape Canaveral, Jupiter Auxiliary Air Force Base and Grand Bahama Island by the end of 1954. Twelve down range stations were built during the 1950's to give the Eastern Test Range the ability to support a 5,000 mile-long mission. On October 31, 1957, the Eastern Test Range supported its first 5,000 mile-long mission (a SNARK test flight). After a slow start, ballistic missile and space programs took root at the Cape and quickly dominated the range after that. By January 1960, the Eastern Test Range had grown to include: 13 major stations, approximately 91 outlying sites, a fleet of ships and three marine support stations.

Despite the obvious signs of prosperity, many of the Eastern Range's old missile and space programs matured or disappeared by the late 1960's. Budget restrictions were increasingly tight, and there were only a few viable space and missile programs in prospect for the 1970's. Under the circumstances, Air Force planners were compelled to downsize many range assets, and the Air Force began deactivating the station in the early 1960's. Following the last SNARK launch in December 1960 and the last MERCURY mission in May 1963, half a dozen range stations were retired. During this downsizing, many downrange stations were inactivated and equipment consolidated. The Jonathan Dickinson Missile Tracking Annex was built near Jupiter, Florida to replace the range station on Grand Bahama Island with the Eastern Test Range's first modern consolidated instrumentation facility. A revitalization of America's unmanned space vehicle industry began in the late 1980's. Contracts were signed for new launch vehicles including the TITAN IV, DELTA II, and ATLAS II. Refurbishment of Cape Canaveral's launch pads and efforts to modernize the Eastern Range with the Range Operations Control Center (ROCC), fiber optics communications, consolidated instrumentation facilities on Antigua and Ascension and radar and optics improvements were completed in 1995.

From 1950 to 12 November 1991, Patrick AFB was a part of the Eastern Space and Missile Center. From 12 November 1991 to the present, Patrick AFB has been part of the Air Force Space Command's 45th Space Wing (45th SW).

### **1.5.2 Mission of Patrick AFB**

The mission of Patrick AFB is to enhance national strength through assured access to space. From 1950 to the present, Patrick AFB has been responsible for launch, test, and support operations associated with the cruise missile program; ballistic missiles; the Apollo and Space Shuttle programs; and the DELTA, ATLAS, and TITAN programs.

## **1.6 ASSESSMENT ANALYSIS**

### **1.6.1 Programmatic Nature of the Environmental Assessment**

This EA has been prepared to evaluate past EAs completed for Patrick AFB and planned actions on the installation. However, the master planning process and related operations that occur at Patrick AFB are subject to continual change in response to a wide range of influencing factors.



Therefore, this document also includes programmatic elements designed to support the evaluation of environmental impacts relating to future actions and plans.

These programmatic evaluation elements have been designed to accomplish the following:

- 1) Enhance the installation's ability to incorporate environmental considerations into the formulation of operating and planning decisions at the early concept stage, thereby minimizing potential impacts and improving the efficiency of the planning and environmental review process.
- 2) Reduce the need for preparation of repetitive individual environmental documents for minor or routine actions that are similar to those evaluated in this document.
- 3) Reduce the effort required to evaluate major new actions by using this EA as a baseline reference.

### **1.6.2 Programmatic Evaluation Elements**

Specific elements have been incorporated into this EA to meet programmatic review goals. These elements are described below.

**Typical Plans, Projects, and Mission Activities** - This EA includes an extensive list of currently identified EAs and component plans for Patrick AFB (Appendix A). These actions are representative of the types of actions that are likely to be identified and evaluated in the future.

**Environmental Baseline Description** - Chapter 2.0 of this EA, Affected Environment, provides a brief description of the existing physical, social, and economic environment within and around Patrick AFB. This baseline data is used to evaluate the impacts of actions identified in this EA and would be used in evaluating the potential impact of future actions. This baseline data should be updated approximately every five years to maintain the usefulness of this document for programmatic review purposes.

### **1.6.3 Programmatic Analysis Procedures**

This section of the EA describes the steps to be taken by a proponent or reviewer to evaluate the potential environmental impact of a proposed action. Based on the results of this screening, the reviewer would have a basis for determining the type and extent of additional environmental documentation required to implement the proposed action.

Use of this EA as a single source of evaluation would not guarantee that a project can be implemented without adverse environmental impacts since the existing condition database is subject to continuous refinement and the level of detail included in this EA is purposely broad in scope. Therefore, it would still be necessary for each project to be reviewed by Patrick AFB Environmental Planners. However, the information and procedures that follow provide a tool for initial screening and early avoidance of impacts to currently known resources.

- **Conduct Consultations** - To assist proponents with their decision making, it is appropriate to consult with the Environmental Planning Office to help determine whether this EA is applicable

to the proponent's actions and to assist with the specific evaluation of the type, extent, and level of environmental effects associated with the proposed action. If it is necessary to prepare supplemental environmental documentation such as an EA or EIS, the Environmental Planning Office would assist in this effort.

- Determine if the Proposed Action is specifically evaluated in this EA - As an initial step, Appendix B (design projects lists) of this document should be reviewed to determine if the proposed action has been specifically listed and addressed. Each project still needs to be reviewed and the 45th SW Environmental Impact Analysis Process (EIAP) procedures outlined in the 28 January 1997 45 CES letter followed to determine what impacts are addressed and what impacts need further evaluation. This procedure should be used as a way of documenting that the project was reviewed by Environment Planning and evaluated against the EA. However, other sections of the EA (i.e., Chapter 3.0, Environmental Consequences), must be reviewed to identify the type and extent of impacts that were identified, and any related mitigation recommendations or commitments. In addition, the Environmental Planning Office staff will verify that existing conditions have not changed and that the conclusions of this EA regarding the specific project are still valid. Environmental Planning Office staff would assist the proponent in determining what level of supplemental documentation, if any, is required.
- Determine if the Proposed Action is within the scope of this EA - If the proposed action has not been specifically addressed in this EA, then a determination should be made as to if it is within the scope of the programmatic review comments of this document. In order for a new action to be covered by this EA, it must be located within installation boundaries and fall under one of the broad evaluation categories (i.e., new construction, renovation, infrastructure improvement, or component plans). If the proposed action falls outside of these parameters, the 45th SW EIAP procedure must be followed and the Environmental Planning Office consulted before proceeding with the following step. If the proposed action is within the parameters, the proponent should complete the EIAP procedure and proceed to the next step.
- Determine if the Proposed Action is eligible for a Categorical Exclusion (CATEX) - A CATEX is defined as a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in implementation of these regulations and for which, therefore, neither an EA nor an EIS is required (CFR 1508.4, *Categorical Exclusion*). As a result of following the 45th SW EIAP procedure, if it can be determined that the proposed action is not covered by a CATEX, the Environmental Planning Office would assist in preparing supplemental environmental documentation.

#### **1.6.4 Types of Environmental Documentation**

The types of environmental documentation required as a result of applying the programmatic analysis procedures described in Section 1.6.3 would vary depending on the findings of the proponent and Environmental Planning Office. All documentation should conform to applicable Air Force regulations.

Because the current mission of Patrick AFB is relatively constant, it is expected that many future actions would be very similar to those that have been identified and evaluated in this document. Therefore, in many cases, analysis of new projects would be limited to application of the 45th SW EIA procedure and preparation of an AF Form 813. The AF Form 813 describes the proposed action and contains steps for a preliminary environmental survey and concludes with an environmental analysis determination. It is used not only to indicate when an EA is required, but also when a proposed action qualifies for a CATEX. An AF Form 813 is also used to document the CATEX.

In cases where a separate EA and FONSI or an EIS and related Record of Decision (ROD) are required, these documents should “tier” off this programmatic EA to the maximum extent possible to minimize the duplication of effort, complexity, and size of these future documents.

#### **1.6.5 Assumptions Regarding the Programmatic Analysis Procedure**

The following list of assumptions has been provided to further clarify the intent and use of this Programmatic EA and to ensure that the document is applied in a consistent and logical manner. Through this Programmatic EA, Patrick AFB agrees to accept the findings of the document and commit physical and monetary resources to ensure that referenced environmental protection measures are implemented as required to comply with applicable laws and regulations. The proponent of a proposed action should understand that the same obligations should be incorporated into their project planning using this EA to evaluate their proposed action(s).

This EA does not provide blanket coverage. In most situations, actions similar to those described herein can proceed based on an AF Form 813, or other documents that tier from this EA. However, subsequent tiered EA or EIS documents must include evidence of an evaluation, anticipated impacts, and mitigation commitments for any impacts determined to be significant.

#### **1.6.6 Applicable Regulations and Compliance Procedures**

The U.S. Department of the Air Force is required to comply with the NEPA. In partial fulfillment of NEPA requirements and as directed by Executive Order 11514, actions taken at Patrick AFB are to be evaluated to identify potential impacts to the environment. Applicable Federal, state, and local laws and regulations that pertain to the action would be identified in the environmental review process. Accordingly, a list of applicable laws and regulations is included in Appendix D.

Air Force Policy Directive 32-70, *Environmental Quality*, outlines Air Force commitments toward environmental quality. These commitments include cleaning up environmental damage resulting from the past activities of the Air Force, meeting all environmental standards applicable to present operations, planning future activities to minimize environmental impacts, managing responsibly the irreplaceable natural and cultural resources it holds in public trust, and eliminating pollution from its activities wherever possible. The Federal Environmental Statutes and Executive Orders to be reviewed are also listed in Appendix D.

Air Force Instruction 32-7061, *The Environmental Impact Analysis Process*, identifies responsibilities, general compliance requirements, and procedures to protect and preserve the quality of the environment. It implements the Air Force EIAP and provides procedures for environmental impact analysis both within the United States and abroad.

## **1.7 RELATED ENVIRONMENTAL DOCUMENTATION**

A list of Environmental Assessments completed at Patrick AFB is included in Appendix A.

## **1.8 AGENCIES INVOLVED IN ENVIRONMENTAL ANALYSIS**

The Florida State Clearinghouse reviews Environmental Assessments for projects planned at Patrick AFB pursuant to Gubernatorial Executive Order 95-359; the Coastal Zone Management Act; 16 U.S.C. SS 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. SS 4321, 4331-4335, and 4341-4347. The Florida State Clearinghouse sends copies of the draft environmental assessments to applicable regulatory agencies for review and passes the review comments to Patrick AFB so that they can be addressed in the final environmental assessment.

## **1.9 PUBLIC INVOLVEMENT**

Public involvement would take place at the completion of this EA process. There would be a 30-day comment period after the Notice of Availability of the Programmatic Environmental Assessment for Development and Maintenance of Patrick Air Force Base is published in the local newspaper.

## **CHAPTER 2.0**

### **AFFECTED ENVIRONMENT**

This section describes the environmental characteristics that may be affected by the proposed action. The affected environment is described in order to provide a context for understanding the potential impacts. Those components of the affected environment that are of greater concern relevant to the potential impacts are described in greater detail.

Available literature (such as existing Patrick AFB EAs and installation general plans) was acquired, and data gaps (questions that could not be answered from the literature) were identified. To fill the data gaps and to verify and update available information, installation personnel and Federal, state, and local regulatory agencies were contacted. Cited literature, telephone interviews, and referenced material are presented in Section 7.0.

Thirteen broad environmental components were considered to provide a context for understanding the potential effects of the proposed actions and to provide a basis for assessing the significance of potential impacts. Several of these environmental components are regulated by Federal and/or state environmental statutes, many of which set specific guidelines, regulations, and standards. These standards provide a benchmark to assist in determining the significance of environmental impacts under the NEPA evaluation process. The compliance status of each project area with respect to environmental requirements was included in the information collected on the affected environment. The areas of environmental consideration, discussed briefly as follows, are airspace, air quality, natural resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure and transportation, land use, noise, socioeconomics, visual and aesthetics, and water resources. Neither ongoing mission nor daily operations environmental compliance at Patrick AFB is evaluated in this EA.

**Airspace** - Existing information on airspace was reviewed to identify any known conflicts between existing and future airspace restrictions.

**Air Quality** - Existing information on air quality was reviewed to identify air quality issues with particular attention paid to background ambient air quality compared to the primary National Ambient Air Quality Standards (NAAQS). In addition, information was obtained on whether the installation was located in an attainment or nonattainment area. Compliance with air emission permits, indicating that a facility is not in violation of Clean Air Act (CAA) requirements, was ascertained by contacting the appropriate regulatory agencies.

**Natural Resources** - Existing information on plant and animal species and habitat types in the vicinity of the sites was reviewed, with particular attention paid to the presence of any protected species, especially Federal or state threatened or endangered species.

**Cultural Resources** - Existing information on cultural resources and the potential for the presence of resources eligible for inclusion in the National Register of Historic Places (National Register) was reviewed.

**Geology and Soils** - Existing information on topographic, geologic, and soil resources on the installation was reviewed to determine any physical resource concerns.

**Hazardous Materials and Waste** - Existing management practices and records of compliance for hazardous materials and waste were reviewed to determine the installation's capability to handle additional materials and waste. Records were also reviewed to determine any potential problems with use, handling, storage, treatment, or disposal that may occur from project activities.

**Health and Safety** - Existing environmental documents were reviewed and installation and regulatory agency personnel were contacted to determine if public and occupational health and safety concerns are an issue at the installation. Safety regulations were also reviewed with regard to hazardous materials storage, handling, and disposal.

**Infrastructure and Transportation** - Existing information on the capacity and current demands of infrastructure elements (drinking water, wastewater, power, telecommunications, and transportation) at the installation was examined to identify any infrastructure constraints to conducting the proposed activities.

**Land Use** - Installation General Plans, environmental management plans, resource management plans, and other existing documents were reviewed to identify any known conflicts between existing and future facilities, land uses, and proposed activities.

**Noise** - Existing environmental documents were reviewed and installation and regulatory agency personnel contacted to determine if noise concerns are an issue.

**Socioeconomics** - Existing information on area population and installation personnel numbers was reviewed.

**Visual and Aesthetics** - Examination of the surroundings of the installation was used to provide a baseline of the visual and aesthetic characteristics that could potentially be affected.

**Water Resources** - Existing information on surface-water and groundwater quality and supply was reviewed to identify any water resource impacts from the proposed action. Wastewater discharge permits and compliance status were also considered in determining baseline conditions.

For each environmental media, a region of influence (ROI) has been established. The ROI is the geographic area within which a Federal action, program, or activity may cause changes in the natural or man-made environment.

## 2.1 AIRSPACE

Region of Influence - The ROI for airspace at Patrick AFB includes that airspace within 5 nautical miles of the base.

### Affected Environment

Patrick AFB has two functioning runways (numbered 02/20 and 11/29) (Figure 2-1). Runway 02/20 is the longest runway and is the primary runway. There are also three helicopter landing areas on the base. The installation has a control tower with hours of operation from 7:00 A.M. to 11:00 P.M. Patrick AFB has approximately 110,000 flight operations per year. Aircraft based at the installation include the H-60 and UH-1 helicopters, C-130 military aircraft, Gulfstream-159 aircraft, and various general aviation aircraft that are part of the Patrick AFB Flying Club. Numerous transient aircraft use Patrick AFB including the C-5, C-141, C-17, P-3 Orion, and multiple types of military jet fighter aircraft. Commercial aircraft are not allowed to land at the base, but local area flying schools do use the airspace for various types of training activities including instrument approaches leading to low/missed approaches at the base. (Carey 1996)

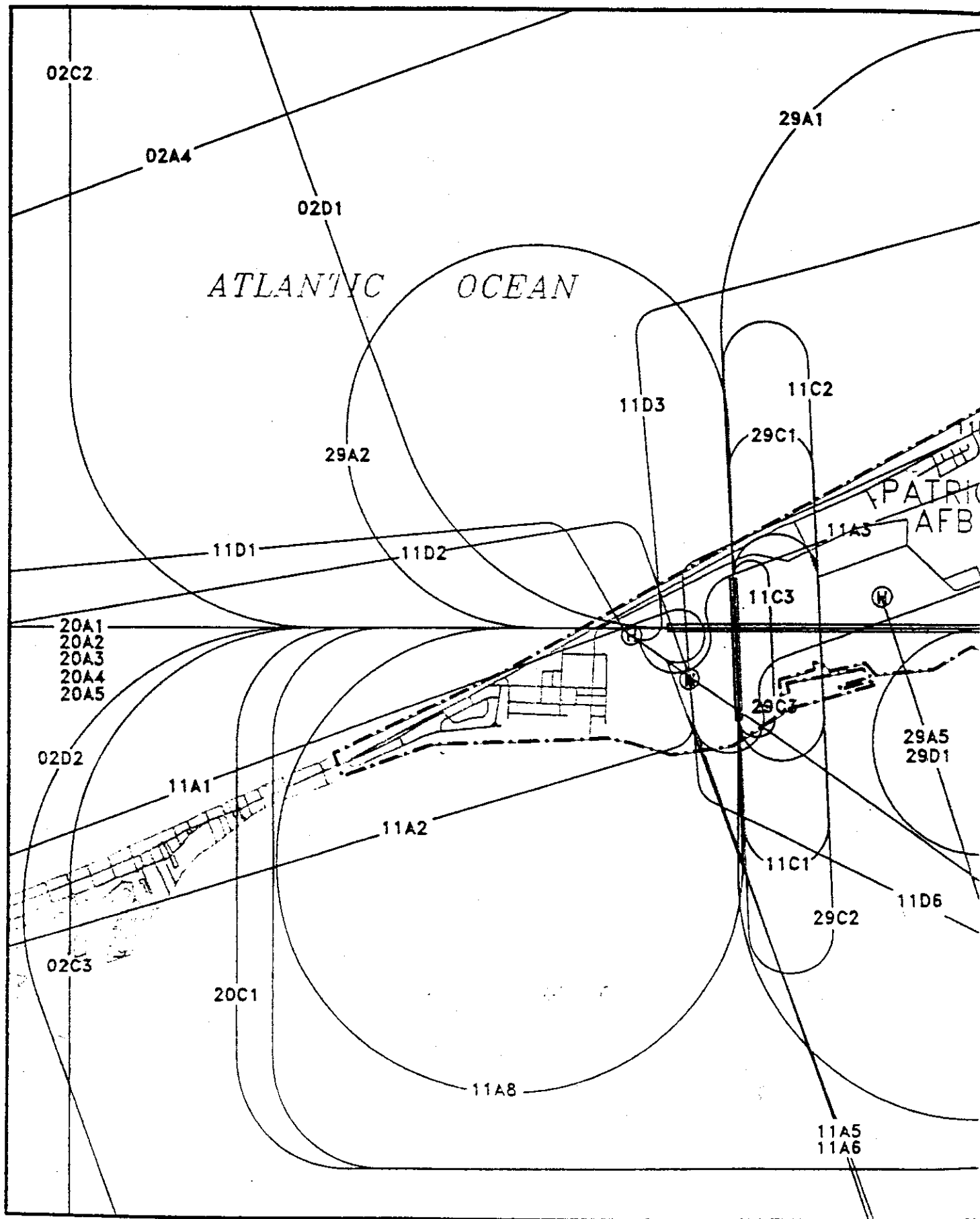
Noise is a concern at the base so the airport pattern altitude has been raised from 1,500 feet above mean sea level (MSL) to 2,000 feet above MSL over Merritt Island in an effort to prevent disturbances from aircraft operations to the local population. In addition, departing aircraft must wait until they are at least 3.5 miles south of the departure end of the runway before turning to the west over the mainland for noise abatement purposes. (Carey 1996)

Patrick AFB aircraft use the following basic flight patterns (Patrick AFB 1993):

- Straight out departure
- Straight in approach
- River departures to the west
- Overhead landing pattern from the north and south
- Instrument flight rules (IFR) or radar closed pattern
- Visual flight rules (VFR) or closed pattern
- Re-entry VFR pattern
- Ocean departures to the east.

Patrick AFB flight patterns (Figure 2-1) result from several considerations including (Patrick AFB 1993):

- takeoff patterns routed to avoid heavily populated areas as much as possible;
- Air Force criteria governing the speed, rate of climb, and turning radius for each type of aircraft;
- efforts to control and schedule missions to keep noise levels low, especially at night; and
- coordination with the Federal Aviation Administration to minimize conflict with civilian aircraft operations, especially those related to Melbourne Airport.





**FIGURE 2-1**

**Patrick Air Force Base  
Flight Tracks**

**Legend:**

Ⓜ Helipad

**SOURCES:**

- (1) Bureau of the Census  
TIGER/Line Data - 1990
- (2) NOISEMAP Version 6.1

True North



Magnetic North  
Var. 4.3°W  
Mar 1993

**SCALE IN THOUSANDS OF FEET**



Miami Air Route Traffic Control Center (ARTCC) controls the airspace surrounding Patrick AFB and to the south, while Jacksonville ARTCC controls the airspace to the north of the base. The closest Federal Airway in the vicinity of the installation is V3 running just west of the Indian River between the Ormond Beach Vortac and the Melbourne VOR-DME. There are additional Federal Airways further to the west of V3 (e.g., V437, V51, and V537). There are no Military Operations Areas or Prohibited Areas in the vicinity of Patrick AFB, while the closest Warning Areas (W) to Patrick AFB are W-497A and W-497B, located to the east of the base over the Atlantic Ocean. The closest Restricted Areas (R) to Patrick AFB are R-2931, R-2932, R-2933, R-2934, and R-2935, located around Cape Canaveral to the north of Patrick AFB. There are no Military Training Routes in the vicinity of Patrick AFB. The closest is approximately 25 miles to the west of the base. (Carey 1996)

There are both public and private airports near Patrick AFB. The closest public airports are Melbourne International located approximately 8 miles south of the base and Merritt Island Airport located approximately 5 miles northwest of the base. The closest private airport is Rockledge Airport located approximately 5 miles west/northwest of the base. Melbourne International Airport approach and departure procedures are coordinated by Patrick AFB. Approach and departure procedures into Cape Canaveral airspace are also coordinated by Patrick AFB. (Carey 1996)

## 2.2 AIR QUALITY

Region of Influence - The ROI for air quality is Patrick AFB and Brevard County.

### Affected Environment

Air quality at a specific location is evaluated by the concentrations of various pollutants in the atmosphere expressed in units of parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The significance of a pollutant concentration is usually determined by comparison with Federal or state ambient air quality standards. These standards represent levels of allowable pollutants that protect public health and welfare with a reasonable margin of safety established by the U.S. Environmental Protection Agency (EPA). The NAAQS are defined as the maximum acceptable ground level concentrations of contaminants allowable. These standards include concentrations for carbon monoxide (CO), nitrogen dioxide ( $\text{NO}_2$ ), ozone ( $\text{O}_3$ ), respirable particulate matter less than or equal to 10 micrometers in diameter (PM-10), sulfur dioxide ( $\text{SO}_2$ ), and lead (Pb). Although the EPA has the ultimate responsibility for protecting ambient air quality, the Florida Department of Environmental Protection (FDEP) monitors air quality within Florida.

Regions within a state are classified as attainment areas; areas in compliance with the NAAQS, and nonattainment areas. A nonattainment area is one where monitoring data or air quality monitoring demonstrates a violation of the NAAQS. Nonattainment policies prevent construction or modification of any source that would "interfere with" attainment and maintenance of ambient standards.

According to the FDEP, Patrick AFB is located in an attainment area for all criteria pollutants. Brevard County reports that current readings for ozone and particulate matter are below the Federal and state limits. One-hour average ozone levels in the vicinity of Patrick AFB are between 0.04 and 0.08 ppm, and the annual average PM-10 reading is 30  $\mu\text{g}/\text{m}^3$ .

Patrick AFB has been issued air emissions permits by the State of Florida. They cover:

- Six petroleum storage tanks
- Thirteen steam boilers and eight hot water heaters (over 1,000,000 BTUs each)
- Four outdoor spray painting facilities
- Seven indoor paint booths and 21 bulk storage facilities (Table 2-1)

**Table 2-1**  
**Bulk Storage Facilities Issued Air Permits**

Facility #	Facility #	Facility #
626	667	612
633	634	613
662	616	614
663	618	615
664	620	617
665	622	619
666	611	621

Florida requires annual emission testing with reports due in March of each year, and no violations have been detected (Patrick AFB General Plan, 1996).

## **2.3 NATURAL RESOURCES**

Region of Influence - The ROI for Natural Resources is limited to Patrick AFB and potentially affected areas along the Atlantic coast.

Affected Environment

### **2.3.1 Vegetation**

There is little elevation on Patrick AFB and vegetation is limited to plants that can tolerate relatively saline soil and air. The major factor that affects the ecological character of the base is the high degree of land development. The base is almost entirely developed with structures and related features, including base housing, offices, medical facilities, a shopping center, aircraft hangars and support buildings, roadways, runways, taxiways, aprons, and recreational grounds. Portions of the base that do not support manmade facilities include grassy runway lateral clearance areas and

maintained lands around the buildings. Soils encountered at Patrick AFB are sandy with little organic material. The sandy soils drain water quickly after a rain; therefore, drought resistant vegetation is best suited for this environment. Typical shrubs and trees found near the buildings include privet (*Ligustrum* spp.), Asiatic Jasmine, Hibiscus (*Hibiscus* spp.), oleander (*Nerium oleander*), yucca (*Yucca* spp.), Norfolk Island pine (*Araucaria heterophylla*), Australian pine (*Casuarina glauca*), and palms (Sabal and Royal). Sod is typically Raleigh St. Augustine. The golf course is the largest vegetated area on the base.

The only vegetated areas on the base that do not receive regular landscape maintenance are the recreational and canal areas near the Banana River at the southwestern end of the base. These areas have grown up in saltbrush and exotic species such as Australian pine and Brazilian pepper. Little natural habitat exists, although tree cover occurs along the shore of the Banana River west of the primary runway in an area known as the Survival Area. Areas on or contiguous to the base that are less impacted by development and that more closely resemble natural areas include the beach and dune system along the Atlantic Ocean and the intermittently exposed, unvegetated flats and sand bars, mangrove islands, salt marshes, and nearshore waters of the Banana River.

Plants in the salt marshes include smooth cordgrass (*Spartina alterniflora*), saltwort (*Batis maritima*), glass wort (*Salicornia virginica*), salt grass (*Distichlis spicata*), and sea ox-eye (*Borrchia frutescens*). Mangroves are a mixture of red (*Rhizophora mangle*), black (*Avicennia germinans*), and white (*Laguncularia racemosa*) mangroves. Wetlands on the base are limited and primarily occur intermittently along the shoreline of the Banana River. Additional wetland vegetation on base is restricted to the banks of water bodies, drainage ditches, and small depressions. Common wetland plants include water pennywort (*Hydrocotyle umbellata*), cattails (*Typha* sp.), rushes (*Juncus* spp.), and sedges (*Carex* spp.). Submerged aquatic vegetation includes sea grasses.

### 2.3.2 Wetlands

Wetlands as defined in subsection 373.019 (17), Florida Statute, means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

The base has a number of ponds and drainage ditches, primarily to the west of and in Central Housing, and on the golf course. The ditches were created in 1958 for drainage and irrigation water.

Potential wetland areas have developed along the banks of these ponds and ditches, where there is suitable habitat for vegetation including water pennywort, duckweed (*Lemna* sp.), cattail, needlerush (*Juncus* sp.), and sedges.

Wetland habitats at Patrick AFB include small areas of freshwater wetlands around ponds and drainage canals, and minor brackish wetlands along the Banana River shoreline, mostly around outlets of drainage canals. Brackish wetland plants include the three species of mangrove, with red mangrove most abundant along the shoreline.

### 2.3.3 Fish and Wildlife

Numerous species of birds and mammals have been sighted on Patrick AFB (U.S. Air Force: ESMC-Patrick AFB, Undated). Bird species common to the more developed portion of the base include the cattle egret (*Bubulucus ibis*), mourning dove (*Zenaida macroura*), fish crow (*Corvus ossifragus*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Dendroica coronata*), sparrows, and pigeon (*Columba livia*). A number of wading birds, e.g., great blue heron (*Ardea herodias*), tricolored heron (*Egrena tricolor*), green-backed heron (*Butorides striatus*), woodstork (ibis) (*Mycteria americana*), white ibis (*Eudocimus albus*), the ring-billed gull (*Larus delawarensis*), herring gull (*Larus argentatus*), great black-backed gull (*Larus marinus*), double-crested cormorant (*Phalacrocorax auritus*), brown pelican (*Pelicanus occidentalis*), various waterfowl (e.g., mallard (*Anas platyrhynchos*), mottled duck (*Anas fulvigula*), and northern pintail (*Anas acuta*) are common to the wetland and freshwater habitats on the base. These birds, in addition to Least terns (*Sterna antillarum*), sandpipers, plovers and osprey (*Pandion haliaetus*), are also common along the Banana River. Birds which commonly forage and may nest in wetland areas of Patrick AFB include snowy egret (*Egretta thula*), woodstork (ibis) (*Mycteria americana*), American coot (*Fulica americana*), and common gallinule (*Gallinula chloropus*). Several species of wading birds use the drainage ditches for feeding. Resources for wading birds at Patrick AFB are limited to feeding and suitable roost areas. Suitable nesting sites, for these species, are not present. Resident bird species in nonwetland areas of Patrick AFB include mockingbird (*Mimus polyglottos*), starling, boat-tailed grackle (*Quiscalus major*), and Least terns. Overall, the estuarine and shoreline habitats of the Banana River contain the base's highest bird diversity.

Reptiles and amphibians common to the base include green anole (*Anolis carolinensis*), brown anole (*Anolis sagrei*), eastern garter snake (*Thamnophis sirtalis sirtalis*), eastern indigo snake (*Drymarchon corais couperi*), southern toad (*Bufo terrestris*), and southern leopard frog (*Rana utricularia*), and a variety of skinks, and geckos. The American alligator (*Alligator mississippiensis*) has been reported in some larger drainage canals. Common mammal species include shorttail shrew, eastern mole (*Scalopus aquaticus*), raccoon (*Procyon lotor*), eastern cottontail rabbit (*Sylvilagus floridanus*), eastern fox squirrel (*Sciurus niger*), rice rat (*Oryzomys palustris*), hispid cotton rat (*Sigmodon hispidus*), house mouse (*Mus musculus*), armadillo (*Dasypus novemcinctus*), opossum (*Didelphis marsupialis*), and Norway rat (*Rattus norvegicus*). Bottlenose dolphins (*Tursiops truncatus*) can also be found in the Banana River. Terrestrial vertebrates (excluding birds) found in the mangrove and salt-marsh grass communities include marsh rabbit (*Sylvilagus palustris*), rice

rat, hispid cotton rat, raccoon, diamondback terrapin (*Malademys terrapinterrapin*), and garter snake. Invertebrates include crabs, shrimp, oysters, snails, and mosquitoes.

Fish species restricted to the freshwater habitats of Patrick AFB include largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), red ear sunfish (*Lepomis microlophus*), warmouth (*Lepomis gulosus*), white catfish (*Ictalurus catus*), channel catfish (*Ictalurus punctatus*), brown bullhead (*Ictalurus nebulosus*), lake chubsucker (*Erimyzon sucetta*), gar (*Lepisosteus* spp), and blue tilapia (*Tilapia aurea*). A number of fish species that occur in the Banana River are also encountered in the freshwater impoundments on the base. These include striped mullet (*Mugil cephalus*), sea catfish, menhaden (*Brevoortia tyrannus*), hogchoker (*Trinectes maculatus*), gizzard shad (*Dorosoma cepedianum*), mosquitofish (*Gambusia affinis*), and tidewater silverside (*Menidia beryllina*). The principal game fish found in the Banana River or coastal area of the Atlantic Ocean include tarpon (*Megalops atlanticus*), snook (*Centropomus undecimalis*), sheepshead (*Archosargus probato-cephalus*), black drum (*Pogonius cromis*) and red drum (*Sciaenops ocellatus*), gray snapper (*Lutjanus griseus*), Florida pompano, sea trout (*Cynoscion* spp), and channel bass.

A base fish and wildlife management plan provides a program for protecting endangered species and for conserving and managing fisheries and wildlife. Agencies cooperating in Patrick AFB's fish and wildlife conservation program include local municipalities, the Florida Game and Fish Commission, the Florida Department of Environmental Protection, and the U.S. Fish and Wildlife Service. Excluding housing, base facilities, and airfield, approximately 845 acres of Patrick AFB is available for fish and wildlife management. Habitat management is conducted to provide recreational fishing (the base is closed to hunting), protect endangered and threatened species, and protect government property. Management of saltwater habitat primarily consists of ceasing any work activities on the beach during turtle nesting season, as suggested in the Marine Turtle Nesting Report (Base Fish & Wildlife Plan to the PAFB Integrated Natural Resources Management Plan), and making the base community aware of the presence of these endangered species. Wildlife management is minimal due to a lack of natural undeveloped land on base.

Base operational-related activities that have, or have the potential to, affect biota include wastewater discharges to the Banana River, spills of fuels or other hazardous materials, and recreational boating (e.g., propeller injury to West Indian manatees). Two other existing impacts that result from aircraft operation are noise-related disturbances and bird strikes with aircraft. The latter impact is also a significant safety concern for aircraft and crew.

#### **2.3.4 Threatened and Endangered Species**

Federal and state endangered, threatened, or species of concern which may be found on and around the base are listed in Table 2-1. These species are concentrated on the golf course, Banana River, and Atlantic Ocean. No rare or endangered plant species occur at Patrick AFB.

Federal and state protected species and species of special concern which reside on the base include the common snook, the American alligator, the West Indian manatee, and the eastern indigo snake which are located along the Banana River. Resident bird species include the brown pelican, little

blue heron, and osprey, which are located in the wetland areas and the Banana River. In addition, the southeastern beach mouse may be a resident of the dunes on base.

A number of species use the base for specific reasons such as foraging or nesting. These include three endangered (leatherback, Atlantic ridley, Atlantic green) and one threatened (Atlantic loggerhead) species of sea turtle which nest on the beaches, the least tern (state threatened) and the endangered woodstork (ibis) (*Mycteria americana*) which forages on the base. Species which are transient, (occasionally occurring on base), include the roseate spoonbill (state concern), American oystercatcher (state concern), piping plover (federal threatened), Arctic peregrine falcon (federal endangered), and burrowing owl.

Areas that support significant resources used by rare and endangered animal species include the Atlantic Ocean beach habitat used by nesting sea turtles (mostly the Atlantic loggerhead) and the Banana River lagoon and shallow water habitats used by wading birds and the West Indian manatee. The West Indian manatee feeds on vegetation along shoreline habitats. Manatees use coastal waters for wintering and as migration corridors.

**Table 2-2**  
**Federally and State Listed Species and Species of Concern with Potential for Occurrence at Patrick AFB**

Common Name (occurrence)*	Scientific Name	Federal Status*	State Status*
<b>Fish</b>			
Common snook (A)	<i>Centropomus undecimalis</i>	NL	SSC
<b>Reptiles</b>			
American alligator (A)	<i>Alligator mississippiensis</i>	T (S/A)	SSC
Atlantic loggerhead turtle (B)	<i>Caretta caretta caretta</i>	T	T
Atlantic green turtle (B)	<i>Chelonia mydas mydas</i>	E	E
Atlantic hawksbill sea turtle (B)	<i>Eretmochelys imbricata imbricata</i>	E	E
Leatherback turtle (B)	<i>Dermochelys coriacea</i>	E	E
Atlantic ridley turtle	<i>Lepidochelys kemp</i>	E	E
Atlantic salt marsh water snake (D)	<i>Nerodia fasciata taeniata</i>	T	T
Eastern indigo snake (A)	<i>Drymarchon corais couperi</i>	T	T
<b>Birds</b>			
Brown pelican (A)	<i>Pelicanus occidentalis</i>	NL	SSC
Little blue heron (A)	<i>Egretta caerulea</i>	NL	SSC
Snowy egret (E)	<i>Egretta thula</i>	NL	SSC
Tri-colored heron	<i>Egretta tricolor</i>	NL	SSC
Wood (Ibis) stork	<i>Mycteria americana</i>	E	E

Roseate spoonbill (F)	<i>Ajaia ajaia</i>	NL	SSC
American oystercatcher (F)	<i>Haematopus palliatus</i>	NL	SSC
Piping plover (F)	<i>Charadrius melodus</i>	T	T
Least tern (A)	<i>Sterna antillarum</i>	NL	T
Bald eagle (F)	<i>Haliaeetus leucocephalus</i>	E	E
Arctic peregrine falcon (F)	<i>Falco peregrinus tundrius</i>	T	E
Southeastern American kestrel (D)	<i>Falco sparverius paulus</i>	E	T
Burrowing owl	<i>Athene cunicularia</i>	NL	SSC
Kirtland's warbler (F)	<i>Dendroica kirtlandii</i>	E	E
Osprey (A)	<i>Pandion haliaetus</i>	NL	SSC
<b><u>Mammals</u></b>			
Southeastern beach mouse (A)	<i>Peromyscus polionotus niveiventris</i>	T	T
West Indian manatee (A)	<i>Trichechus manatus latirostris</i>	E	E

\* Occurrence: A=resident species, B=nesting species, C=located within 50 mi/transient species, D=resident status not known, E=foraging species, F=transient species

Status: C2=Category 2 species, E=endangered species, NL=not listed, SSC=species of special concern, T=threatened species, T(S/A)=threatened due to similarity of appearance

The estimated number of sea turtle nests per mile of beach in south Brevard County is 725. The number of loggerhead turtle nests along the 4.3 miles of beach at Patrick AFB for the past ten nesting years were as follows: 1,405 (1996), 1,619 (1995), 1,494 (1994), 1,203 (1993), 1,549 (1992), 1,733 (1991), 1,458 (1990), 923 (1989), 608 (1988), and 782 (1987) (Ehrhart, 1996). Along this same stretch of beach, 26 green turtle nests were observed during the 1996 nesting season. Twenty-four nests were observed during the 1994 nesting season. No nesting by green turtles was noted in 1991, 1989, or 1988. As stated in the Marine Turtle Nesting Report and the Revised Policy Letter on Existing Lighting, reasonable precautions must be taken to protect nesting activities, including the type and timing of lighting in the beach areas that could effect nesting. Systematic investigation of sea turtle nesting is also conducted to monitor the success of nesting efforts. Suitable roost or nest sites for listed bird species are not present at the base.

## 2.4 CULTURAL RESOURCES

Region of Influence - The ROI for cultural resources is limited to Patrick AFB.

### Affected Environment

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activity considered important to a culture or community for scientific, traditional, religious, or other reasons. Cultural resources are divided into three categories: archaeological (prehistoric and historic), historic resources and structures, and traditional (e.g., American Indians or other ethnic groups).



Prehistoric archaeological resources are defined as physical remnants of human activity that predate the advent of written records in a particular culture and geographic region. They include archaeological sites, structures, artifacts, and other evidence of prehistoric behavior.

Historic resources consist of physical properties or locations postdating the advent of written records in a particular culture and geographic region. They include archaeological sites, structures, artifacts, documents, and other evidence of human behavior. Historic resources also include locations associated with events that have made a significant contribution to history or that are associated with the lives of historically significant persons.

Traditional native resources may be prehistoric sites and artifacts, historic areas of occupation and events, historic and contemporary sacred areas, materials used to produce implements and sacred objects, hunting and gathering areas, and other botanical, biological, and geological resources of importance to contemporary American Indian groups.

Historical and archaeological resources are protected under the National Historic Preservation Act (NHPA), as amended (16 U.S.C. § 470 et seq.), the Archaeological Resource Protection Act (ARPA) (16 U.S.C. §470 et seq.), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §469 et seq.). Section 106 of the NHPA requires that the sponsoring agency official take into account the effect of an undertaking upon historic properties and to afford the Advisory Council on Historic Preservation (ACHP) the opportunity to comment. This process is implemented by 36 CFR 800. Additionally, Section 110 of the NHPA sets forth a series of requirements embedded in the Federal comprehensive planning process. Patrick AFB procedures for compliance with the previously mentioned statutes are contained in the 45th SW Cultural Resources Management Plan.

Two types of cultural resource research have been performed at Patrick AFB. An archaeological survey was conducted to determine the presence of cultural resource sites pre-dating the existence of the base. This research proved negative. The other research, a Historical American Building Survey, identified numerous structures and three districts on Patrick AFB as potentially eligible for listing in the National Register of Historic Places (NRHP). Because there are known cultural resource sites on Patrick AFB, it is essential that the EA process include a thorough discussion of effects the proposed projects may have on these sites.

Patrick AFB was established in 1940 as the Banana River Naval Air Station, and some World War II-era buildings still exist on the site. All structures built before 1945 are potentially eligible for listing in the National Register of Historic Places. The following table contains a list of historic buildings located on Patrick AFB and their date of construction.

**TABLE 2-3  
HISTORIC BUILDINGS AT PAFB**

<b>BLDG. NUMBER</b>	<b>DATE OF CONSTRUCTION</b>	<b>BLDG. NUMBER</b>	<b>DATE OF CONSTRUCTION</b>	<b>BLDG. NUMBER</b>	<b>DATE OF CONSTRUCTION</b>
251	1945	560	1944	970	1963
312*	1941	561	1945	981	1965
313*	1943	562	1945	984	1953
315	1943	575*	1945	986	1953
317*	1943	673	1958	988	1955
318*	1943	688	1956	989	1957
330*	1944	703*	1943	992*	1956
401	1942	710	1942	996*	1954
402	1975	722	1943	1173*	1953
407	1945	734	1944	1315	1970
423	1959	735	1943	1316	1970
425	1957	738	1944	1319	1958
431	1942	750	1943	1322	1941
439	1945	751	1945	1327	1941
530	1942	800*	1945	1330	1941
534	1942	908	1958	1350	1951
535	1942	922	1964	1353	1961
536	1942	926	1968	1425	1941
537	1942	945	1957	1432	1941
543	1982	957	1954	1435	1941
545	1943	958	1945	1437	1941
556	1945	961	1959	1440	1941
559*	1944	969	1963		

\* Indicates Building scheduled for demolition during FY 1997-2003

A National Park Service archaeologist has made a detailed inspection of Patrick AFB, noting the nature, location, and extent of base construction disturbance. Although the archaeologist did not conduct an intensive survey of the area and no field work was involved, his inspection was sufficient to conclude that it is highly unlikely that Patrick AFB contains any significant cultural resources that could be affected by future construction. A letter dated August 25, 1981 from the State Historic

Preservation Officer (SHPO) to the Commander of Patrick AFB concurred with this finding, and the base was cleared for construction.

## **2.5 GEOLOGY AND SOILS**

Region of Influence - The ROI for geology and soils is Patrick AFB.

### **Affected Environment**

Patrick AFB is situated on a barrier island off the central east coastline of Florida. The barrier islands are a system of beach ridges that separate the Atlantic Ocean from brackish lagoons such as the Banana River, which forms the western boundary of Patrick AFB. The island attains a maximum width of some 4.5 miles and is approximately 90 miles long. Land surface elevations across Patrick AFB range from 0 to 15 feet above MSL, with the highest elevations corresponding to the sand dunes which parallel the Atlantic beach front. From the dunes, the land slopes gently west toward the shorelines along the Banana River.

The unconsolidated surficial materials which underlie Patrick AFB are the undifferentiated Pleistocene/Holocene deposits known as the Pamlico sands. These deposits are composed primarily of marine sands which are sandy, well-drained, and generally good for development; however, the stability of the soils near the Banana River is suspect. This instability limits construction to less intensive forms of development and requires soil boring prior to beginning construction projects. There is high susceptibility to erosion along both shorelines (Patrick AFB General Plan, 1996).

The bedrock underlying the base is considered to be all those units which underlie the Pleistocene/Holocene deposits. The first such unit that is encountered is the Anastasia Formation of Pleistocene age. This formation lies 10 feet below land surface (bls) and has a thickness of 20 feet. Its lithology is that of coquina and shell conglomerates, quartz sand and clay. Beneath the Anastasia is the Caloosahatchee Marl Formation. It is encountered at a depth of approximately 30 feet bls and is 50 feet thick. In the vicinity of the base, it is described as a gray to greenish-gray sandy shell marl with green clay and fine sand of Pliocene age. Underlying the Caloosahatchee Marl Formation is the Miocene age Tamiami Formation. However, the Caloosahatchee Marl Formation may locally overlie either the Tamiami or the deeper Hawthorn Group. The approximate thickness of the Tamiami Formation is 20 feet, and it is located 80 feet bls. It is composed predominantly of a white sandy limestone that is discontinuous in the region.

Wind erosion at Patrick AFB can be minimized by establishing vegetation and maintaining this vegetation during dry periods. The planting of shrub lines provides a wind break and also reduces wind-blown sand from the beach area.

Soils in Brevard County have been surveyed and mapped by the Soil Conservation Service in cooperation with the University of Florida. The soil is sandy type to depths of 60 inches or more. The soil permeability is greater than 20 inches per hour; available water capacity is 0.02 to 0.05 inches per inch of soil. Soil reaction is 6.6 to 8.4 pH. Original vegetative cover consisted of

saw-palmetto, scrub live oak, and salt tolerant shrubs such as sea grape and Spanish bayonet. Soil tests made are representative of soil type mapped. These tests indicate the soil has a high pH (7.5 - 8.0). Three soil associations are identified in the Patrick AFB area: (1) Canaveral-Palm Beach-Welaka association; (2) Myakka-EauGallie-Immokalee association; and (3) Tidal Marsh-Tidal Swamp association.

## **2.6 HAZARDOUS MATERIALS AND WASTE**

Region of Influence - The ROI for hazardous materials and waste is Patrick AFB.

Affected Environment

### **2.6.1 Hazardous Materials**

A variety of regulatory agencies (e.g., EPA, Department of Transportation [DOT]) have promulgated differing definitions of a hazardous material as applied to a specific situation. Of these definitions, the broadest and most applicable is the definition specified by the DOT for regulation of the transportation of these materials. As defined by the DOT, a hazardous material is a substance or material which is capable of posing an unreasonable risk to health, safety, or property when transported in commerce and has been so designated (49 CFR 171.8).

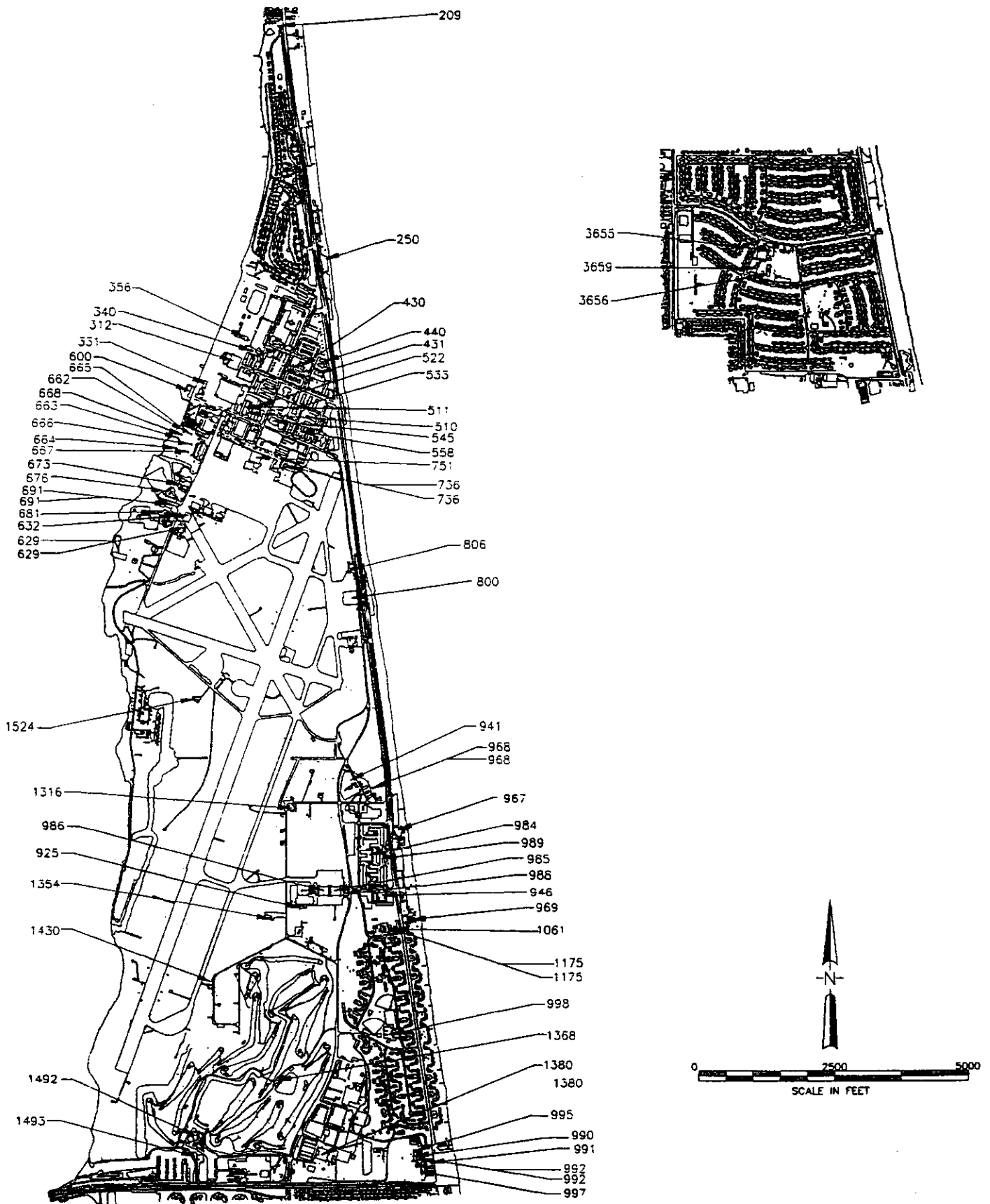
Several Federal agencies oversee various aspects of hazardous material usage. The DOT regulates the safe packaging and transporting of hazardous materials, as specified in 49 CFR parts 171 through 180 and Part 397. The Occupational Safety and Health Administration (OSHA) regulates the safe use of hazardous materials in the workplace in 29 CFR, primarily Part 1910. Environmental safety and public health issues associated with hazardous materials are regulated by the EPA through specific criteria applied to areas such as air emissions and water discharge.

A wide variety of hazardous material ranging from paints, solvents, adhesives, cleaners, metal treatments, and fuels are used on Patrick AFB. The collection, management, transportation, and disposal of hazardous wastes are defined and strictly regulated by the Resource Conservation and Recovery Act (RCRA), as amended, and by implementing federal and state regulations. The 45th Space Wing Operations Plan (OPLAN) 19-14, Petroleum Products and Hazardous Waste Management Plan, describes waste management procedures in place at Patrick AFB (Appendix E).

Up to 80 Underground Storage Tanks (USTs) have been in use at various times at Patrick AFB. These tanks are used to store gasoline, No. 2 heating oil, diesel fuel, JP-4 and JPTS aviation fuel, aviation gas, or used oil. Locations of USTs at Patrick AFB are illustrated in Figure 2-2. Patrick AFB has removed 46 USTs and is in the process of removing USTs not required to be underground for safety reasons and replacing them with aboveground tanks in accordance with Federal and state regulations.

# LOCATION OF EXISTING AND FORMER USTS AT PATRICK AFB

## FIGURE 2-2



### **2.6.2 Installation Restoration Program (IRP)**

The Remedial Investigation/Feasibility Study (RI/FS) process at Patrick AFB is part of the U.S. Air Force's Installation Restoration Program (IRP). The Air Force established the IRP at all its facilities in the United States to clean up contamination caused by past operations. The program assesses the risk to human health and environment and recommends a plan of action to clean up these sites. The IRP implements portions of Patrick AFB's responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to determine the potential for, and the extent of, contamination at Patrick AFB associated with past disposal and land use practices and to evaluate the potential risk to human health and the environment resulting from contamination and suspected contamination.

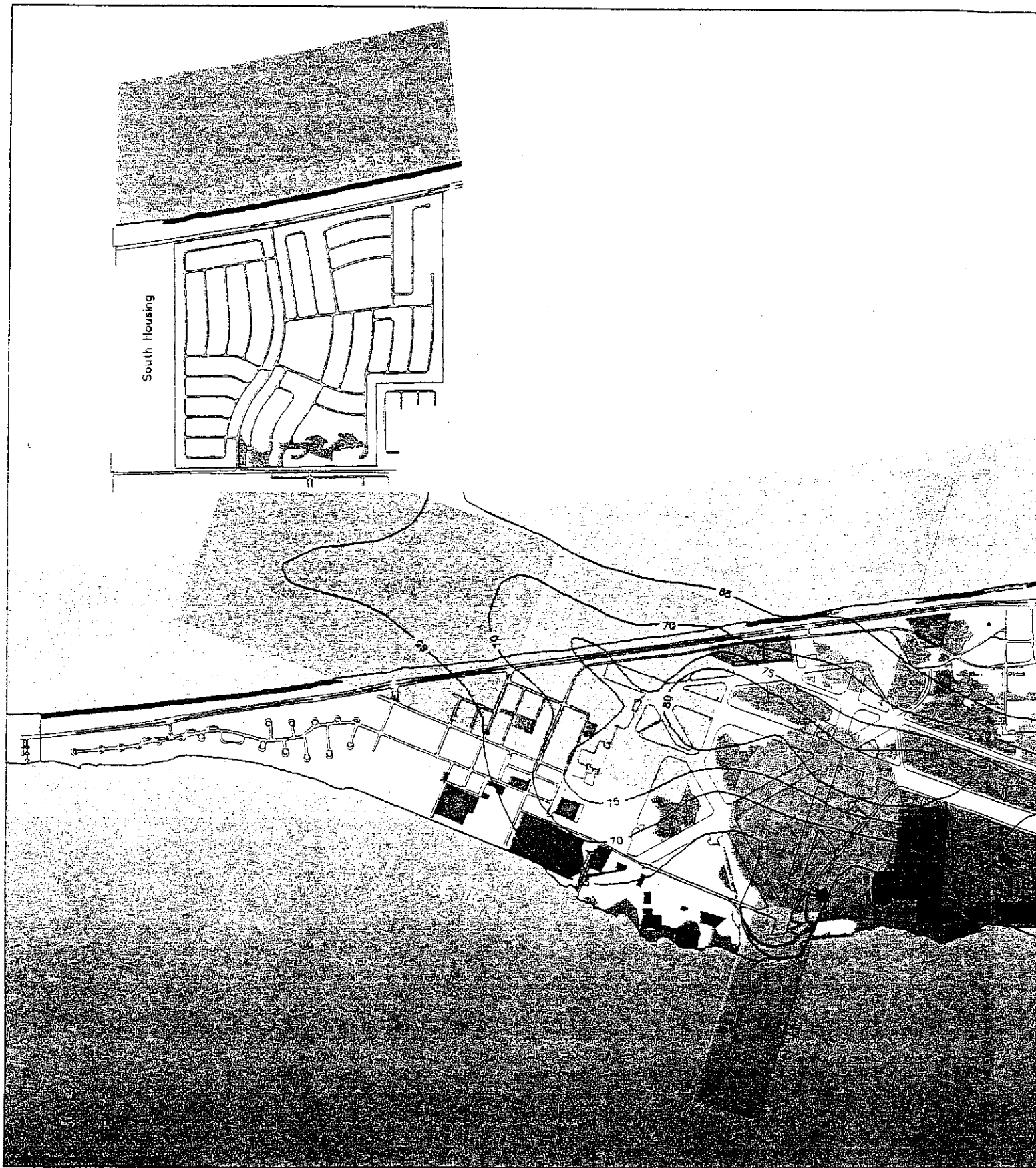
Previously, potentially contaminated sites have been identified at Patrick AFB. The sites consisted of landfills, disposal sites, fire training areas, polychlorinated biphenyl (PCB) sites, and specific facilities where contamination may have occurred (Figure 2-3). At Patrick AFB, the majority of environmental damage has resulted from petroleum pollution. IRP sites at Patrick AFB include fuel storage facilities which leaked petroleum into the ground and abandoned landfills. Twenty-nine IRP sites have been identified. Of these, 18 are categorized as either Closed, Proposed for Closure (pending regulatory concurrence), or Proposed for Long Term Monitoring. The remaining 11 require further investigation (Patrick AFB General Plan).

In accordance with this program, Patrick AFB has completed Phase II of an RI/FS for various sites on the base. The RI/FS is part of the IRP process. Phase I was a record search to identify potential IRP sites. Phase II, Stage I consisted of the installation of wells and the collection of environmental samples. Stage 2, the final stage, included literature searches, field investigation, and the development of remedial alternatives and technologies. The location of IRP sites is a critical factor in planning and siting new facilities at Patrick AFB.

### **2.6.3 Solid Waste**

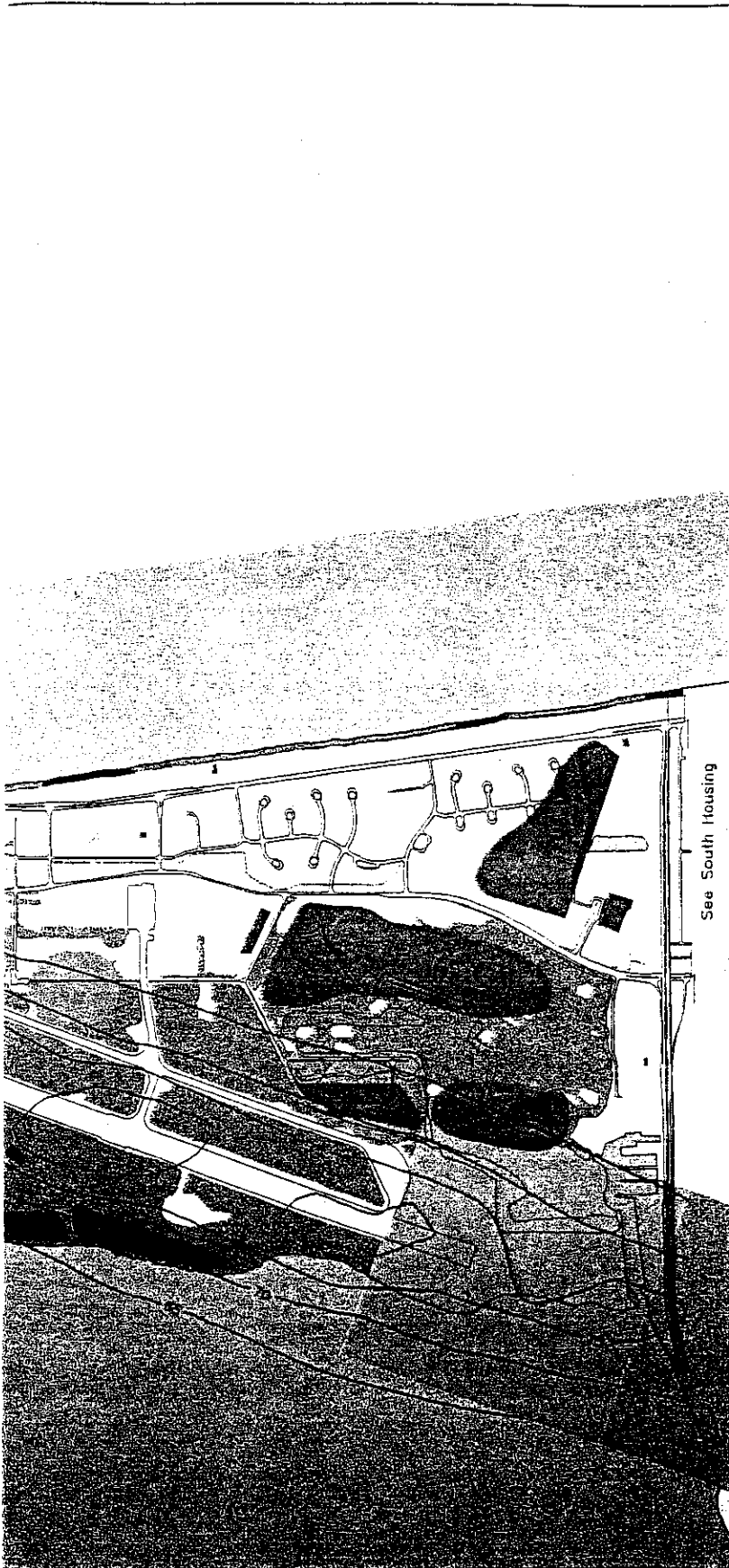
Solid waste generated at Patrick AFB includes non-hazardous trash, rubbish, yard waste, ACM, peeling lead-based paint, garbage, construction debris, and wastewater treatment sludge. Patrick AFB contracts to remove most industrial waste. Residential waste is hauled to the Brevard County landfill. Construction and demolition debris is transported directly by U.S. Air Force and contractor vehicles to the landfill at the Cape Canaveral Air Station.

Patrick AFB manages asbestos-containing materials generated by installation activities through an Asbestos Management Plan and Asbestos Operations Plan. Asbestos has been used in construction and insulation, and, when damaged, may release fibers that pose a health hazard. The 45th Space Wing has an intense asbestos program where if possible, asbestos is handled "in place" and systematically eliminated from facilities as renovations are complete. A complete inventory detailing the location of asbestos in wing facilities is maintained and personnel are trained in procedures to prevent damage to asbestos and to properly deal with asbestos in both planned and unplanned circumstances. Asbestos waste is removed in accordance with regulatory requirements and is disposed of in the Cape Canaveral Air Station landfill designated to receive this material (45 CES/CEV, 1996).










FROM:

Patrick AFB General Plan



## Legend

-  IRP Site
-  Accident Potential Zone
-  Clear Zone
-  Coastal Setback Line
-  100-Year Floodplain
-  Noise Contours
-  Q-D Zone

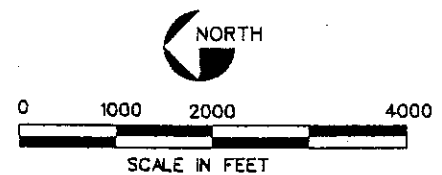


Figure 2-3  
Composite Constraints

Patrick Air Force Base  
General Plan



Lead-based paint was commonly used in and on buildings and other structures until 1978. Lead-based paint in good condition does not pose a health hazard. When lead-based paint is in a deteriorated (cracking, peeling, chipping) condition, or damaged by renovation or maintenance activities, it can release lead-containing particles that pose a threat of lead contamination to the environment and a health hazard to workers and building occupants. The 45th Space Wing's lead-based paint program places emphasis on managing it "in-place" whenever possible and systematically eliminating it from facilities as renovations are complete. Emphasis is placed on personnel awareness and training in procedures to prevent damage to lead-based paint and to properly deal with in both planned and unplanned circumstances (45 CES/CEV, 1996).

Waste materials (less commonly referred to as solid waste) are defined in 40 CFR 261.2 as "any discarded material (i.e., abandoned, recycled, or 'inherently waste-like') that is not specifically excluded. This can include materials that are both solid and liquid (but contained). Hazardous waste is further defined in 40 CFR 261.3 as any solid waste not specifically excluded which meets specific concentrations or has certain toxicity, ignitability, corrosivity, or reactivity characteristics. Oversight of hazardous waste issues is provided primarily by the EPA (as mandated by the RCRA, and the CERCLA, and its extension, the Superfund Amendments and Reauthorization Act [SARA]). EPA regulations are found in 40 CFR. Additional requirements are promulgated by the DOT, which regulates all transportation issues pertaining to hazardous waste. DOT requirements are found in 49 CFR.

#### **2.6.4 Hazardous Waste**

The term "hazardous waste" as defined in Section 1004(5) of RCRA is a "solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

1. cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
2. pose substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Patrick AFB is designed as a Large-Quantity Hazardous Waste Generator with a permitted storage facility (EPA No. FL2570024404) used to store wastes generated on the base during degreasing operations, corrosion control, painting, aircraft and vehicle maintenance, and other mission-related activities. Hazardous materials that are not reutilized, transferred, or donated through the Defense Reutilization and Marketing Office (DRMO) are designated as hazardous wastes and are disposed of through the DRMO. Hazardous waste is shipped off-site by contract either through the DRMO or by an approved contractor. Installation hazardous waste management is conducted by the Base Environmental Planning Office.

Patrick AFB provides thorough training for all personnel that generate hazardous wastes and has implemented the OPLAN 19-14. All organizations and personnel who design, use, operate,

maintain, manage, or contract for operations involving hazardous materials, hazardous waste, or any other regulated materials or wastes are required to comply with OPLAN 19-14. In addition, each on-site organization that generates hazardous waste must also comply with the RCRA, as well as all other applicable Federal, state, and Air Force Regulations/Instructions. Construction contractors are required to dispose of any hazardous waste in accordance with Federal, State and local regulations under their own EPA Identification Number.

The types of waste petroleum, oils, and lubricants (POL) generated on base include wastes from the clean up of spills; off specification (water contaminated) aviation fuel, ground, space heating, and power generation fuel; and waste oils and lubricants from vehicle maintenance.

Patrick AFB has various procedural hazardous waste management plans and spill contingency and response plans based on regulations promulgated by the Air Force and other Federal and state agencies (e.g., RCRA). These plans include the Petroleum Products and Hazardous Waste Management Plan (OPLAN 19-14), the Installation Oil and Hazardous Substance Pollution Contingency Plan (OPLAN 19-1), the Disaster Preparedness Plan (OPLAN 355-1), and the Asbestos and Lead-based Paint Management Programs. All personnel and contractors operating on Patrick AFB must report any release of POLs or hazardous substances to the installation Fire Department immediately.

## **2.7 HEALTH AND SAFETY**

Region of Influence - The ROI for health and safety is Patrick AFB.

### **Affected Environment**

Health and safety includes consideration of any activities, occurrences, or operations that have the potential to affect one or more of the following.

- The well-being, safety, or health of workers - Workers are considered to be persons directly involved with the operation producing the effect or who are physically present at the operational site.
- The well-being, safety, or health of members of the public - Members of the public are considered to be persons not physically present at the location of the operation, including workers at nearby locations who are not involved in the operation and the off-installation population.

The standards applicable to the evaluation of health and safety effects differ for workers and the public; thus, it is useful to consider each separately.

The OSHA is responsible for protecting worker health and safety in non-military workplaces. The OSHA regulations are found in 29 CFR. For Air Force operations, AFI 91-301 and AFI 91-302 , contain the Air Force's Safety program, and provide the basis for worker safety programs. Specific

Patrick AFB programs which affect construction and demolition operations include the Asbestos and Lead-based Paint programs.

Asbestos has been used in construction and insulation, and, when damaged, may release fibers that pose a health hazard. Patrick AFB manages asbestos-containing materials generated by installation activities through an Asbestos Management Plan and Asbestos Operations Plan. The 45th Space Wing has an intense asbestos program where if possible, asbestos is handled "in place" and systematically eliminated from facilities as renovations are complete. A complete inventory detailing the location of asbestos in wing facilities is maintained and personnel are trained in procedures to prevent damage to asbestos and to properly deal with asbestos in both planned and unplanned circumstances (45 CES/CEV).

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## **2.8 INFRASTRUCTURE AND TRANSPORTATION**

Region of Influence - The ROI for infrastructure and transportation is Patrick AFB and the nearby communities.

### **Affected Environment**

Infrastructure addresses those facilities and systems that provide drinking water, wastewater treatment, power, and telecommunications. Transportation addresses the modes of transportation (road, air, and marine) that provide circulation within and access to the installation.

### **Drinking Water**

Potable water is provided by the City of Cocoa. The water is delivered to Patrick AFB through a 24-inch main entering the base at the northern boundary. An additional water supply is provided from the City of Melbourne by way of two water main tie-in lines located on the south end of Patrick AFB. Potable water usage at Patrick AFB ranges from 1 million gallons per day (mgd) during winter months to 3.8 mgd during summer months.

### **Wastewater Treatment**

The wastewater treatment system is also off-base and is provided by the City of Cocoa Beach. Two lift stations and wastewater force mains were installed in the Patrick AFB wastewater system to convey wastewater to the City of Cocoa Beach for treatment. Treated effluent for reuse is then

furnished to the citizens of Cocoa Beach and to Patrick AFB. The maximum load which Patrick AFB is permitted to send to the treatment system is 1.2 mgd. At present, the base is sending a maximum of 700,000 gallons per day (gpd).

## **Power**

Electrical service is provided to Patrick AFB by Florida Power and Light Company. Transmission voltage is 138 kilovolts (kV). Transmission lines connect to a north substation and a south substation, both owned by Florida Power and Light Company. Power is then distributed throughout the base via radial feeders, four at the north substation and six at the south substation. Of the primary and secondary electrical distribution lines, approximately 10 percent are overhead and the remainder are underground. The overhead distribution system, which includes poles, transformers, and hardware are adversely impacted by salt air contamination, high winds, bird interference, and lightning strikes (Patrick AFB General Plan 1996).

Natural gas is supplied to Patrick AFB by City Gas Company. A four-inch line enters the base from the north, and a two-inch line enters from the south. These gas mains are owned and maintained by City Gas Company. There is no limit on gas supply. Average usage at Patrick AFB is approximately 25,000 MBTU. Approximately 0.6 miles of gas lines distribute low pressure gas to the Central Heating Plant, hospital, and individual building heating plants. Lines also distribute natural gas to North and Central Housing areas.

## **Telecommunications**

The phone service on Patrick AFB is provided internally. A new switch was provided in 1992 to allow expansion capabilities of the telecommunications system.

An extensive communications network consisting of communication satellites, microwave links, high frequency (HF), very high frequency (VHF), and ultra high frequency (UHF) radio systems, and various landline links is used to connect the Eastern Range sites and stations with each other and the world (Patrick AFB General Plan 1996).

## **Transportation**

Patrick AFB is located on State Road A1A, which is a north-south route along the east coast barrier islands of Florida. US Highway 1 lies on the mainland of Florida, west of Patrick AFB. Interstate access is provided by Interstate 95 also located on the mainland west of the base. The major access to the barrier island on which Patrick AFB is located is via the Pineda Causeway (Highway 404).

The roadway network available to Patrick AFB is modern, well maintained, and fully adequate to support the base's transportation needs.

Patrick AFB has no direct rail service. It is serviced by air via the 9,000 foot runway on the base. The nearest commercial air facility is the Melbourne Regional Airport located approximately 12 miles south of Patrick AFB.

Marine transportation to the base occurs via the Manatee Cove Marina. This marina is used for pleasure craft only. There is no commercial marine access to the base.

## **2.9 LAND USE**

Region of Influence - The ROI for land use is Patrick AFB.

### **Affected Environment**

Patrick AFB is located in Brevard County. The County comprises approximately 1,310 square miles in three distinct landforms: the St. Johns River Valley, which parallels the western border of the county, the Atlantic coastal ridge, which forms the eastern boundary of the mainland; and the barrier islands, which lie offshore and parallel to the mainland at Patrick AFB. Patrick AFB consists of approximately 2,254 acres. The main base contains 1,943 acres and is bounded on the east by the Atlantic Ocean and on the west by the Banana River, a brackish lagoon. The main base has three major areas of land use: the northern end of the base contains housing for military personnel; the central portion contains airfields, administrative buildings, and other support facilities; and the southern portion contains housing for military personnel, the hospital, and industrial area. State Road A1A, the major north-south highway on the Florida east coast, traverses the base. Patrick AFB also includes an area of 311 acres of housing south of the main base. This area is known as South Housing.

The predominant land use on Patrick AFB is associated with the airfield, which uses 683 acres for runways, taxiways and aprons, and 33 acres for aircraft operations and maintenance. The other main land uses on Patrick AFB include 420 acres for family housing and 271 acres for outdoor recreation (mainly the golf course and marina). Industrial land use encompasses 193 acres, while 63 acres are administrative land use (General Plan 1996). The Community Center, including the Commissary, Base Exchange, and Hospital, is located at the southern edge of the base. Family housing is divided into three distinct areas: North Housing and Central Housing, and South Housing. Undeveloped lands are limited in size and have previously been disturbed. Unimproved land totals only 28 acres and consists exclusively of dredged materials. The following list of facilities is not all-inclusive, but is meant to provide examples of the types of facilities found in each land use category.

#### **Airfield**

##### **Facility**

Runway

Overrun

Taxiway

##### **Facility**

Apron

Arm/Disarm pad

Various navigational aids/air traffic facilities

## **Aircraft Operations and Maintenance**

### **Facility**

Aircraft Hangar  
Aircraft Organizational Maintenance  
General Purpose Shop (A/C)  
Maintenance Control Office  
AGE Shop Maintenance  
Engine I&R  
Fuel Maintenance Dock  
Corrosion Control Facility  
NDI Shop  
Avionics Shop  
Field Training Detachment (on flightline)  
Base Operations  
Crew Readiness Facility

## **Industrial**

### **Facility**

Base Supply Administration  
Warehouse, Supply & Equipment  
Shed, Supplies & Equipment  
Open Storage, BCE  
Commercial Transportation  
Vehicle Operations Administration  
Vehicle Maintenance Shop  
Refueling Vehicle Shop  
Vehicle Parking Shed  
Vehicle Operations Parking  
Heating Plant  
Central Refrigeration Plant  
Sanitation Facility  
Flight Simulator  
Water Facilities  
Fire Station-structural  
Locomotive Maintenance  
POL Operations Building  
Truck Fill Sand  
Fuel Storage  
Operating Storage  
Field Training Detachment (Sps)  
Small Arms Training  
Small Arms Range

### **Facility**

Helicopter Operations  
Control Tower  
Weather Facility  
Munitions Load Crew Training Facility  
Fire Station-Crash/Rescue  
Air Freight Terminal  
Squadron Operations/Flight Training  
Aircraft Wash Rack  
Sound Suppressor  
Aircraft Maintenance  
Missile Launch Sites  
Radar/Aircraft Guidance Systems  
Primary Radar Station Facilities

### **Facility**

Vehicle Operations Storage  
Vehicle Wash Rack  
Open Storage, LGT.  
Base Engineering Administration  
BE Maintenance Shop  
BE Covered Storage  
BE Storage Shed  
BE Pavements & Grounds  
BE Open Storage  
Communications Maintenance Facilities  
Test Call  
Disaster Preparedness  
Fire Training Facility  
Kennel Support  
Reserve Fire Team Facilities  
Base Printing Plant  
Armament Maintenance/Storage  
Photo Lab  
MARS Radio  
Electric Substations  
Survival Equipment Shop  
Other Utility Facilities  
Weapons/Munitions Storage Area  
Various Research Facilities/Labs

**Administrative**

**Facility**

Audio Visual Facilities  
Television Production Center  
Education Center  
Social Action Facilities  
Wing/Group Headquarters  
Area Defense Council Office  
Law Center  
Command Post  
Telecom Center  
CPBO  
Civilian Personnel  
Family Services

**Facility**

Family Housing Management  
Red Cross  
Warehouse, Forms & Publications  
DCO Staff  
DCM Staff  
SP Group Headquarters  
Security Operations  
Central Security Control  
SP Control & ID  
Traffic Check House  
Data Processing Plt.

**Community (Commercial)**

**Facility**

**Commercial**

Clothing Sales  
Bank  
Credit Union  
Thrift Shop  
Commissary  
Cold Storage  
Exchange Branch  
Exchange Cafeterias

**Facility**

Exchange Service Station  
Exchange Laundry  
Exchange Sales Store  
Exchange Service Outlet  
Exchange Warehouse  
Exchange Maintenance Shop  
Exchange Administration

**Clubs/Dining**

Airmens' Club  
NCO Club  
Officers' Club

Airmens' Dining Hall  
Dry Storage, DH Support

**Indoor Recreational**

Gym  
Fieldhouse  
Theater  
Bowling

Recreation Center  
Arts-Crafts Center  
Auto Hobby Shop  
Youth Center

**Community (Service)**

**Educational Dependent Schools**

**Other Community Facilities**

**Facility**

Post Office

**Facility**

Chapel

Library  
Child Care Center

Religious Education Center  
Education Center

**Medical**

**Facility**

Veterinarian Facility  
Hospital & Dental Clinic

**Facility**

Medical Storage

**Housing (Accompanied)**

**Facility**

Family Housing  
TLF  
TLF Support

**Facility**

Trailer Court

**Housing (Unaccompanied)**

**Facility**

Bachelor Housing  
BOQ  
UEPH

**Facility**

Visitor Housing  
VOQ  
VAQ

**Outdoor Recreation**

**Facility**

Tennis Courts  
Baseball, Junior Fields  
Football Fields  
Track  
Softball Fields  
Recreation Court  
Recreation Pavilion  
Golf Course  
Golf Clubhouse

**Facility**

Riding Stable  
Outdoor Pool  
Swimmers' Bath House  
Fam Camps  
MWR Supply/Storage  
Outdoor Ranges  
Parks/Picnic Areas  
Beaches  
Outdoor Drill, Training Areas

**Open Space**

Conservation areas, forest stands, grazing areas  
Required buffer space-safety clearances, security areas, utility easements.

**Water**

On-base ponds, lakes, major streams.

Erosion along the Atlantic Ocean and Banana River is the most significant environmental constraint that affects Patrick AFB. The sand dunes along the beach provide some control of erosion and are protected by guidelines established by the FDEP. The "Coastal Construction Setback Line" along the beach represents the location of this dune protection. Regulations prohibit any new construction from the dunes to the Atlantic Ocean. Several beach restoration projects have been undertaken to



reduce the risk of Patrick AFB being adversely affected from beach erosion. In an effort to control beach erosion, a special project was developed to import sand in the area opposite the Main Gate. For this project to be effective, however, sand would have to be imported on a continuing basis to offset the natural erosion. Also, actions are being taken to prevent erosion along the Banana River, where erosion is threatening critical utilities, including a sanitary sewer lift station.

The sub-tropical climate, prevailing winds, and marine environment have a major impact on the man-made and natural environments. The oceanfront setting of Patrick AFB also contributes to the rapid decline of its infrastructure and facilities due to corrosion.

Coastal Florida is vulnerable to hurricanes and associated storm tides. The Cape Canaveral Hurricane Evaluation Study, completed in September 1990, included hurricane storm surge inundation information for several counties on Florida's east coast, including Brevard County. The Hurricane Storm Tide Map for Patrick AFB depicts areas that are likely to be inundated in the event of storms of varying intensity. Category 5 storms are the strongest, while Category 1 storms are the least intense. Historical data show that the storm tide height in a Category 5 storm was in the range of 16-17 feet, and the Category 3 storm tide height was 4.4 feet. Patrick AFB is vulnerable to considerable damage from tropical storms and hurricanes.

Another natural constraint on Patrick AFB is the 100-year floodplain. Because Patrick AFB is located on a barrier island and the terrain is very flat and low, it is particularly vulnerable to flooding. The elevation of the 100-year floodplain is 5 feet on the west side of the ocean front dune along the Atlantic Ocean. The east side of the dune (next to the ocean) has a 100-year floodplain elevation of 8 feet. The 500-year floodplain is not as well determined. The most susceptible areas to flooding are the golf course and the areas surrounding the runways and taxiways. The runways and taxiways are above the 100-year floodplain. Normally, floodplains are not suitable for the construction of new facilities. In the absence of suitable vacant land outside the floodplain, these areas may be considered buildable sites. If these lands are developed, care must be taken to ensure that project design and construction incorporates flood-proofing measures and that the finished floor elevation is above the flood level.

## **2.10 NOISE**

**Region of Influence** - The ROI for noise is Patrick AFB and the immediately surrounding communities.

### **Affected Environment**

Noise is unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment; it may be intermittent or continuous, steady or impulsive. Noise may also involve a broad range of sound sources and frequencies and be generally nondescript, or it can have a specific, readily identifiable sound source. The decibel (dB) is the accepted standard unit for measuring the level of noise and is generally adjusted to the "A-weighted" logarithmic scale to better correspond to the normal human response to different frequencies, dBA. Several metrics have been

developed for multiple-noise event analysis. The one most commonly used is the (Ldn) metric. This is the dBA level averaged over a 24-hour period, with an additional ten dBA penalty added for noise events occurring between 10 p.m. and 7 a.m. (because noise at night is judged to be more annoying than noise during the day). The threshold noise level for compatible land uses is Ldn 65 dBA. Historical, existing, and projected aircraft noise levels and impacts have been characterized for Patrick AFB using Ldn contours.

Noise sources at Patrick AFB include various industrial activities, aircraft operations, and traffic. Noise contours at Patrick AFB are illustrated in Figure 2-3. Sound levels in the vicinity of Patrick AFB have not been monitored. However, the day-night average sound level (Ldn) contours for aircraft operations have been predicted for preparation of the Air Installation Compatible Use Zone (AICUZ) study for Patrick AFB. Nearby noise-sensitive land uses include residential areas to the north of the base (Cocoa Beach), to the south (South Patrick Shores), and to the west of the base across the Banana River (Merritt Island), as well as beaches on base that are accessible to the public. Significant contributors to sound levels at these adjacent areas include the aircraft operations at Patrick AFB, and traffic and residential noise. With the exception of a small area southwest of the base, the residential development in the vicinity of the base is outside the 65 dBA Ldn contour for Patrick AFB (Figure 2-3). The area outside of the 65 dBA Ldn contour is compatible with residential and other noise-sensitive land uses. Some of the North base housing units are currently within the 65-70 dBA and are generally considered incompatible with residential uses unless sound insulation and other measures are taken to reduce interior noise levels (Code of Federal Regulations, Part 150). Base operations contribute to traffic along roads used to access the base (Routes A1A and 404) and along other roads in the area and contribute to the resulting noise along these roads.

## **2.11 SOCIOECONOMICS**

Region of Influence - The ROI for socioeconomics is Patrick AFB and the Brevard County area. Socioeconomics within this EA is concerned with population, employment, and recreation for the area.

### **Affected Environment**

The Space Coast has emerged as a center for military and space technology. This has occurred through the continued success of the DOD space shuttle program and commercial launches. The space industry continues to contribute to the region's economy. The presence of Cape Canaveral Air Force Station, Kennedy Space Center and Patrick AFB have led to the convergence of a large number of defense contractors in the Brevard County area. The presence of the DOD and several high tech and aerospace employers represent a predominant economic force in the area, with a combined potential employment population of some 50,000 people and an economic value that exceeds one billion dollars (Patrick AFB General Plan, 1996).

Patrick AFB, as a major employer in Brevard County, impacts the local economy through direct employment of civilian and military personnel as well as through the local procurement of goods and services. Direct employment by the base as well as employment directly generated from the base's

procurement expenditures have led to an increase in the level of economic activity and the creation of additional employment opportunities. The presence of the 45th Space Wing (Patrick AFB and Cape Canaveral Air Station) activities provide employment for more than 13,000 people, with annual collective salaries totaling more than \$240 million (Patrick AFB General Plan).

The State of Florida, Brevard County, and the Cocoa Beach area offer an extensive selection of recreational activities. Patrick AFB also offers an extensive recreational program with numerous facilities and a diversity of activities. There are various outdoor recreational activities offered that utilize base lands including golf, fishing, swimming pools, playing fields and the marina convenient to family housing areas. A youth center recreation area is located in the South Housing area.

## **2.12 VISUAL AND AESTHETICS**

Region of Influence - The ROI for visual and aesthetics is Patrick AFB.

### **Affected Environment**

There are three classes used to rate the scenic quality of a landscape. Class A (Distinctive) landscapes have features of landform, vegetative patterns, water forms, and rock formations of unusual or outstanding quality. Class B (Common) landscapes have features containing variety in form, line, color, and texture but tend to be common. Class C (Minimal) landscape features have little change in form, line, color, and texture.

Another criterion used in the analysis of visual resources is visual sensitivity, i.e., the degree of public interest in a visual resource and concern over adverse changes in the quality of the resource. Visual sensitivity is rated high, medium, or low. High sensitivity exist where views are rare, unique, or in other ways special, such as remote or pristine areas. Medium sensitivity areas are more developed than those of high sensitivity. Contemporary human influence is more apparent, and the presence of motorized vehicles and other evidence of modern civilization is commonplace.

Patrick AFB has established a Mediterranean architecture theme for the Base. The Mediterranean-style consists of red Spanish tiles on pitched roofs with large overhangs and stucco as an exterior wall material. The Mediterranean-style does not lend itself to tall multi-story structures over five stories tall. All new facilities with the exception of hangars should be under five stories. This scheme is demonstrated in several buildings around the Base, namely the Airman's Dining Hall and the Dental Clinic.

The local subtropical climate, prevailing winds, and marine environment have a major impact on the man-made and natural environments and, therefore, the visual and aesthetic features of the base. The oceanfront setting of the base also contributes to the rapid visual and physical decline of its infrastructure and facilities due to corrosion.

## **2.13 WATER RESOURCES**

Region of Influence - The ROI for water resources is Patrick AFB.

### **Affected Environment**

Water resources include both surface water and groundwater. To protect these resources, and human health, Congress has enacted the Clean Water Act and the Safe Drinking Water Act. The EPA has also established water quality standards to protect water resources.

#### **2.13.1 Surface Water**

The major surface waters in the area are the Atlantic Ocean (which bounds Patrick AFB on the east) and the Banana River (which bounds the base on the west). The water resources on the base include five man-made ponds totaling 31.3 acres. The base also contains 4.1 miles of drainage ditches and 40.2 acres of canals. Most of the drainage ditches contain water throughout the year because they intersect the shallow water table aquifer. The canals are interconnected with the Banana River and are thus tidally influenced and brackish.

The Banana River is an element of the Indian River Lagoon System, which also includes the Indian River, Mosquito Lagoon, and Sykes Creek. The entire Indian River Lagoon system has been designated as an Estuary of National Significance under the National Estuary Program. Patrick AFB is currently participating in the program.

The Banana River is a brackish waterway with an average depth of 5 feet. The width of the river varies from 600 to 15,000 feet (U.S. Air Force, 1992). Water exchange with the Atlantic Ocean is very restricted, and no significant freshwater inflow occurs; thus the Banana River is classified as a lagoon. Circulation is not significant within the Banana River lagoon system. Currents are largely wind-generated as well as a function of freshwater inflow. Tidal fluctuations in the northern section of both the Banana and Indian River lagoon systems near Patrick AFB are not significant due to the distances to the nearest ocean inlets. Historically, sewage effluents, agricultural and urban runoff, and restriction of natural circulation and flushing by the presence of causeways are the major causes of water quality degradation within the Banana River.

The FDEP classified the Banana River in the vicinity of Patrick AFB as Class III water, which is intended to protect the waterways for recreation and for the propagation and maintenance of healthy fish and wildlife populations. In addition, in the vicinity of Patrick AFB, the Banana River has been designated as an Aquatic Preserve by the Florida Legislature. It has also been designated as Outstanding Florida Waters by the FDEP. Such waters are deemed to have "exceptional recreational or ecological significance" and receive special protection from the FDEP. The base marina is connected to the Banana River and is used for recreational boating and fishing. In addition, the river is used for shrimping and clamming. Figure 2-3 illustrates the 100-year floodplain for Patrick AFB.

The FDEP also describes the water quality of the Banana River lagoon in the vicinity of Patrick AFB as poor. This assessment is supported by measurements of dissolved oxygen, fecal coliform, water clarity, and species diversity. This situation has been attributed to stormwater runoff from urbanized areas and effluent discharges from wastewater treatment plants combined with naturally poor tidal flushing in the estuary. Seasonal degradation also occurs in some of these areas during the summer as a result of increases in biological oxygen demand. Water quality improves toward the western shore of the river.

In 1990, the Florida Legislature passed a law mandating that wastewater discharges into the Indian River Lagoon Basin, including the Banana River, be eliminated by 1995. Specifically, no new facilities or expansions of existing facilities which would discharge to the basin would be permitted.

### **2.13.2 Groundwater**

Patrick AFB is underlain by both confined and unconfined aquifers. The hydrologic units (aquifers) underlying the base include the surficial water table aquifer; semiartesian and artesian aquifers within the Caloosahatchee Marl, Tamiami Limestone, and Hawthorn Group; and the artesian Floridan aquifer. The surficial water table aquifer underlying the base is the major hydrostratigraphic system that can be influenced by base operations. This system, consisting primarily of marine sands, shell fragments, and coquina limestone, extends approximately 50 feet below the land surface. The water table is generally within 5 feet of the ground surface. The surficial groundwater flows primarily toward the Banana River. Groundwater is not believed to be tidally influenced. Low-levels of contaminants (e.g., volatile organic compounds, petroleum hydrocarbons, and heavy metals) originating from base IRP sites have been detected in surficial groundwaters at the base.

Groundwater at Patrick AFB occurs under unconfined (water table), semi-confined, and confined (artesian) conditions. The unconfined aquifer, composed of Holocene and Pleistocene age surficial deposits of marine sand, shell fragments, and sand conglomerate of the Anastasia Formation, is recharged by direct infiltration or rainfall. The generalized direction of groundwater flow in the surficial aquifer is westward, toward the Banana River. Localized flow in the surficial aquifer is from topographic highs (mounds, swells, dune ridges) toward surface water bodies (creeks, ponds, drainage canals).

Patrick AFB has standby production wells, air conditioning supply and return wells, monitoring wells, and irrigation wells. Potable water needs for the base are provided by the Cocoa municipal water system. The City of Melbourne, in conjunction with the St. Johns River Water Management District, has an agreement with the base to provide water on a contingency basis.

### **2.13.3 Stormwater/Wastewater**

The stormwater drainage system at Patrick AFB is a separate system. That is, it is not connected with the flow of wastewater in the sanitary sewer system. The high permeability of the soils at Patrick AFB (exceeding 20 in. per hour) accommodates most of the stormwater runoff that occurs. Surface water discharge from the base occurs when local rainfall exceeds this infiltration rate and

when rainfall contacts impervious surfaces built on Patrick AFB. A system of catch basins, storm sewers, pipes, and drainage ditches direct most of the stormwater runoff to the Banana River, although some outfalls do direct stormwater runoff to the Atlantic beach front. Stormwater drainage systems associated with the base hospital, exchange, and commissary are connected to the base golf course pond system.

Patrick AFB environmental staff are developing an Installation Stormwater Management Plan which will describe policies to be followed by construction and demolition contractors performing work on the base. This plan will outline permitting requirements required by the State of Florida and the EPA. For example, facilities over 5,000 SF or parking lots over 4,000 SF require permits. The EPA requires National Pollution Discharge Elimination System (NPDES) permits for construction projects covering over five acres. Additionally, studies are being conducted at Patrick AFB to evaluate the need for an installation-wide NPDES permit. Based on these studies, improvements to the installation stormwater drainage system may be required.

Currently, wastewater (primarily domestic wastewater with small quantities of industrial wastewater) at Patrick AFB is routed directly to the City of Cocoa Beach's treatment facilities through a 20 inch force main. The city has reserved a treatment capability of 2.0 mgd for Patrick AFB. The average daily flow will be 1.2 mgd based on construction and occupancy of North and Central Housing. This provides a residual capacity of 0.8 mgd. This allows for an expansion capability of 8,000 persons but does not take into account treatment of industrial wastes or inflow and infiltration which could be high during wet weather months. The City of Cocoa Beach returns highly treated reuse water to the base for irrigation purposes. Current average daily flow for reuse water is approximately 0.4 to 0.6 mgd via a 14 inch reuse line. With this procedure, Patrick AFB is in compliance with the State of Florida's Indian River Lagoon Act which mandated zero discharge to the Banana River by 1995. The base also has oil/water separators that are connected to the sanitary sewer system. Improvement projects are programmed for the Patrick AFB wastewater system.

## **CHAPTER 3.0**

### **ENVIRONMENTAL CONSEQUENCES**

This section of the EA describes the potential environmental consequences of the proposed activities by comparing proposed project activities with the potentially affected environmental components. Sections 3.1 through 3.13 provide discussions of potential environmental consequences from the proposed activity. The amount of detail presented in each section is proportional to the potential for impacts. Sections 3.14 through 3.25 provide discussions of the following with regard to proposed project actions: changes in mission and operations; cumulative impacts summary; mitigation measures summary; conflicts with Federal, regional, state, local, or Indian tribe land use plans, policies, and controls; energy requirements and conservation potential; natural or depletable resource requirements and conservation potential; adverse environmental effects that cannot be avoided; the relationship between the short-term uses of the human environment and the maintenance and enhancement of long-term productivity; irreversible or irretrievable commitment of resources; Federal actions to address environmental justice in minority populations and low-income populations; suggested actions to enhance the Patrick AFB environment; and conditions normally requiring an environmental impact statement.

To assess the potential for and significance of environmental impacts from the proposed project activities, a list of activities necessary to accomplish the proposed action was first developed (Section 1.0). Then the environmental setting was described, with emphasis on any special environmental sensitivities (Section 2.0). Next, the program activities were compared with the potentially affected environmental components to determine the environmental impacts of the proposed action.

Federal environmental laws and regulations were reviewed to assist in determining established thresholds for assessing environmental impacts (if any) in fulfillment of NEPA requirements. Proposed activities were evaluated to determine their potential to result in significant environmental consequences using an approach based on the interpretation of significance outlined in the CEQ regulations for implementing the procedural provisions of the NEPA (40 CFR 1500-1508).

Guidelines established by the CEQ (40 CFR 1508.27) specify that significance should be determined in relationship to both context and intensity (severity). The assessment of potential impacts and the determination of their significance are based on the requirements in 40 CFR 1508.27.

“Significantly,” as used in the NEPA, requires consideration of both context and intensity:

- **Context** - This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

- Intensity - This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
  - impacts that may be both beneficial and adverse (a significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial);
  - the degree to which the proposed action affects public health and safety;
  - unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
  - the degree to which the effects on the quality of the human environment are likely to be highly controversial;
  - the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks;
  - the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration;
  - whether the action is related to other actions with individually insignificant but cumulatively significant impacts (significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment and cannot be avoided by terming an action temporary or by breaking it down into small component parts);
  - the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register or cause loss or destruction of significant scientific, cultural, or historic resources;
  - the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973; and
  - whether the action threatens a violation of Federal, state, or local laws or requirements imposed for the protection of the environment.

Based on the previous criteria, three levels of impact can be identified:

- No Impact - No impact is predicted.
- No Significant Impact - An impact is predicted, but the impact does not meet the intensity/context significance criteria for the specific resource.
- Significant Impact - An impact is predicted that meets the intensity/context significance criteria for the specific resource.



The definition of cumulative impacts as shown in 40 CFR 1508.7 is “the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The purpose of a cumulative impacts analysis is to ensure that activities that may have individually minor impacts are recognized for their potential to produce collectively significant effects on the environment. Further, impacts to be considered include those from past, present, and reasonably foreseeable future actions. Reasonably foreseeable actions are not limited to planned or scheduled activities that have a high degree of certainty. To qualify as reasonably foreseeable, it is sufficient that an action have some probability of occurring.

One approach for classifying cumulative impacts defines four categories of cumulative effects as follows:

- Nibbling - Similar, small incremental effects.
- Time-crowded Perturbations - Closely time-spaced activities.
- Space-crowded Perturbations - Closely geographically spaced activities.
- Indirect Effects - Space- and/or time-crowded indirect effects.

The use of these four categories provides a framework for the resource specialist to determine if a not significant impact could potentially become a significant impact when analyzed in a cumulative context. This analytical approach also provides a basis for evaluating and selecting appropriate program actions to minimize any significant cumulative impacts identified.

Potential cumulative impacts of the proposed activities are evaluated by determining (1) whether the proposed action would have an impact on a given resource and (2) what is the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions.

### **3.1 AIRSPACE**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to airspace management and utilization.

#### **3.1.1 Proposed Action**

There would be positive, though not significant, impacts expected to airspace utilization, from the implementation of the proposed action. As part of the proposed action, Patrick AFB would be removing facilities from within the Clear Zones (Clear Zones are areas established at the ends of each separate runway and are based on accident potential and noise generation of aircraft) and building new facilities in safer, quieter parts of the base. No new construction would occur within Clear Zones. Industrial facilities, unaccompanied housing, administrative, community commercial

and outdoor recreation facilities are all located within the Northern Clear Zone. Many of these facilities located within the Northern Clear Zone would be demolished and, if required, be reconstructed in an area outside the Northern Airfield Clear Zone.

Airspace dimensions, hours of operations, number of aircraft operations, and types of aircraft that utilize the base would not be expected to change. Operations at nearby airports (both public and private) and at Cape Canaveral are not expected to be affected by the projected changes to Patrick AFB requirements.

### **3.1.2 No-Action Alternative**

In the no-action alternative, existing facilities would be maintained and new facilities would not be constructed in support of changing operational requirements. There would continue to be negative impacts associated with conflicting land use in the Airfield Clear Zones.

### **3.1.3 Cumulative Impacts**

There would be positive cumulative impacts from removing facilities from within the Airfield Clear Zones. These impacts would be to public health and safety.

### **3.1.4 Mitigation Measures**

No mitigation measures are expected for airspace.

## **3.2 AIR QUALITY**

Criteria pollutants are those chemicals for which ambient air quality standards have been promulgated. These criteria pollutants are emitted primarily from combustion sources such as power plants, boilers, aircraft engines, automotive engines, solid waste incinerators, and burn pits. These pollutants are regulated and controlled so that the concentration does not exceed either short-term or long-term standards. Under the CAA, Federal actions must not cause or contribute to any new violation of air quality standards, increase the frequency or severity of any existing violation, or delay the timely attainment of any air quality standard or interim milestone.

Non-criteria pollutants are all other air pollutants that are regulated and controlled by emission standards or other health-risk-based criteria. As the various portions mandated by the 1990 CAA Amendments are promulgated by the EPA, the number of regulated pollutants has continued to grow. These pollutants may be emitted from many different sources, such as the use of solvents in paint, automobile maintenance, and metals and organic emissions from solid waste incineration activities.

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to air quality.

### **3.2.1 Proposed Action**

There would be no significant impacts expected to air quality from the proposed action. Federal and state NAAQS concentrations would not reasonably be expected to be exceeded due to demolition of facilities and construction of new facilities in support of current and future installation requirements.

No significant impacts are anticipated as a result of potential future construction activities on the base. However, heating, ventilation, and air conditioning (HVAC) systems required for new facility construction could generate air and water emissions which may require permitting. Individual projects would require analysis of permit requirements by following the 45th SW procedure for EIAP before the project may proceed. Intermittent construction-related impacts could result from fugitive dust (particulate matter) and construction equipment emissions. Combustion emissions would be generated during construction by the internal combustion engines of heavy construction equipment vehicles and equipment. The primary emissions from heavy duty construction equipment are carbon monoxide, hydrocarbons, nitrogen oxides, aldehydes, sulfur oxides, and particulates. In accordance with the National Defense Authorization Act for Fiscal Year 1993, Title III, Section 326 (Public Law 102-484), contractors should not make use of materials, classified as a Class I Ozone Depleting Chemical (ODC). Class I ODCs include chloroflourcarbons (CFC's 11, 12, 113, 114, 115, 13, 111, 112, 211, 213, 214, 215, 126 and 217), carbon tetrachloride, methyl chloroform, methyl bromide and Halons 1211, 1301, 1202 and 1011. Contractors would be required to comply with the requirements identified in Section 608 of the Clean Air Act. Contractors who would be required to work with Class I ODC refrigerants would comply with all requirements identified in Section 603 of the Clean Air Act. EAs prepared in the past at Patrick AFB for construction projects have not identified significant impacts to air quality (see Appendix A).

### **3.2.2 No-Action Alternative**

In the no-action alternative, existing facilities would be maintained and new facilities would not be constructed in support of changing operational requirements. There would not be impacts to air quality resulting from the no-action alternative since there would be no changes to the general types of ongoing activities in the area.

### **3.2.3 Cumulative Impacts**

HVAC systems required for new facility construction could generate air and water emissions. These emissions would not be expected to become significant due to the permitting process and the requirement to comply with the restrictions/procedures of the permit.

### **3.2.4 Mitigation Measures**

Construction-related emissions of fugitive dust and exhaust products would depend on the amount of construction and earthwork performed and the construction mobilization schedule. Fugitive dust from ground-disturbing activities can be reduced up to 50 percent by regular site-watering practices.

Emissions from HVAC systems would be monitored to ensure that the operations are in compliance with the restrictions/procedures of any required permits.

### **3.3 NATURAL RESOURCES**

Criteria for determining the significance of potential impacts to natural resources are based on the importance of the resource, the number or amount of the resource that would be impacted, the sensitivity of the resource to the proposed activities, and the duration of the impact. Impacts are considered significant if they are determined to have the potential to result in reduction of the population size of Federally listed or state-listed threatened or endangered species, degradation of biologically important unique habitats, or substantial long-term loss of vegetation and the capacity of a habitat to support wildlife (i.e. negatively impact biodiversity).

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to natural resources.

#### **3.3.1 Proposed Action**

There would be positive impacts to natural resources from the implementation of the proposed action. The beachfront area between Florida State Highway A1A and the ocean would remain open to protect the dunes and shoreline. Additionally, the proposed action includes leaving significant open spaces along the Banana River on the west central portion of the base. Also, the Landscape Development Plan would include more natural ground cover along with new landscaping. This plan recommends that site development along the Atlantic Ocean and Banana River be sensitive to the natural environment. Priority would be given to preserving the shoreline vegetation, dune revegetation and beach restoration, all of which are critical to shoreline stabilization. These activities will provide more habitat for the many species which co-exist on Patrick AFB and ensure the protection of resources within the base.

Compatible land use elements of the proposed action would improve the sustainability of healthy, diverse, and productive plant and animal communities reflective of a naturally balanced ecosystem. Though there are no rare or endangered plant species on the base, native plant communities as well as nongame species would also be encouraged. Increased habitat will improve the sustainability of the healthy, diverse varieties of plant and animal species that make their homes on Patrick AFB. The restriction of activities on the shoreline of the ocean would help protect the endangered sea turtle species that use the beach for nesting. Additionally, the Patrick AFB exterior lighting policy (30 October 1990), would continue to afford additional protection for the sea turtles. This policy would continue to be a permanent design and construction policy regarding exterior lighting. Also, proponents of construction activities would continue to give consideration to the nesting activities of the state threatened Least tern. Mitigation measure for activities which could potentially disturb Least tern nesting (which often occurs on flat, gravel-topped roofs of buildings) would continue to be implemented. Examples of these mitigations include curtailing roofing activities during the April

through August breeding/nesting time frame or, when unavoidable, erecting netting to discourage nesting.

Since wetlands are one of the most biologically productive natural ecosystems in the world, planned management of the wetlands resources found on Patrick AFB is critical to sustaining biodiversity in the defined ROI and beyond. Aquatic habitats and the broad range of species found along Patrick AFB's coastal and lagoon shorelines would be managed and improved to further support biodiversity in the ROI and beyond.

### **3.3.2 No-Action Alternative**

If the no-action alternative is chosen, no comprehensive land use management plan would exist. Without planning for dune and shoreline stabilization, a negative impact of erosion would occur resulting in damage to shorelines and lowering of water quality.

### **3.3.3 Cumulative Impacts**

As the proposed action is implemented, positive cumulative impacts would be expected from grouping land uses into compatible areas and increasing the amounts of natural ground cover and landscaping and implementing policies and land use plans which protect, preserve, and refurbish portions of sensitive dunes and shorelines of the Atlantic Ocean and Banana River. Additionally, proactive policies to protect the endangered sea turtle, such as the Installation's exterior lighting Policy, would continue to have a positive effect on the nesting and survival of this species.

### **3.3.4 Mitigation Measures**

Future Patrick AFB plans and programs would need to be evaluated on a case by case basis via the 45th SW EIAP Procedure and procedures outlined in AFI 32-7061 to judge the potential for impacts of these plans or programs on the natural resources of the base. Additionally, policies for exterior lighting and building construction should continue in effect to limit potential for impact to the sea turtle and Least tern. Impacts of construction/demolition projects on sensitive wetlands on Patrick AFB would need to be addressed for each project along with consultation with the Patrick AFB Environmental Flight.

## **3.4 CULTURAL RESOURCES**

Cultural resources include real property (such as archaeological sites and historic buildings) as well as historic documents and museum artifacts and collections. These resources are limited, nonrenewable resources whose potential for scientific research or value as a traditional resource may be easily diminished by actions which significantly impact the integrity of the property. Activities that disturb the ground in which an archaeological site is present can destroy temporally and culturally diagnostic artifacts and features or alter artifact provenance. Such alterations to the integrity of a property precludes possible determination that the site may be likely to yield

information important in prehistory or history. Significance of impacts is determined by the intensity and context of the alteration of the distinctive characteristics and integrity of a property.

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to cultural resources.

#### **3.4.1 Proposed Action**

There would be no anticipated significant impacts to cultural resources from the implementation of the proposed action. By establishing a coherent management system, existing cultural resources would be protected from encroachment from installation activities.

Many of the historic buildings at Patrick AFB were constructed with concrete mixed with salt water. Over time the salt water used in the concrete has caused damage to the structural integrity of the building. In cases where the structural integrity of the building is beyond repair, the building would be scheduled for demolition. Historical buildings scheduled for demolition in FY 1997-2003 are as follows: 312, 313, 317, 318, 330, 559, 575, 703, 800, 992, 996, and 1173. Where not already accomplished, coordination with the Florida SHPO would be accomplished prior to beginning any demolition or renovation activities to buildings with potential historical significance.

If, during future construction activities, the selected contractor observes items that might have historical or archaeological value, such observations shall be reported immediately to the Air Force so that the appropriate authorities may be notified and a determination can be made as to their significance and what, if any, special disposition of the finds should be made. The construction contractor shall cease all activities that may result in the destruction of these resources and shall prevent employees from trespassing on, removing, or otherwise damaging such resources.

#### **3.4.2 No-Action Alternative**

If the no-action alternative is chosen, there would be no anticipated impacts to cultural resources as there would be no change to the general types of activities in the area. Impacts to cultural resources would be analyzed on a case-by-case basis through EAs and coordination with the Florida SHPO.

#### **3.4.3 Cumulative Impacts**

Cumulative impacts are not expected as a result of the proposed action.

#### **3.4.4 Mitigation Measures**

In instances where a historic building will have to be demolished, there may be no feasible mitigation measures. Previously used measures include: recording the design of a building either photographically or through the preservation of original blueprints; using similar construction materials and techniques; and incorporating structural design changes to minimize their impact.

In addition, mitigation measures should be included in contractor design specifications to address the possibility that the proposed action would discover a previously unknown cultural resource site. Wording such as mentioned in Section 3.4.1, should be included in the design specification.

### **3.5 GEOLOGY AND SOILS**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to geology and soils.

#### **3.5.1 Proposed Action**

There would be no significant impacts to geology and soils from the implementation of proposed action. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. By using best management practices during new construction, potential negative impacts on the geology and soils (e.g., sheet flow and gully erosion) would be avoided. By controlling these erosion factors, siltation and turbidity of the canals and waterways would be minimized.

#### **3.5.2 No-Action Alternative**

In the no-action alternative, existing facilities would be maintained and new facilities would not be constructed in support of changing operational requirements. There would be no impacts to geology and soils because there would be no change to the general types of ongoing activities in the area.

#### **3.5.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact geology and soils in a cumulative manner; therefore, no cumulative impacts are expected.

#### **3.5.4 Mitigation Measures**

Negative impacts (e.g., soil erosion and siltation of waterways) would be minimized by following the grounds maintenance and soil erosion control measures and guidelines found in the Integrated Natural Resources Management Plan.

### **3.6 HAZARDOUS MATERIALS AND WASTE**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to hazardous materials and waste.

### **3.6.1 Proposed Action**

There should be no significant impacts anticipated to hazardous materials and waste from the implementation of proposed action. The proposed action is demolish and construct facilities on Patrick AFB in support of current and future installation requirements. Hazardous materials and waste would be expected to be encountered during demolition of facilities on Patrick AFB in the forms of ACM and lead based paint. Hazardous materials would be handled in accordance with the Patrick AFB Oplan 19-14 to ensure they are stored, transported, and disposed of properly. Construction design specifications would continue to provide specific procedures to be followed by the construction or demolition contractor for the management of hazardous materials and waste.

### **3.6.2 No-Action Alternative**

There would be no significant impacts to hazardous materials and waste from the implementation of proposed action. Under this alternative, no construction of new facilities would occur. Patrick AFB OPLAN 19-14 would still provide guidance for the handling of hazardous materials on the base.

### **3.6.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact hazardous materials and waste in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.6.4 Mitigation Measures**

Demolition projects at Patrick AFB would need to be evaluated on a case by case basis to confirm the presence of ACM or lead based paint. Strict adherence to Patrick AFB OPLAN 19-14 and construction/demolition design specifications would need to be ensured.

## **3.7 HEALTH AND SAFETY**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to health and safety.

### **3.7.1 Proposed Action**

There would be positive impacts to health and safety from the implementation of proposed action. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. The demolition of buildings from within the Clear Zones will provide a margin of safety for personnel on the ground in the event of aircraft emergencies.



During demolition or new construction, the construction contractor would be working under the guidelines of a comprehensive accident prevention plan that would address all hazards and safety precautions associated with the proposed work. Demolition projects at Patrick AFB may need to be evaluated on a case by case basis to confirm the presence of ACM or lead based paint. Saw cutting, drilling, excavation, and all other activities involving chemicals would be addressed in the contractor's accident prevention plan. In addition, all construction or demolition contractors would comply with the State of Florida Department of Transportation regulations with regard to safety barriers and marking requirements for road construction. The selected contractors would perform all work to comply with FAR 52.236-13, Accident Prevention Guidelines and would be required to develop (a comprehensive accident prevention plan) and receive approval from 45 SPW/SEG and 45 MG/SGPB.

### **3.7.2 No-Action Alternative**

In the no-action alternative, existing facilities would be maintained and new facilities would not be constructed in support of changing operational requirements. There would be no impacts to health and safety because there would be no change to the general types of ongoing activities in the area.

### **3.7.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact health and safety in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.7.4 Mitigation Measures**

The construction contractor would be working under the guidelines of an approved comprehensive accident prevention plan that would address all hazards and safety precautions associated with the proposed work. Saw cutting, drilling, excavation, and all other activities involving chemicals would be addressed in the contractor's accident prevention plan. In addition, all construction contractors would comply with the State of Florida Department of Transportation regulations with regard to safety barriers and marking requirements for road construction. The selected contractors would perform all work to comply with FAR 52.236-13, Accident Prevention Guidelines.

## **3.8 INFRASTRUCTURE AND TRANSPORTATION**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to infrastructure and transportation.

### **3.8.1 Proposed Action**

There would be positive impacts to infrastructure and transportation from the implementation of the proposed action. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. Through the consolidation of facilities with

like activities, infrastructure and transportation efficiencies would be improved. Other projects which will provide positive impacts to infrastructure and transportation include: Stormwater drainage improvements, widening of South Patrick Drive, installation of a traffic light at South Patrick Drive and Mace Road, and the realignment of Mace Road.

### **3.8.2 No-Action Alternative**

There would be no significant impacts to infrastructure and transportation from the implementation of no action alternative. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. No action would result in continued use of facilities for their current purposes without the relocation and grouping of similar activities such as housing, recreation, administration, flightline activities etc. Existing inefficiencies in the current infrastructure and transportation system would remain.

### **3.8.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact infrastructure and transportation in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.8.4 Mitigation Measures**

Stormwater drainage control would be managed by strict adherence to permits and design specification as well as utilization of construction best management practices to minimize disruption to base infrastructure and transportation.

## **3.9 LAND USE**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to land use.

### **3.9.1 Proposed Action**

There would be positive impacts to land use from the implementation of the proposed action. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. As part of the proposed action, land usage would be improved by demolishing facilities from within the Clear Zones and relocating them to compatible land use areas. Additionally, like activities would be grouped into land use categories such as: Airfield; Aircraft Operations and Maintenance; Industrial; Administrative; Community (Commercial); Community (Service); Medical; Housing (Accompanied); Housing (Unaccompanied); Outdoor Recreation; Open Space; and Water.

### **3.9.2 No-Action Alternative**

If the no-action alternative is chosen, new construction will not occur, however, facilities will remain within the Clear Zones. This will continue an unsafe land use condition in the event of aircraft emergencies.

### **3.9.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact land use in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.9.4 Mitigation Measures**

No mitigation measures for land use are expected.

## **3.10 NOISE**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to noise.

### **3.10.1 Proposed Action**

There would be no significant impacts expected to noise due to the implementation of the proposed action. The proposed action is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. Normal noise producing activities on the base would continue but would not be affected by the construction of new facilities, however, short-term increases of noise levels around construction sites would be reasonably expected to occur. Construction noise has not historically been a significant issue with construction projects in the past at Patrick AFB (see Appendix A).

Patrick AFB would follow the AICUZ Plan and update it as necessary with any change in aircraft types assigned to the base or significant mission changes that increase flight activities and/or associated aircraft support activities.

### **3.10.2 No-Action Alternative**

If the no-action alternative is chosen, there would be no impacts to noise because there would be no change to the general types of activities in the area.

### **3.10.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact noise in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.10.4 Mitigation Measures**

Patrick AFB would follow the AICUZ Plan and update it as necessary with any change in aircraft types assigned to the base or significant mission changes that increase flight activities and/or associated aircraft support activities. Beddown of new aircraft at Patrick would require implementation of the Environmental Impact Analysis Process (AF Form 813) and dependent upon the results of the analysis, an EA or EIS may be required. The impacts to noise would be thoroughly analyzed through this process.

To limit noise during potential future construction activities, the following measures can be followed to reduce the level of and eliminate the potential for significant impacts to construction workers and the surrounding land uses.

- Confine construction activities to normal working hours.
- Provide workers with hearing protection equipment (i.e., inert soft ear plugs and/or exterior noise reducing ear muffs).

### **3.11 SOCIOECONOMICS**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to socioeconomics.

#### **3.11.1 Proposed Action**

There would be positive impacts to socioeconomics from the implementation of the Proposed Action. There would be no impacts to population, but employment in the region would be expected to increase with future construction projects planned at Patrick AFB.

There would be positive impacts to on-base outdoor recreation facilities. Planned improvements under the proposed action include renovation of the golf course, improvements to playing fields, addition of picnic areas and campgrounds, improvements at the marina and the addition of fishing piers.

#### **3.11.2 No-Action Alternative**

There would be no significant impacts to socioeconomics from the no-action alternative. The proposed action is demolish and construct facilities on Patrick AFB in support of current and future installation requirements. There would be no impacts to population or employment in the region, but there could be potential negative impacts to recreational facilities.

Outdoor recreational facilities on the base could be negatively affected without the implementation of the proposed action. Boat ramps, fishing piers, and swimming areas would be affected due to lack of improvements and maintenance for these facilities.

### **3.11.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact socioeconomics in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.11.4 Mitigation Measures**

No mitigation measures are necessary for socioeconomics.

## **3.12 VISUAL AND AESTHETICS**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to visual and aesthetics.

### **3.12.1 Proposed Action**

There would be significant positive impacts to visual and aesthetics from the implementation proposed action. Through the proposed action and the Facilities Excellence Plan, the base would become more aesthetically pleasing. Architecture and color schemes would be followed to provide the Patrick AFB landscape and buildings with continuity and enhanced quality of life features.

### **3.12.2 No-Action Alternative**

If the no-action alternative is chosen, the facilities construction program and component plans would not be implemented and there would not be a concise operating procedure in place to manage the visual and aesthetic aspects of the base. Buildings and landscaping on the base would be affected without the implementation of the facilities construction program and component plans due to lack of an overall comprehensive base color and exterior architecture scheme.

### **3.12.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact visual and aesthetics in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.12.4 Mitigation Measures**

No mitigation measures are necessary for the visual and aesthetics resource.

## **3.13 WATER RESOURCES**

The following sections describe the impacts to the environment from the proposed action and the no-action alternative, cumulative impacts, and potential mitigation measures pertaining to water resources.

### **3.13.1 Proposed Action**

There would be positive impacts to water resources from the implementation of the proposed action. As part of the proposed action, many areas presently covered with impervious surfaces (asphalt and concrete) will be replaced with natural ground cover. This will allow more precipitation to infiltrate the ground surface and recharge the groundwater system. This will also help reduce stormwater runoff. A water conservation plan is being prepared for Patrick AFB which encourages efficient use of water. Under this plan, irrigation would be limited to evening hours and the use of xeriscape is encouraged to reduce the amount of water required for irrigation.

Any selected construction contractor would obtain a National Pollutant Discharge Elimination System (NPDES) construction permit from the EPA. The contractor would comply with the NPDES permit requirements as well as all applicable Federal, state, and local laws and regulations during construction. Additionally, best construction management practices and adherence to the requirements in the construction design specification would ensure impacts to water resources are minimized to the maximum extent possible.

### **3.13.2 No-Action Alternative**

If the no-action alternative is chosen, existing facilities would be maintained and new facilities would not be constructed in support of changing operational requirements. There would be no impacts to water resources because there would be no change to the general types of ongoing activities in the area. Stormwater drainage could become a problem due to overdevelopment (lack of infiltration areas).

### **3.13.3 Cumulative Impacts**

There are no additional past, present, or reasonably foreseeable actions that would be expected to impact water resources in a cumulative manner; therefore, no cumulative impacts are expected.

### **3.13.4 Mitigation Measures**

Any selected construction contractor would obtain a NPDES permit from the EPA. The contractor would comply with the NPDES permit requirements and all applicable Federal, state, and local laws and regulations as well as construction design specifications during construction. This would potentially include compliance with permitting requirements for stormwater, domestic waste water, and drinking water.

## **3.14 CHANGES IN MISSION AND OPERATION**

Air Force guidance on the preparation of EISs and EAs suggests that the proposed action be evaluated with respect to its impact on the current mission and operations of the installation. As noted in Section 1.0, implementation of the facilities construction program and component plans in a timely, consistent, and effective manner would ensure the wise protection, use, and synergistic

management of Patrick AFB resources. The lack of a comprehensive General Plan which would group facilities with similar missions into land use categories would have a negative impact on natural and cultural resources and lead to or continue conflicting land use problems. This assessment concluded that implementation of the General Plan with its facilities construction program and component plans would not cause a negative change in the mission or operations at Patrick AFB. The proposed action would not significantly alter the mission of the base and is consistent with the General Plan.

### 3.15 CUMULATIVE IMPACTS SUMMARY

In accordance with the implementing regulations for NEPA, cumulative impacts must be addressed in an EA. A cumulative impact is the "...impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions..."

The implementation of the General Plan and component plans would not represent a increase in activities already occurring on the base. Environmental effects identified in the analysis do not support a conclusion that there would be cumulative impacts at Patrick AFB as a whole as a result of this proposed action.

### 3.16 MITIGATION MEASURES SUMMARY

Mitigation measures for the proposed action are not required for *Airspace*, *Socioeconomics*, and *Visual and Aesthetics* resources. Mitigation measures for the remaining resources are summarized below:

**Air Quality** - Construction-related emissions of fugitive dust and exhaust products would depend on the amount of construction and earthwork performed and the construction mobilization schedule. Fugitive dust from ground-disturbing activities can be reduced up to 50 percent by regular site-watering practices. Emissions for HVAC systems would be monitored to ensure that the operations are in compliance with the restrictions/procedures of any required permits.

**Natural Resources** - There would be no significant impacts to natural resources with the implementation of the General Plan and component plans, and mitigation measures are not necessary as long as the management plans outlined within the General Plan and component plans are followed. Future Patrick AFB plans and programs would need to be evaluated on a case by case basis via the 45th SW EIAP procedure and the procedures outlined in AFI 32-7061 to judge the potential for impacts of these plans or programs on the natural resources of the base. Additionally, policies for exterior lighting and building construction should continue in effect to limit potential for impact to the sea turtle and Least tern. Impacts of construction/demolition projects on sensitive wetlands on Patrick AFB would need to be addressed for each project along with consultation with the Patrick AFB Environmental Flight.

**Cultural Resources** - In instances where a historic building will have to be demolished, there may be no feasible mitigation measures. Previously used measures include: recording the design of a building either photographically or through the preservation of original blueprints; using similar construction materials and techniques; and incorporating structural design changes to minimize their impact.

In addition, mitigation measures should be included in contractor design specifications to address the possibility that the proposed action would discover a previously unknown cultural resource site. If, during future construction activities, the selected contractor observes items that might have historical or archaeological value, such observations shall be reported immediately to the Air Force so that the appropriate authorities may be notified and a determination can be made as to their significance and what, if any, special disposition of the finds should be made. The construction contractor shall cease all activities that may result in the destruction of these resources and shall prevent employees from trespassing on, removing, or otherwise damaging such resources.

**Geology and Soils** - Negative impacts (e.g., soil erosion and siltation of waterways) would be minimized by following the grounds maintenance and soil erosion control measures and guidelines found in the Integrated Natural Resources Management Plan.

**Hazardous Materials and Waste** - Demolition projects at Patrick AFB would need to be evaluated on a case by case basis to confirm the presence of ACM or lead based paint. Construction design specifications would need to clearly address contractor responsibilities for the proper handling and disposition of hazardous materials and waste to include lead-based paint and ACM. Strict adherence to Patrick AFB OPLAN 19-14 and construction/demolition design specifications would need to be ensured.

**Health and Safety** - The construction contractor would be working under the guidelines of an approved comprehensive accident prevention plan that would address all hazards and safety precautions associated with the proposed work. Saw cutting, drilling, excavation, and all other activities involving chemicals would be addressed in the contractor's accident prevention plan. In addition, all construction contractors would comply with the State of Florida Department of Transportation regulations with regard to safety barriers and marking requirements for road construction. The selected contractors would perform all work to comply with FAR 52.236-13, Accident Prevention Guidelines.

**Infrastructure** - Stormwater drainage control would be managed by strict adherence to permits and design specification as well as utilization of construction best management practices to minimize disruption to base infrastructure and transportation.

**Land Use** - By following the General Plan, there would be further assurances that future actions would be compatible with existing land use.

**Noise** - Patrick AFB would follow the AICUZ Plan and update it as necessary with any change in aircraft types assigned to the base or significant mission changes that increase flight activities and/or



associated aircraft support activities. Beddown of new aircraft at Patrick would require implementation of the 45th SW EIAP procedure and, dependent upon the results of the analysis, an EA or EIS may be required. The impacts to noise would be thoroughly analyzed through this process.

To limit noise during potential future construction activities, the following measures can be followed to reduce the level of and eliminate the potential for significant impacts to construction workers and the surrounding land uses.

- Confine construction activities to normal working hours.
- Provide workers with hearing protection equipment (i.e., inert soft ear plugs and/or exterior noise reducing ear muffs).

**Water Resources** - Any selected construction contractor would obtain a NPDES permit from the EPA. The contractor would comply with the NPDES permit requirements and all applicable Federal, state, and local laws and regulations as well as construction design specifications during construction.

### **3.17 CONFLICTS WITH FEDERAL, REGIONAL, STATE, LOCAL, OR INDIAN TRIBE LAND USE PLANS, POLICIES, AND CONTROLS**

The Programmatic Environmental Assessment for Development and Maintenance of Patrick AFB would have no impact on existing land use itself and present no conflicts with Federal, regional, state, local, or Indian Tribe land use plans, policies, or controls.

### **3.18 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

Anticipated energy requirements of program activities can be accommodated within the energy supply of the region. Energy requirements would be subject to any established energy conservation practices.

### **3.19 NATURAL OR DEPLETABLE RESOURCE REQUIREMENTS AND CONSERVATION POTENTIAL**

Other than the use of necessary building materials and vehicle fuels, no significant use of natural or depletable resources is required by the project.

### **3.20 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED**

Adverse environmental effects that cannot be avoided include fugitive dust (particulate matter) and construction equipment emissions; some potential destruction of existing vegetation during future construction activities; noise from airfield operations and potential construction activities; and the disturbance of soils. However, through implementation of the program actions and mitigations described within this document, these effects can be minimized.

### **3.21 RELATIONSHIP BETWEEN SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

No significant impacts to the human environment or the maintenance and enhancement of long-term productivity would occur as a result of implementing the proposed action. The scope of the proposed action is consistent with historical activities on Patrick AFB. Potential future construction activities would include excavation, paving, and landscaping. The proposed action is designed to enhance the operational capability of the base.

### **3.22 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

The amount of potential construction materials and energy required for future actions would be small. Although potential activities would result in some irreversible and irretrievable commitment of resources such as construction materials, concrete, minerals, and labor, this commitment of resources is not significantly different from that necessary for many other similar building programs. Potential activities would most likely not result in significant changes to land use or cause permanent loss of habitat for biological species.

### **3.23 FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS**

The proposed action would be undertaken in a manner that would not substantially affect human health or the environment. The activities would also be conducted in a manner that would not exclude persons from participation in, deny persons the benefits of, or subject persons to discrimination under, the project actions because of their race, color, or national origin.

### **3.24 SUGGESTED ACTIONS TO ENHANCE THE PATRICK AFB ENVIRONMENT**

The following is a brief list of suggested actions to enhance the environment in and around Patrick AFB.

- Increase proper landscaping/xeriscaping throughout the base. This would also reduce the amount of water used in maintaining the area landscape.
- Complete an audit of the Patrick AFB water delivery system to ensure potable water is not wasted through misuse or leakage.
- Continue to maintain or increase aircraft pattern altitude to ensure reduced noise levels over base housing areas and the surrounding communities.
- Increase beach renourishment and continue planting appropriate dune vegetation.
- Increase biodiversity (biodiversity is discussed below).

Biological diversity (biodiversity), or the variety of life and its processes, is a basic property of nature that provides enormous ecological, economic, and aesthetic benefits. The loss of biodiversity is recognized as a major national as well as global concern with potentially profound ecological and

economic consequences. The "Ecosystem Management Policy Directive" issued in 1994 by DoD's Under Secretary of Defense, articulates the biodiversity conservation policy embraced by the DoD and the military departments. The goal of this policy is to:

*"Maintain and improve the sustainability and native biodiversity of terrestrial and aquatic, including marine, ecosystems while supporting human needs, including DoD mission."*

Conservation of biodiversity is a national goal provided for in the framework of NEPA. This goal is to anticipate and evaluate the effects of Federal actions on biodiversity and actively manage for the reduction of the impact of these effects as well as the promotion of restoration to previously impacted areas. The DoD Environmental conservation Instruction, signed in 1996, lays out specific management tactics to achieve conservation goals:

- *"Maintain or restore remaining native ecosystem types across their natural range of variation."*
- *"Maintain or reestablish viable populations of all native species in areas of natural habitat, when practicable."*
- *"Maintain evolutionary and ecological processes, such as disturbance regimes, hydrological processes, and nutrient cycles."*
- *"Manage over sufficiently longtime periods to allow for changing system dynamics."*
- *"Plan to accommodate human use as necessary."*

The basic goal of biodiversity conservation is to maintain naturally occurring ecosystems, communities, and native species. For the proposed action evaluated in this EA, impacts to biodiversity could be significant if the mitigative measures outlined are not implemented. The natural environment at Patrick AFB has been previously disturbed and the ecosystem altered for several decades and measures should be taken to restore and protect the biodiversity of the area.

Suggestions to minimize any anticipated impacts for planned construction in the area, and subsequently increase biodiversity in this area, include:

- incorporating measures to minimize landscape fragmentation,
- linking blocks of originally connected habitat through landscape corridors,
- utilizing only native species in landscape plantings, and
- monitoring for biodiversity impacts and for changes in biodiversity.

### **3.25 CONDITIONS NORMALLY REQUIRING AN ENVIRONMENTAL IMPACT STATEMENT**

The potential impacts arising from the proposed implementation of the General Plan and component plans were evaluated specifically in the context of the criteria for actions requiring an Environmental

Impact Statement described in Paragraph 3.5 of AFI 32-7061, *The Environmental Impact Analysis Process*.

Specifically, the proposed project activities were evaluated for their potential to:

- significantly affect environmental quality or public health and safety;
- significantly affect historic or archaeological resources, public parks and recreation areas, wildlife refuge or wilderness areas, wild and scenic rivers, or aquifers;
- adversely affect properties listed or meeting the criteria for listing on the National Register or the National Registry of Natural Landmarks;
- significantly affect prime and unique farmlands, wetlands, ecologically or culturally important areas, or other areas of unique or critical environmental concern;
- result in significant and uncertain environmental effects or unique or unknown environmental risks;
- significantly affect a species or habitat listed or proposed for listing on the Federal list of endangered or threatened species;
- establish a precedent for future actions;
- adversely interact with other actions resulting in cumulative environmental effects; and
- involve the use, transportation, storage, and disposal of hazardous or toxic materials that may have significant environmental impact.

The evaluation indicated that the proposed action, as described in this EA, did not meet any of these criteria.

## **CHAPTER 4.0**

### **AREA DEVELOPMENT PLANS**

An area development plan is a conceptual design study of a specific area which lies within the confines of a larger military base. The purpose of the ADP is to analyze the constraints and/or problems of an area, propose solutions in order to improve the area's aesthetics and organization, and to identify future development potential and plan, with specific goals in mind, for the future of the area. The emphasis of the various ADPs is primarily the location of new facilities to meet the growing and changing needs of Patrick AFB, and the relocation of existing facilities to better utilize on-base assets. Each of the 11 ADPs (Figure 4-1) are summarized below. Following each summary of the ADPs is a list of potential environmental impacts for each area.

#### **ADP 1 - River Community Area**

The River Community Area is located directly northwest of the Main Base in an area currently occupied by the Motor Pool, vehicle storage, Base supply functions and the Print Plant. This land is prime river front property which would better serve the Base as a community area. Community facilities currently located in the Clear Zone (Gymnasium, DEOMI, Visting Airmans Dorm etc.) would be relocated to the River Community Area. The industrial land use category in this area is opposed to *Air Force Planning Criteria*. Relocating industrial facilities out of this area will allow Patrick AFB to maximize the unique river front by building more community oriented facilities.

#### **Potential Environmental Impacts**

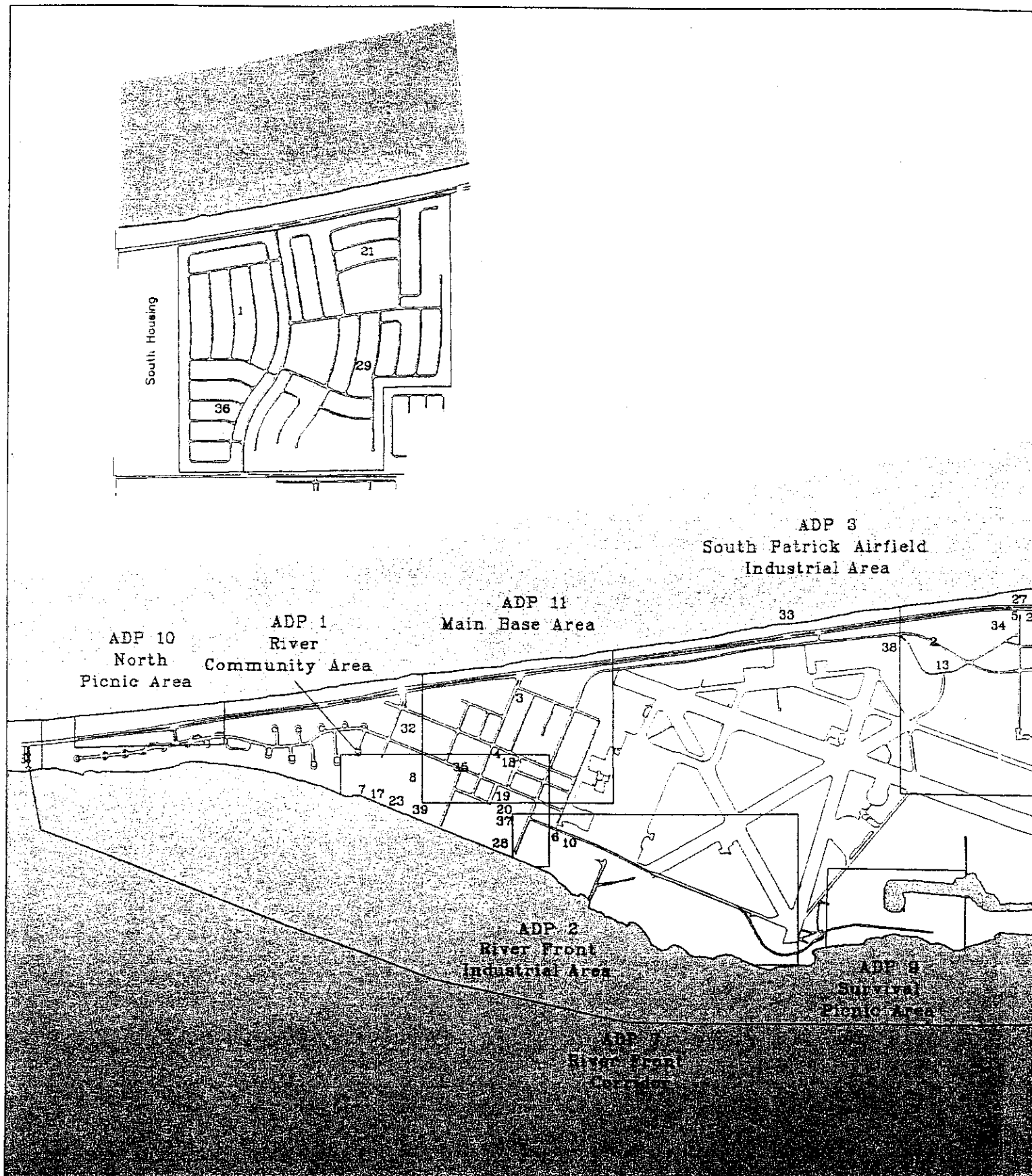
- Positive impact to Water Resources from removal of large expanses of asphalt and concrete
- Positive impact to Visual and Aesthetics from the relocation of vehicle storage
- Positive impact to Health and Safety from removal of facilities from the Clear Zone
- Negative impact of possible site contamination from previous industrial areas in this area

#### **ADP 2 - River Front Industrial Area**

The River Front Industrial area is bounded on the east by the airfield and on the west by the Banana River. This area is one of the main industrial areas on the base and also contains storage and maintenance facilities. The area lacks landscaping and has developed in such a way that it has an unorganized and unattractive appearance. Proposals for improvement in this area include a River Corridor bicycle/pedestrian path along the Banana River, a greenspace and/or buffer between the Industrial area and the River Corridor, separating Rescue Road from the North Parking Apron, enhance the Civil Engineer Contractor Storage Area, and construct various new facilities.

#### **Potential Environmental Impacts:**

- Negative impacts from Visual and Aesthetics due to the proximity of the industrial area to the River Corridor



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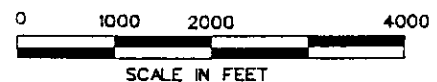
## PROGRAMMED/PROPOSED FACILITIES (SHORT-TERM)

- 1 Replace Mil Fam Housing (South)
- 2 Widen South Patrick Drive
- 3 Alter Base Pers Office
- 4 Alter Airmen Dorm
- 5 Replace Base Paving/Grounds Fac
- 6 CE Material Recycling Fac
- 7 Upgrade North Elect Substation
- 8 Riverfront Pavillion
- 9 Addition to Base Storage Fac
- 10 Construct Survival Equip Shop
- 11 Golf Maint Fac
- 12 Control Tower
- 13 Air Freight/Pax Terminal/Base Ops
- 14 Reserve Medical Training Fac
- 15 Alter Hosp Oral Surgery Clinic
- 16 Alter Enlisted Beach Club Pool
- 17 Construct DEOMI Fac
- 18 Alter Airmen Dorm
- 19 Construct New Print Plant
- 20 Construct New Pubs Warehouse
- 21 Replace Mil Fam Housing (South)
- 22 Base Engr Covered Storage
- 23 DEOMI Complex
- 24 ANG Comms Maint/Warehouse Facs
- 25 Base Supply Complex
- 26 Composite Medical Fac
- 27 Expand Enlisted Beach Club
- 28 Alter Boat House
- 29 Replace Mil Fam Housing (South)
- 30 Expand Marina
- 31 Alter Golf Course/Spt Fac
- 32 Construct Visiting Off Qtrs
- 33 Beach/Dune Erosion Restoration
- 34 Consolidated Engr Dev Center
- 35 Renovate Mini Mall
- 36 Replace Mil Fam Housing (South)
- 37 Vehicle Maint Fac

## PROGRAMMED/PROPOSED FACILITIES (LONG-TERM)

- 38 Construct Fire Station
- 39 Construct Visiting Airmen Dorm
- 40 Widen South Patrick Drive

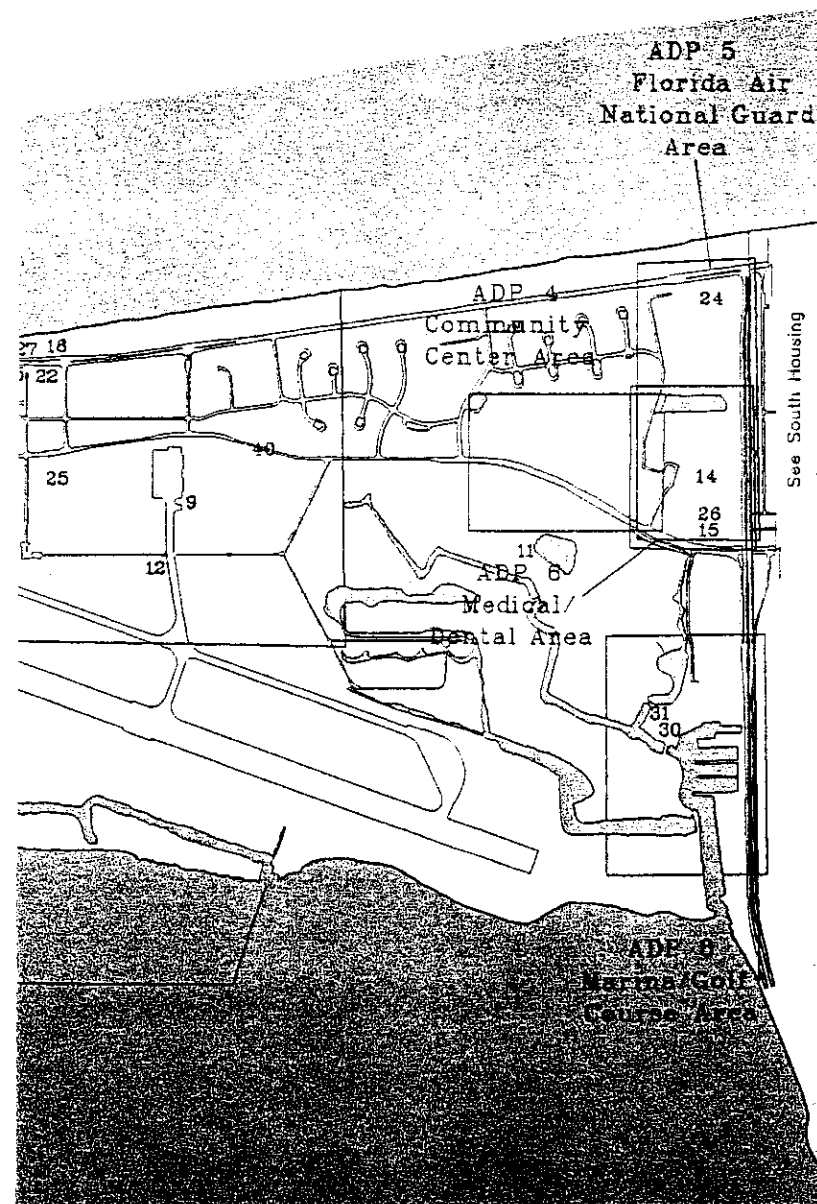
Area Development Plans (ADP)



## Map 5-1

Facilities Development Plan

Patrick Air Force Base  
General Plan



- Potential positive impact from landscaping enhancements
- Potential negative impact to Banana River shoreline during construction phases of projects

### **ADP 3 - South Patrick Airfield Industrial Area**

This area is located in the east-central portion of PAFB in the vicinity of AFTAC. This is the main industrial area on-base and has the greatest potential for expansion. This area is prime for the relocation of the Base Supply Complex, which is key to development of other parts of the base. Other improvements planned include: additional signage on South Patrick Drive to prevent cars from wandering onto runways, landscape enhancements, widening of South Patrick Drive to improve traffic flow, screening of all mechanical equipment with walls or landscaping and constructing various new facilities.

#### **Potential Environmental Impacts**

- A negative impact to Land Use because portions of the South Patrick Airfield Industrial Area lie within the 100-year floodplain
- Positive impact to traffic flow from widening of South Patrick Drive
- Positive impacts to Visual and Aesthetics Resources from landscaping improvements
- Positive impacts to Infrastructure from relocating Base Supply Facilities to this area and a resultant decrease of truck traffic through the main base

### **ADP 4 - Community Center Area**

The Community Center Area is located in the south-central area of the Base and contains the BX, bank, Satellite Pharmacy, Burger King, Class Six store and the Commissary. This is the area that generates the most traffic on the base, and where the majority of traffic and parking problems exists. Proposals for improvements in this area include development of a traffic management plan, screening service areas from the rest of the Base and Central Housing, expansion of the BX, pedestrian access from the Community Center to the Central Housing area, replacement of the temporary pharmacy, and landscaping enhancements.

#### **Potential Environmental Impacts:**

- Positive impact to Infrastructure due to widening of South Patrick Drive and the development of a traffic management plan
- Positive impacts to Visual and Aesthetics Resources from landscaping improvements
- Positive impact to Infrastructure due to the creation of a pedestrian path from the Central Housing to the Community Center which will decrease traffic load on South Patrick Drive

### **ADP 5 - Florida Air National Guard Area**

The Florida Air National Guard (FLANG) Area is located in the southeast corner of the base. This area houses several different functions including the Florida Air National Guard, a Medical



warehouse, Thrift Shop, FAA radar facility and contractor storage space. Proposals for improvements in this area include solving traffic problems, screen FLANG operations from SR A1A and Central Housing, addition of a new Communications Maintenance and/or Warehouse and an Equipment Wash Rack facility and realignment of Mace Road.

**Potential Environmental Impacts:**

- Potential negative impacts to Transportation caused by increased development in this area
- Positive impact to Visual and Aesthetics Resources from screening and landscaping
- Positive impact to Infrastructure from the realignment of Mace Road

**ADP 6 - Medical Center/Dental Area**

This area is located south of the Community Center area and currently houses the Hospital, Dental clinic and two outpatient clinics. The area has potential for development and expansion of the Hospital and medical facilities. The layout of the parking and entrances to this area is congested and inadequate. Proposed improvements in the Medical Center/Dental Area include a traffic light at the intersection of South Patrick Drive and Mace Road, realignment of Mace Road, establish several one-way roads in the Hospital parking area, construction of several medical facilities, landscaping enhancements, and installation of an off-ramp from Pineda Causeway.

**Potential Environmental Impacts:**

- Negative impacts to Transportation from increased development in this area and the poor layout of parking and roads
- Positive impacts to Infrastructure from realignment of Mace Road and installation of traffic signal on South Patrick Drive
- Positive impact to Visual and Aesthetics from landscaping
- Positive impact to Infrastructure from creation of off-ramp from Pineda Expressway

**ADP 7 - River Front Corridor**

This area extends from the River Picnic Area along the Banana River to the north end of the North Housing area, and passes alongside the River Industrial Area, Main Base, River Community Area, and North Housing. The River Corridor is a bicycle path and/or pedestrian walk for the population at PAFB. The walk would provide a place to access the Banana River which could have a major impact to the quality of life on-base. Proposed improvements for the River Corridor area include a landscape buffer to screen unsightly areas from River walk users, rehabilitate the existing boathouse, and the addition of piers and benches along the corridor.

**Potential Environmental Impacts:**

- Positive impacts would be expected for Natural Resources due to improvements to biodiversity from landscaping to reduce habitat fragmentation

- Positive impacts to Visual and Aesthetics from screening and landscaping of unsightly areas
- Potential negative impacts to Banana River shoreline from careless construction activities

#### **ADP 8 - Marina/Golf Course Area**

This area is located in the southwest corner of the Base. The Marina/Golf Course Area houses the Marina Club, Golf Club and an 18-hole Golf Course, DRMO, sewage plant facilities and the Base's South Power Substation. Proposed improvements in this area include parking improvements for the area east of the Marina, provide a front entry for the Marina from the parking lot, develop a site circulation scheme to support the golf course and marina facilities, develop dry boat storage in the former sewer plant area, and relocate the DRMO facility to CCAS.

##### **Potential Environmental Impacts:**

- Negative impacts to Health and Safety from the location of this area within the Clear Zone
- Negative impacts to Water and Natural Resources from additions to the Marina
- Potential negative impacts to endangered Manatee habitat
- Positive impacts to Visual and Aesthetics due to removal of the salvage yard
- Positive impacts to shoreline stabilization and biodiversity from mangrove plantings in marina area
- Positive impacts to Hazardous Materials/Waste from the removal of underground storage tanks in the Marina area
- Positive impacts to Water Resources from the installation of two sewage pump facilities

#### **ADP 9 - Survival Picnic/Famcamp Area**

The River Picnic and Family Camp Area is located south of the River Industrial Area, west of the airfield and adjacent to the Banana River. The River Picnic Area will be at the end of the proposed River Corridor. Proposed improvements for this area include protection of the river bank, increase number of parking slabs for RV camping, improve site aesthetics through landscaping enhancements, increase number of picnic pavilions, parking and restroom facilities, and implement existing *PAFB Famcamp Expansion Plan*.

##### **Potential Environmental Impacts:**

- Positive impacts to Visual and Aesthetics from increased landscaping
- Positive impacts to biodiversity from landscape plantings to decrease habitat fragmentation
- Potential negative impacts to Banana River shoreline from careless construction activities
- Potential negative impacts to Natural Resources from increased human usage

#### **ADP 10 - North Picnic Area**

The North Picnic Area is east of State Road A1A from the North Housing Area along the coastline of the Atlantic Ocean. This area currently houses a picnic pavilion, rest rooms, volleyball court, and

access stairways to the beach. Proposed improvements in the North Picnic area include another picnic pavilion, restroom, volleyball court, boardwalks and parking lot, landscaping enhancements, new entrance to the existing parking lot, and a traffic light at the intersection of Riverside Trail and SR A1A.

**Potential Environmental Impacts:**

- Negative impacts to Geology and Soils due to beach erosion resulting from increased human usage and beach vegetation impacts
- Potential negative impacts to sea turtle nesting habitat
- Potential negative impacts to Health and Safety and Infrastructure due to increased vehicular and pedestrian traffic
- Positive impacts to Visual and Aesthetics from landscaping improvements

**ADP 11 - Main Base Area**

The Main Base Area is the principal command and control area of the Base which houses the majority of command administration and dormitories. A sizable portion of this area is located in the Northern Clear Zone. Proposed improvements in the Main Base Area include relocating appropriate functions that are currently in the Clear Zone to the River Community area and demolish the vacated buildings, create a focal point to enhance the axis from the Main Gate along Jupiter Street, and relocation of other buildings in the Clear Zone.

**Potential Environmental Impacts:**

- Positive impacts to Visual and Aesthetics would be expected from architectural improvements to facilities in this area
- Potential positive impacts to Health and Safety from relocation of facilities from the Clear Zone
- Potential positive impacts to Biological Resources from creation of Open Spaces following demolition of facilities within the Clear Zone

## CHAPTER 5.0

### SUMMARY OF CONCLUSIONS

The anticipated impact to the environment from the proposed action has been assessed. A more detailed comparison of the environmental consequences of each alternative is located in Chapter 3.

Alternative 1 (Proposed Action) is to demolish and construct facilities on Patrick AFB in support of current and future installation requirements. The operational mission of Patrick AFB would be maintained, and projects in the General Plan would be implemented, when funded. Future individual actions may still require detailed environmental analysis and recommendations of feasible alternatives prior to construction and/or implementation. Environmental programs would be integrated with other planning and operational support processes. This alternative would provide efficient, environmentally sensitive, operational support at the installation and meet the installation's mission need for comprehensive planning. The General Plan and component plans would provide an inventory of natural resources and outline procedures for managing soil, shorelines, fish and wildlife resources, and wetlands for the benefit of resident fish and wildlife resources on the base. The plans would serve as a guide for developing and maintaining base lands consistent with the military mission and national policies on conservation of resources.

The proposed action would have no significant impacts to the environment. Resource areas where no significant impacts are expected include *Air Quality, Natural Resources, Cultural Resources, Geology and Soils, Hazardous Materials and Waste, Health and Safety, Infrastructure and Transportation, Land Use, Noise, Socioeconomics, Visual and Aesthetics, and Water Resources*. In addition, there are no cumulative impacts expected under this alternative.

If the no-action alternative is selected, the existing facilities at Patrick AFB would be maintained and new facilities would not be constructed in support of changing operational requirements. This alternative would provide for operational support of various Patrick AFB operations, but not at the efficiency available from the proposed action. The mission need for operational planning support could be met under this alternative but could not be done in a comprehensive, synergistic manner. Also, facilities within airfield clearance zones would remain and thereby continue a less-than-safe condition in the event of aircraft emergencies.

Under the no-action alternative, potential significant impacts are expected for the following resources: *Geology and Soils, Hazardous Materials and Waste, Health and Safety, Infrastructure and Transportation, Land Use, Socioeconomics, and Water Resources*.

## **CHAPTER 6.0**

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## **CHAPTER 7.0**

### **AGENCIES/ORGANIZATIONS/INDIVIDUALS SENT COPIES OF THE ASSESSMENT**

As part of the CEQ Regulations on the National Environmental Policy Act, the U.S. Department of the Air Force, 45 Civil Engineering Squadron, is circulating the Programmatic Environmental Assessment for Development and Maintenance of Patrick Air Force Base Florida to the following agencies, organizations, and individuals.

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Patrick Air Force Base

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## CHAPTER 8.0

### REFERENCES

Carey, Richard, MSGT. Personal communication between Msgt. Carey, Patrick AFB Airspace Representative, and Vista Technologies, regarding airspace surrounding Patrick AFB, August 19, 1996.

Ehrhart, L. M. and L. T. Uong. *Marine Turtle Nesting and Reproductive Success at Patrick Air Force Base; Summer, 1996*. University of Central Florida, Department of Biology, Dec. 1996.

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Patrick AFB, 1993. *AICUZ Study for the United States Air Force, Patrick AFB, Florida, Volumes I, II, and III*.

U.S. Air Force, 1992. *Environmental Compliance Assessment and Management Program (ECAMP) - Final Environmental Evaluation Report for Patrick AFB (March 1992 Assessment)*. Prepared by Argonne National Laboratory, Lakewood, CO, September.



**APPENDIX A**  
**MATRIX OF EXISTING ENVIRONMENTAL ASSESSMENTS**

## Existing Environmental Assessments Completed at Patrick AFB

HQ AFRES Medical Training Complex	12 December 1996
Florida Air National Guard Maintenance Facility	19 September 1996
Construct Material Recycling Facility (MRF) and Construct MRF Storage Shed	18 August 1996
Beddown of the 301st RQS	31 July 1996
Expand Marina	3 May 1996
Expansion of Base Exchange	27 April 1996
Visiting Officers Quarters Supporting Facility	August 1995
Youth Center Addition and Alteration	August 1995
Base Civil Engineering Storage Facility	May 1995
Air Freight/Passenger Terminal & Base Supply Complex	June 1994
Base Exchange, Convenience, Gasoline, and Class Six	17 June 1994
Security Police Operations Facility	January 1994
Air Traffic Control Tower	October 1993
Banana River Shoreline Stabilization	October 1993
Fuel Storage Tank Removal, Replacement, and Refurbishment	May 1993
Construction of Warehouse Addition to Self-Help Building	13 April 1993
Wastewater Tie-In with Cocoa Beach	August 1992
Replacement Housing at Patrick AFB	July 1992
Construction/Modification of Patrick AFB Golf Course	31 May 1988
Relay Mirror Experiment	October 1987
Drawdown of O-2A Aircraft	27 June 1986
Construct Traffic Checkhouse and Roadway Improvements	19 June 1986
Low Altitude Tactical Navigation Area	1 November 1985
Temporary Location of Radar 7.14	16 July 1984
Install New Weather Radar, Facility 423	May 1983
Riverside Recreational Area Facilities	1 February 1983
Beach and Shore Restoration and Protection, 5 Year Plan	September 1982
Repair Overhead Electrical, Housing Areas	September 1981
Construct Boat Slips/Yacht Basin	10 August 1981
Construct Recreational Complex	July 1981
Aerial Spray of Pesticide for Mosquito Control	31 March 1981
Aircraft Corrosion Control Facility	February 1981
Construct Temporary Lodging Facility	February 1981
Marina Facilities Damage	4 August 1980
Upgrade Sewerage Treatment Plants	April 1980
Sprinkler Irrigation System - Dorms and Visiting Officers Quarters	March 1980
Beach Dune Crosswalks at Coastal Dune Lines	26 October 1979
Alteration/Repair of Officer's Club	11 July 1979
Contract Operations by Base 6550 ABW Base Supply	27 February 1979
Installation of Silver Reclamation Processor	31 October 1978
919 Special Operations Group	13 September 1978
Alterations and Additions to Plating Shop and Industrial Waste Treatment Plant	June 14 1978
Contractor Relocation	EA copy and date is TBD



## POTENTIAL IMPACTS DISCUSSED

- Contractor Relocation
- Fuel Storage Tank Removal, Replacement, and Refurbishment
- Replacement Housing at Patrick AFB
- Wastewater Tie-In with Cocoa Beach
- Banana River Shoreline Stabilization
- Construction of Warehouse Addition to Self-Help Building
- Air Traffic Control Tower
- Air Freight/Passenger Terminal & Base Supply Complex
- Security Police Operations Facility
- Base Civil Engineering Storage Facility
- Visiting Officers Quarters Supporting Facility
- Alteration/Repair of Officer's Club
- Marina Facilities Damage
- Construct Boat Slips/Yacht Basin
- Construction/Modification of Patrick AFB Golf Course
- Riverside Recreational Area Facilities
- Youth Center Addition and Alteration
- Expand Marina
- Relay Mirror Experiment
- Beddown of the 301st RQS
- Base Exchange, Convenience, Gasoline, and Class Six
- Expansion of Base Exchange

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## Existing Environmental Assessments Completed at Patrick AFB

HQ AFRES Medical Training Complex	12 December 1996
Florida Air National Guard Maintenance Facility	19 September 1996
Construct Material Recycling Facility (MRF) and Construct MRF Storage Shed	18 August 1996
Beddown of the 301st RQS	31 July 1996
Expand Marina	3 May 1996
Expansion of Base Exchange	27 April 1996
Visiting Officers Quarters Supporting Facility	August 1995
Youth Center Addition and Alteration	August 1995
Base Civil Engineering Storage Facility	May 1995
Air Freight/Passenger Terminal & Base Supply Complex	June 1994
Base Exchange, Convenience, Gasoline, and Class Six	17 June 1994
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Contract Operations by Base 6550 ABW Base Supply	27 February 1979
Installation of Silver Reclamation Processor	31 October 1978
919 Special Operations Group	13 September 1978
Alterations and Additions to Plating Shop and Industrial Waste Treatment Plant	June 14 1978
Contractor Relocation	EA copy and date is TBD

## FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The U.S. Air Force - Patrick Air Force Base (AFB) proposes to expand and upgrade its existing medical complex located on the southern portion of Patrick AFB. The project would be to construct a Reserve Force Administration Training Facility to support the 822 Aeromedical Staging Squadron (ASTS) medical unit and construct additional facilities for the 45 Medical Group (MG). The existing medical complex is located to the east of the base hospital and base commissary and consists of two buildings (Buildings 1373 and 1366) that would be expanded by the addition of five additional buildings. This project would also include the construction of two parking lots at the location and the recontouring of the existing retention pond located to the east of the existing buildings. The proposed construction project would include the construction of one 55-foot by 55-foot Education and Training Facility, one 55-foot by 55-foot Readiness and Military Public Health Facility, one 55-foot by 55-foot Physical Therapy Facility, one 55-foot by 55-foot Pediatrics Facility, one 60-foot by 100-foot Medical Reserve Training Facility, one 60-foot by 400-foot Courtyard Project, one 100-foot by 200-foot parking lot, one 150-foot by 400-foot parking lot, and the recontouring/redigging of the existing 2.5 acre retention pond located to the east of the proposed site. The size of these facilities is subject to change.

Alternatives considered in the Environmental Assessment (EA) include the proposed action and the no-action alternative. Construction of the medical complex is the preferred alternative as it is the alternative that would satisfy the needs of the 822 ASTS and 45 MG as outlined in this EA. Published information was reviewed, field surveys were accomplished, and interviews with Patrick AFB personnel were conducted to determine the nature of related issues and concerns. The proposed action was analyzed in detail to determine which, if any, environmental resources would be impacted by the project. The environmental resources examined include air quality, biological resources, cultural resources, hazardous materials and waste, infrastructure and utilities, land use, noise, public health and safety, socioeconomics, transportation, visual and aesthetics, water quality and resources, and topography/geology/soils. No species of special concern were observed on the site.

All activities to support the proposed action have historically been performed on Patrick AFB. Proposed construction activities are similar to previous construction activities on the base. Cumulative impacts are not anticipated as this project does not represent a significant increase in construction activities already occurring on the base.

Based on the summary of impacts incorporated in the EA, a Finding of No Significant Impact (FONSI) is issued based on the following items and accomplishments of any resultant permits or mitigations before the start of construction:

- An Environmental Resource Permit from the St. Johns River Water Management District would be required prior to reconstruction of the retention pond.
- With the completion and inclusion of the above item, the proposed action is currently deemed consistent with the Florida Coastal Management Program; the Air Force will ensure that the project continues to be consistent to the maximum extent practicable.

An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45 CES/CEV  
Patrick AFB, FL 32925

Brig. Gen. Robert C. Hinson  
45 Space Wing Commander  
Environmental Protection Committee Chairman

  
Approved Signature

  
Date

**Finding of No Significant Impact (FONSI)**  
**for**  
**Construction of a Maintenance Facility and Modification to an Existing**  
**Facility for the Florida Air National Guard on Patrick Air Force Base, Florida**

The US Air Force, Patrick Air Force Base (AFB), proposes to construct a new maintenance facility and alter the existing Florida Air National Guard Facility (Building 991) which is located in the southeastern portion of Patrick AFB. The proposed action would provide the Florida Air National Guard with a total of 26,700 SF of storage and training area to support its mission. Presently, extremely expensive space satellite equipment is stored off base in a temporary facility. The off-base separated temporary facility results in very inefficient operations, adversely affecting training and readiness. Security at the remote location is a concern. This project consolidates facilities to optimize training and operations, and remedies the extreme shortage of space necessary for the mission. Alternatives considered in the Environmental Assessment (EA) include the proposed action as discussed above and the no-action alternative. The proposed action is the preferred alternative as it is the only alternative that would satisfy the severe shortage of maintenance and training space. Interviews with Patrick AFB personnel were conducted, field surveys accomplished, and published information was reviewed to determine the nature of issues and concerns related to the proposed action.

The proposed action was analyzed in detail to determine which, if any, environmental resources would be impacted by implementation of this project. Specifically, this EA addressed air quality, biological resources, cultural resources, hazardous and solid waste, infrastructure and utilities, land use, noise, public health and safety, socioeconomic, transportation, visual and aesthetics, water quality and resources, and topography/geology/soils. After thorough analyses, it was determined that selection of the proposed action would not result in significant impacts to any of the above environmental resources or attributes.

During the site investigation, no flora or fauna species of special concern were observed on the site. No fauna species of special concern are expected to utilize the site except as transients. The facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these procedures, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts are not anticipated as this project does not represent a significant increase in construction activities already occurring on base. The project is consistent with the mission of Patrick AFB and will not result in significant impacts to the environment. This project was determined to be consistent with the Florida Coastal Management Program by the State of Florida Department of Community Affairs.



Based on the summary of impacts incorporated in the EA, a Finding of No Significant Impact is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45 CES/CEV  
1224 Jupiter Street  
Patrick AFB FL 32925

APPROVED:



ROBERT C. HINSON  
Brigadier General, USAF  
Commander

19 Sep 96  
Date

# FINDING OF NO SIGNIFICANT IMPACT

## OVERVIEW AND SELECTED ALTERNATIVE

The alternative selected is to permanently relocate the 301st RQS to Patrick AFB, Florida. The relocation was originally performed in 1992 on an emergency basis due to the destruction of Homestead AFB, Florida, by Hurricane Andrew.

## SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF SELECTED ALTERNATIVE

- Air Quality: Emission increases will not result in exceedance of any ambient air standards. Dust emissions in connection with construction will be appropriately controlled.
- Noise: The slight increase in the day-night average sound level ( $L_{dn}$ ) at the sensitive receptor locations from the increased aircraft operations is negligible and well within regulatory guidelines.
- Waste Management and Hazardous Materials: Materials utilized and wastes produced are properly addressed by existing base plans and systems. Any asbestos encountered during building modification will be properly handled, removed, and disposed.
- Water Resources: Minor additional storm water runoff will result from the selected alternative. Necessary permits will be obtained for construction projects. Potential erosion associated with construction projects will be controlled by routine procedures.
- Vegetation and Wildlife Resources: Negligible impact. The slight increase in noise levels is not expected to induce adverse behavioral responses by wildlife. No critical habitats for threatened and endangered species occur in the affected areas. Effects caused by increased boating and artificial lighting will be mitigated.
- Cultural and Historic Resources: No significant archaeological sites are likely to be present within the project area. The SHPO will be consulted, as appropriate, in advance of the initiation of any projects having potential impacts to properties which may be eligible for listing in the National Register of Historic Places.
- Socioeconomics: No adverse impacts.
- Land Use: No adverse impacts. Any new development within a floodplain will be in compliance with federal, state, and local regulations.

## FINDINGS

On the basis of the above summary, a finding of no significant impact is made. An environmental assessment of this project, dated May, 1996, is on file at:

45th Space Wing  
45 Civil Engineering Squadron  
Environmental Flight  
1224 Jupiter Street  
Patrick AFB, FL 32925

I approve/~~disapprove~~ the Finding of No Significant Impact (FONSI) for this environmental assessment for the selected alternative to permanently relocate the 301st RQS to Patrick AFB, Florida.

  
Chairman, Environmental Protection Committee  
Commander, 45th Space Wing

31 JUL 96  
Date

## **Finding of No Significant Impact (FONSI)**

### **Proposed Expansion of the Manatee Cove Marina, Patrick AFB, Florida**

The U.S. Air Force - Patrick Air Force Base (AFB) proposes an expansion project for its Manatee Cove Marina located adjacent to the base golf course on the eastern shore of the Banana River. The project would include the addition of a sea wall, 62 wet slips for boat docking, and the closure-in-place of a 4,000-gallon underground fuel storage tank and replacement with an 8,000-gallon aboveground storage tank. Also planned is the replacement of port-o-lets with permanent bathroom and toilet facilities, construction of a boat cleaning bay with an environmentally-approved three-stage filtering system, construction of a sanitary pump-out station connected to the Publicly Owned Treatment Works, enlargement of the dry storage area, and the dredging of 4,000 cubic yards of silt from the marina channel.

Alternatives considered in the Environmental Assessment (EA) include the proposed action and the no-action alternative. Expanding the marina is the preferred alternative as it is the only alternative that would satisfy the needs outlined in an independent needs assessment conducted in the summer of 1994. Interviews with Patrick AFB personnel were conducted, field surveys accomplished, and published information reviewed to determine the nature of related issues and concerns. The proposed action was analyzed in detail to determine which, if any, environmental resources would be impacted by this project. The environmental resources examined include air quality, biological resources, cultural resources, hazardous and solid waste, infrastructure and utilities, land use, noise, public health and safety, socioeconomics, transportation, visual and aesthetics, water quality and resources, and topography/geology/soils.

No flora species of special concern were observed on the site. The West Indian Manatee is a frequent visitor in the area. The U.S. Army Corps of Engineers Construction Dredging Permit presently being applied for by Patrick AFB would be followed to minimize potential impact to fish, wildlife, and the natural environment. The building contractor would instruct all associated personnel of the presence of Manatee, the need to avoid approaching within 50 feet of them, and the civil and criminal penalties associated with the harming, harassing, or killing of Manatees. Siltation barriers for this project would need to be of a design in which the Manatee cannot become entangled and must be regularly monitored. All vessels operating in the Marina channel and harbor must operate at "no wake/idle" speeds. If a Manatee comes within 100 yards of dredging operations, all appropriate protective precautions would be implemented. If a Manatee comes within 50 feet of operating equipment, that equipment would be shut down immediately. A minimum of two 3-foot-by-4-foot temporary Manatee awareness signs would be installed and maintained in prominent locations during construction.

All activities to support the proposed action have historically been performed on Patrick AFB. Proposed construction activities are similar to previous construction activities on the base. Cumulative impacts are not anticipated as this project does not represent a significant increase in construction activities already occurring on base.

Based on the summary of impacts incorporated in the EA, a Finding of No Significant Impact (FONSI) is issued based on the following items and accomplishment of any resultant permits or mitigations before

the start of construction:

- ♦ Implementation of the Development of Regional Impact (DRI) process with the Florida Division of Resource Planning and Management.
- ♦ Receipt of the Environmental Resource Permit (ERP), an all encompassing state permit which includes the Dredge and Fill permit required by the Corps of Engineers; the Domestic Sewer permit for Florida Department of Environmental Protection; permits from the St. John's Water Management District.
- ♦ Submission of an Underground Storage Tank Closure Report to the Florida Department of Environmental Protection (FDEP) within 60 days of the Closure-in-place action. Guidelines for closure-in-place of the UST and Installation of the AST (FAC 17-762.500) are provided in Chapters 17-761 and 17-762 of the Florida Department of Environmental Protection's Florida Administrative Code. Forms for registration of the new Aboveground Storage Tank (refer to guidelines 17-761.900) and Closure Assessment forms (refer to 17-761.900) will need to be filed with FDEP.
- ♦ Consultation with the Office Natural Resources, Brevard County regarding the meeting of requirements of the Coquina Revetment and possible permits necessary for bulkhead installation. Patrick AFB is exempt from all other county permit requirements.
- ♦ With the completion and inclusion of the above items, the proposed action is currently deemed consistent with the Florida Coastal Management Program; the Air Force will ensure that the project continues to be consistent to the maximum extent practicable.

An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45 CES/CEV  
Patrick AFB, FL 32925

45 Space Wing Commander  
Environmental Protection Committee Chairman

Approved Signature

Date

Robert C. Hansen

3 May 96

## FINDING OF NO SIGNIFICANT IMPACT

### Base Exchange Expansion Patrick Air Force Base, Florida

The Army and Air Force Exchange Service has determined that the existing Base Exchange is inadequate in size to support the increased sales demand. The proposed action is to enlarge the existing facility by expanding the building on the north and south end to provide a larger shopping area to meet the increased sales demand. An abbreviated Environmental Assessment (EA) was prepared pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508) and Air Force Instruction 32-7061 which implemented the National Environmental Policy Act of 1969.

The abbreviated EA addresses the potential for environmental impact to surface water quality, groundwater quality, air quality, endangered species, wetlands, coastal zones, and land use, and the potential for the release of hazardous or toxic substances. The Saint Johns River Water Management District, Melbourne Office requires a stormwater management permit under Chapter 40C-42.022 of the Florida Administrative Code (FAC).

There is a potential for environmental impact to the endangered Least Tern and sea turtles. The proposed expansion will be designed and constructed to conform to Patrick AFB requirements to minimize potential impacts during the April to August nesting season of the Least Tern. Exterior lighting has the potential to affect the ocean-finding abilities of threatened loggerhead and endangered green sea turtle hatchlings emerging onto Patrick Air Force Base beaches. The exterior lighting added to the facility or parking area will be low pressure sodium luminaries in accordance with the Revised Policy for all Exterior Lighting at CCAFS and PAFB dated 30 October 1990.

The exchange administration maintains current Material Safety Data Sheets for hazardous materials such as pool chemicals and pesticides. The exchange administration has a spill response plan and will report a release of hazardous materials to the installation in accordance with the installations spill plans, 45 SW OPlan 19-14 and OPlan 32-3. The construction contractor shall recycle the fluorescent tubes that are removed during renovation. The contractor shall have ballasts without a "Non-PCB" label sampled for PCB's prior to removal. All wastes shall be disposed of properly in accordance with federal, state, and installation requirements. The contractor shall contact the Army and Air Force Exchange Service prior to disposal of any hazardous wastes. The construction contractor for this project will be required to abide by all federal, state and local environmental regulations as well as with the restrictions described in this EA.

Based on the information obtained from the abbreviated EA for the expansion of the Main Exchange at Patrick Air Force Base, a Finding of No Significant Impact (FONSI) is made. The expansion of the Main Exchange at Patrick Air Force Base poses no significant impact to the environment. An Environmental Impact Statement (EIS) is not warranted.

Brig. Gen. Robert C. Hinson  
Commander, 45th Space Wing

  
Approval Signature

  
Date

## Finding of No Significant Impact (FONSI)

### Proposed Construction and Operation - Visiting Officers Quarters Supporting Facility, Patrick AFB, Florida

The U.S. Air Force - Patrick AFB proposes to construct and operate a 80,000 square foot Visiting Officers Quarters (VOQ) Supporting Facility. The need for the proposed project is to replace the existing, seriously deteriorated VOQ (Building 400) in order to accommodate an increasing number of visitors due to the expanded mission of Patrick AFB-45 Space Wing. The existing VOQ facility is also potentially unsafe, expensive to repair and maintain, and does not reflect an appropriate Air Force image. Moreover, increasing numbers of visitors are being referred to off-base lodging and/or contract quarters. These accommodations are relatively expensive, periodically scarce, and often located 20 to 30 miles away from the base. The existing VOQ (Building 400) is presently being demolished by a separate contract.

Issues and concerns related to the implementation of the proposed action were identified through a scoping process which included reviews of existing published information, field surveys at Patrick AFB, and interviews with Patrick AFB personnel. Preliminary analyses indicated that the proposed action had the potential to affect land use, topography, soils, hydrology, vegetation, wetlands, fish and wildlife resources, threatened and endangered species, air quality, noise, cultural historic resources, and hazardous waste. More rigorous analyses indicated that selection of the proposed action would not result in potentially significant impacts to these environmental attributes.

Building 400 was determined not to be eligible for listing in the National Register of Historic Places, has been found to be seriously unsound, and contains asbestos shingle siding and asbestos insulation for pipes and ducts. Asbestos studies and abatement are ongoing in accordance with Construction Industry Standard (29 CFR 1926.58), engineering controls, and State and Local Employees Worker Protection Rule (40 CFR 763).

During the site investigation, no flora or fauna species of special concerns were observed on the site. No fauna species of special concern are expected to utilize the site except as transients. The proposed facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these design standards, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts will be reduced in scope because existing structures will be removed. Therefore, no unavoidable adverse cumulative impacts are expected as a result of the proposed action and no mitigation measures are necessary. The proposed action, therefore, will not lead to adverse impacts on the human environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of Significant Impact (FONSI) is made. An environmental impact statement is not necessary and not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45th CES/CEV  
Patrick AFB, FL 32925

Brig. Gen. Donald Cook  
45th Space Wing Commander  
Environmental Protection Committee Chairman

  
Approval Signature

18 Aug 95  
Date



## **Finding of No Significant Impact (FONSI)**

### **Proposed Addition and Alteration Youth Center, Patrick AFB, Florida**

The U.S. Air Force - Patrick Air Force Base (AFB) proposes to construct an addition to and alter the existing Youth Center (Building 3656) which is located in the South Housing area of the base. In addition the project would include the renovation of the existing Youth Center facility, construction of a multipurpose court and playground, gymnasium bleachers, new office and storage space, and provide improvements to the gymnasium air conditioning and ventilation system. The proposed action would modify a net area of approximately 8,800 SF. The additional space would enable the Youth Center facilities to adequately accommodate the 5 - 18 years of age youth activities. The present Youth Center facility was assessed in an independent Needs Validation Assessment in June 1992 as inadequate to meet the increased demands for child care facilities and programs for school age children which resulted from a dramatic increase in two working parent families on Patrick AFB. Alternatives considered in the Environmental Assessment (EA) include the proposed action as discussed above, no action, and alternatives eliminated from detailed study. The proposed action is the preferred alternative as it is the only alternative that would satisfy the needs outlined in the independent needs assessment. Interviews with Patrick AFB personnel were conducted, field surveys accomplished and published information was reviewed to determine the nature of issues and concerns related to the proposed action.

The proposed action was analyzed in detail to determine which, if any, environmental resources would be impacted by implementation of this project. Specifically, this EA addressed air quality, biological resources, cultural resources, hazardous and solid waste, infrastructure and utilities, land use, noise, public health and safety, socioeconomics, transportation, visual and aesthetics, water quality and resources, and topography/geology/soils. After thorough analyses, it was determined that selection of the proposed action would not result in significant impacts to any of the above environmental resources or attributes.

Building 3656 was determined not to be eligible for listing in the National Register of Historic Places. The building was determined in an asbestos survey to contain some nonfriable (cannot be crumbled or pulverized when dry) asbestos containing materials (ACM) in the floor tile and mastic. This ACM would be removed as a result of the proposed action. Additionally, a lead based paint survey revealed the previous use of lead based paint on some surfaces of the existing facility. This paint will not be disturbed as a result of this project and therefore would pose no additional health hazard.

During the site investigation, no flora or fauna species of special concern were observed on the site. No fauna species of special concern are expected to utilize the site except as transients. Possible disturbance to the Florida threatened Least tern (*Sterna antillarum*) nesting activities was addressed in this EA since this project could potentially disturb these activities if they were to occur on the roof of the Youth Center during construction. As a result, during nesting season, (April through August), netting will be erected on the roof to discourage nesting. If nesting is observed, construction

activities will be minimized to lessen the disturbance. The facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these procedures, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts are not anticipated as this project does not represent a significant increase in construction activities already occurring on base. The project is consistent with the mission of Patrick AFB and will not result in significant impacts to the environment.

Based on the summary of impacts incorporated in the EA, a Finding of No Significant Impact is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45 CES/CEV  
1224 Jupiter Street  
Patrick AFB, FL 32925

Brig. Gen. Donald Cook  
45 Space Wing Commander  
Environmental Protection Committee Chairman

Donald G Cook  
Approved Signature

10 Aug 95  
Date

## **Finding of No Significant Impact (FONSI)**

### **Proposed Construction and Operation - Base Civil Engineer Storage Facility, Patrick AFB, Florida**

The United States (U.S.) Air Force, Patrick Air Force Base ( Patrick AFB), Florida, proposes to construct and operate a 6,000 square foot enclosed civil engineering storage facility, and demolition of an existing 5,975 square foot metal building on base. The proposed storage facility would replace the existing civil engineering supply storage and support area located in a pre-engineered steel building constructed in 1953. The purpose of the proposed action is to provide adequate supply and storage facilities for material handling and inventory control of base engineering assets. An enclosed building is required to prevent rapid deterioration of materials due to the harsh conditions of coastal Florida.

Issues and concern related to the implementation of the proposed action were identified through a scoping process which included reviews of existing published information, field surveys at Patrick AFB, and interviews with Patrick AFB personnel. Preliminary analyses indicated that the proposed action had the potential to affect land use, topography, soils, hydrology, vegetation, wetlands, fish and wildlife resources, threatened and endangered species, air quality, noise, cultural historic resources, and hazardous waste. More rigorous analyses indicated that selection of the proposed action would not result in potentially significant impacts to these environmental elements.

During the site investigation, no flora or fauna species of special concerns were observed on the site. No fauna species of special concern are expected to utilize the site except as transients. The proposed facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these design standards, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts will be reduced in scope because existing structures will be removed. Therefore, no unavoidable adverse cumulative impacts are expected as a result of the proposed action and no mitigation measures are necessary. The proposed action, therefore, will not lead to adverse impacts on the human environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of No Significant Impact (FONSI) is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
the CES/CEV  
Patrick AFB, FL 32925  
Attn: Environmental Planner

Brig. Gen. Donald Cook  
45th Space Wing Commander  
Environmental Protection Committee Chairman

  
Approval Signature

13 July 95  
Date

## **Finding of No Significant Impact (FONSI)**

### **Proposed Construction and Operation - Base Supply Complex and Base Operations/Air Freight/Passenger Terminal at Patrick AFB, Patrick AFB**

The U.S. Air Force proposes to construct a base supply complex and base operations/air freight/passenger terminal on Patrick AFB east of the airfield in the Airfield and Flightline zone. The purpose of the proposed action is to ensure safety and increase efficiency of base operations. The proposed action is needed to replace seriously dilapidated existing facilities and to consolidate operations currently occurring at two or more facilities. Alternatives considered in the EA include the proposed action as stated above, no action, and alternatives considered but eliminated from detailed study which included the upgrade of Hangar 800 and Building 330, the use of other existing facilities on Patrick AFB, and other locations on Patrick AFB.

Under the no action alternative, Patrick AFB would not construct and operate the proposed facilities. Consequently, base supply and air terminal operations at Patrick AFB would continue to be directed from facilities that have been documented as unsafe and in violation of numerous building codes. In addition, the location of the existing facilities is inefficient, resulting in wasted manpower. The location and structural condition of the existing base supply complex and the air terminal do not support the ongoing and anticipated mission of Patrick AFB. Therefore, the no action alternative is not recommended for selection.

A complete upgrade of Hangar 800 was considered as an alternative and would resolve the problems associated with the structural damage of the building. However, the present location of Hangar 800 reduces the efficiency and safety of freight shipments. Freight frequently has to be unloaded from transport aircraft at a considerable distance from the terminal causing manpower to be wasted. The configuration of the ingress/egress to the terminal from South Patrick Drive provides little sight distance, creating a potential traffic hazard. The location of the air terminal in Hangar 800 does not meet the ongoing and anticipated mission of Patrick AFB, therefore, the upgrading of Hangar 800, including the air terminal was eliminated from further study.

A complete upgrade of Building 330 was considered as an alternative and would resolve the problems associated with the structural damage of the building. However, the present location of Building 330 adjacent to the Banana River and the storage of hazardous materials/waste on-site presents a potential contamination problem at Building 330. The potential exists for migration of hazardous materials/waste and contaminated stormwater runoff into the Banana River. Only by relocating the storage of hazardous materials/waste away from the river will this potential be reduced. In addition, the construction of a new facility would provide for an integrated design to handle all material handling needs in the most efficient manner, instead of retrofitting a 49-year-old building. The upgrading of Building 330 does not meet the ongoing and anticipated mission of Patrick AFB; therefore, this alternative has been eliminated from detailed study.

There are no other existing facilities on Patrick AFB that currently meet the requirements of the proposed action or could potentially be modified to meet these requirements.

The proposed sites were selected as the locations for the new base supply complex and air terminal because these locations most completely meet the operational requirements for the facilities. For both facilities, efficient operations require close access to arriving and departing aircraft. Other potential locations for the facilities were either less satisfactory than the proposed sites in terms of proximity to

aircraft to conduct routine operations or did not meet the safety clearance requirements for siting facilities in the Airfield and Flightline zone.

Issues and concerns related to the implementation of the proposed action were identified through a scoping process which included reviews of existing published information, field surveys at Patrick AFB, and interviews with Patrick AFB personnel. Preliminary analyses indicated that the proposed action had the potential to affect land use, topography, soils, hydrology, vegetation, wetlands, fish and wildlife resources, threatened and endangered species, air quality, noise, cultural resources, and hazardous materials/waste. More rigorous analyses indicated that selection of the proposed action would not result in potentially significant impacts to these environmental media.

The proposed sites for the base supply complex and the air terminal are located in a designated floodplain. Therefore, the project must be developed in accordance with Executive Order 11988, Floodplain Management and Air Force Regulation (AFR) 19-9, Interagency and Intergovernmental Coordination of Land, Facility and Environmental Plans, Programs, and Projects (specifically, Chapter 5, Floodplain Management and Wetlands Protection). As previously identified, there are no practical alternatives to locating the facility in the floodplain. The proposed action requires a stormwater management permit under Chapter 40C-42.022 of the Florida Administrative Code (F.A.C.).

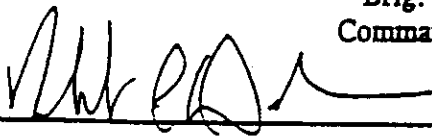
During the site investigation, no species of special concern were observed on the site, nor are any expected to utilize the site except as transients. The proposed facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these design standards, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities conducted on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts will be reduced in scope because existing structures will be removed (as part of a separate program). Therefore, no unavoidable adverse cumulative impacts are expected as a result of the proposed action and no mitigation measures are necessary. The proposed action, therefore, will not lead to adverse impacts on the human environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of No Significant Impact (FONSI) is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

45 CES/CEV  
1224 Jupiter St.  
Patrick AFB, FL 32925-3334  
Attn: Environmental Coordinator

Brig. Gen. R.S. Dickman  
Commander 45th Space Wing



29 JUL 94

Approval Signature

Date

**FINDING OF NO SIGNIFICANT IMPACT**  
**Base Exchange/Convenience/Gasoline/Class Six**  
**Patrick Air Force Base, Florida**

**INTRODUCTION**

The U.S. Army and Air Force Exchange Service has determined that the existing Base Exchange/Class Six facility is too small for the volume of sales that is currently generated. The proposed action is to expand the facility to provide Convenience/Gasoline capability. An Environmental Assessment (EA) was prepared, pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508), which implemented the National Policy Act of 1969, and Air Force Regulation 19-2.

**POTENTIAL ENVIRONMENTAL IMPACT**

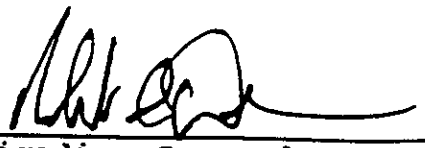
The EA recognized the potential for environmental impact to surface water quality, groundwater quality, air quality, wetlands, coastal zones and land use, and the potential for the release of hazardous or toxic substances. The listed potential environmental impacts will result from the transportation, transfer, storage and sales of petroleum hydrocarbons (gasoline).

The EA assumed that the proposed action will not cause an increase in the net volume of gasoline consumption in the general area and assumed that gasoline sales will only be re-directed from other existing sources in the surrounding area. The proposed equipment and proposed installation procedures for the equipment to be utilized for the storage and sales of the gasoline are in compliance with the current standards of the Florida Department of Environmental Protection. Those standards were established to limit or minimize the potential for the release of gasoline into the environment. Releases from this site should occur at a frequency less than the statistical average occurrence of such releases at all such currently active facilities.

**CONCLUSIONS**

Pursuant to the Council on Environmental Quality regulations implementing the National Environmental Policy Act of 1969, as amended, and Air Force Regulation 19-2, an assessment of the identified potential environmental impacts has been prepared for the proposed action at Patrick Air Force Base. The determination has been made that the action has the potential to have an adverse impact on the quality of the environment, but with the selected equipment and implementation of the release prevention and detection systems in compliance with Florida Department of Environmental Protection guidelines as proposed for the transfer, storage and sales of the gasoline at this site, that potential impact is not considered significant. Thus, an environmental impact statement is not warranted.

JUN 17 1984

  
Brigadier General Robert S. Dickman  
Commander, 45th Space Wing  
Patrick Air Force Base, Florida

Date

## **Finding of No Significant Impact (FONSI)**

### **Proposed Construction and Operation - Security Police Operations Facility at Patrick AFB, Patrick AFB**

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The U.S. Air Force proposes to construct and operate a security police operations facility on Patrick AFB. The purpose of the proposed action is to relocate the existing main security police operations facility, Building 575, outside of the Airfield Clear Zone and to consolidate selected security police functions into a single facility. The proposed action is needed to relocate operations occurring in the dilapidated Building 575 which is in violation of the airfield safety clearance requirements. Alternatives considered in the EA include the proposed action as stated above, no action, and alternatives considered but eliminated from detailed study which included the upgrading of Building 575, other existing facilities on Patrick AFB, and other locations on Patrick AFB.

The existing main security police facility, Building 575, is located in the Airfield Clear Zone, a violation of airfield safety clearance requirements. Upgrading the dilapidated Building 575 to meet Air Force building standards does not reconcile the need to relocate the facility outside of the Airfield Clear Zone. Therefore, upgrading Building 575 was eliminated from detailed study.

Building 530 was initially considered as a potential facility for the Security Police Operations Facility. However, adequate parking was not available in the area to meet the demand of the facility. Instead, Patrick AFB relocated an auditorium, also located in the airfield clearance zone, to Building 530. The use of several smaller buildings that combined meet the square footage requirement of the security police was investigated. However, with the additional demand for building space caused by the beddown of the 301st Rescue Squadron and the 41st, 71st, and 741st CAMS, several smaller buildings in close proximity were not available for police security operations. Therefore, the use of another facility(ies) was eliminated from detailed study.

Initially, a parcel of land adjacent to Building 685 was considered a potential site for the construction of a new Security Police Operations Facility. However, the site is remote from the rest of the base and is located on soils with poor engineering qualities. Land area suitable for the development of new facilities is severely restricted at Patrick AFB. The proposed site is available for development because the existing structure on the site is scheduled for demolition under a separate action. The removal of this existing structure will allow the construction of the security police facility at the proposed site. After an investigation for potential sites, Patrick AFB personnel determined that other suitable areas for the security police facility are not available. The only site suitable for a security police facility and available for use is the proposed site. Therefore, construction and operation of the security police facility at another location was eliminated from detailed study.

Issues and concerns related to the implementation of the proposed action were identified through a scoping process which included reviews of existing published information, field surveys at Patrick AFB, and interviews with Patrick AFB personnel. Preliminary analyses indicated that the proposed action had the potential to affect land use, topography, soils, hydrology, vegetation, wetlands, fish and wildlife resources, threatened and endangered species, air quality, noise, cultural resources, and hazardous waste. More rigorous analyses indicated that selection of the proposed action would not result in potentially significant impacts to these environmental media.

During the site investigation, no species of special concern were observed on the site, nor are any expected to utilize the site except as transients. The proposed facility will be designed to conform to the




Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these design standards, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. The proposed action requires a stormwater management permit under Chapter 40C-42.022 of the Florida Administrative Code (F.A.C.). Construction activities will be consistent in scope with construction activities conducted on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts will be reduced in scope because existing structures will be removed (as part of a separate program). Therefore, no unavoidable adverse cumulative impacts are expected as a result of the proposed action and no mitigation measures are necessary. The proposed action, therefore, will not lead to adverse impacts on the human environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of No Significant Impact (FONSI) is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

45th CES/CEV  
1224 Jupiter St.  
Patrick AFB, FL 32925-334  
Attn: Environmental Coordinator

Brig. Gen. R.S. Dickman  
Commander 45th Space Wing



MAR 28 1994

Approval Signature

Date

## Finding of No Significant Impact (FONSI)

### Proposed Construction and Operation - Air Traffic Control Tower, Patrick AFB

The U.S. Air Force proposes to construct an air traffic control tower on Patrick AFB. The purpose of the proposed action is to provide terminal air traffic control services to aircraft flying to, from, or operating within the Patrick AFB air traffic area. The need for the proposed project is to replace the existing air traffic control tower located in the northwest corner of Hangar 800, which is in seriously dilapidated condition rendering the building unsafe and in violation of numerous building codes. Alternatives considered in the EA include the proposed action as stated above, no action, and alternatives considered but eliminated from detailed study.

Issues and concerns related to the implementation of the proposed action were identified through a scoping process which included reviews of existing published information, field surveys at Patrick AFB, and interviews with Patrick AFB personnel. Preliminary analyses indicated that the proposed action had the potential to affect land use, topography, soils, hydrology, vegetation, wetlands, fish and wildlife resources, threatened and endangered species, air quality, noise, cultural resources, and hazardous waste. More rigorous analyses indicated that selection of the proposed action would not result in potentially significant impacts to these environmental media.

The proposed air traffic control tower site is located in a designated floodplain. Therefore, the project must be developed in accordance with Executive Order 11988, Floodplain Management and Air Force Regulation (AFR) 19-9, Interagency and Intergovernmental Coordination of Land, Facility and Environmental Plans, Programs, and Projects (specifically, Chapter 5, Floodplain Management and Wetlands Protection). As previously identified, there are no practical alternatives to locating the facility in the floodplain. The proposed action requires a stormwater management permit under Chapter 40C-42.022 of the Florida Administrative Code (F.A.C.).

During the site investigation, no species of special concern were observed on the site, nor are any expected to utilize the site except as transients. The proposed facility will be designed to conform to the Patrick AFB exterior lighting standards and requirements to minimize potential impacts to nesting sea turtles. With the inclusion of these design standards, the proposed action is not anticipated to affect species of special concern.

All activities to support the proposed action have historically been performed on Patrick AFB. Construction activities will be consistent in scope with construction activities conducted on the base in the past. The project is not expected to spur additional spin-off development. Cumulative impacts will be reduced in scope because existing structures will be removed (as part of a separate program). Therefore, no unavoidable adverse cumulative impacts are expected as a result of the proposed action and no mitigation measures are necessary. The proposed action, therefore, will not lead to adverse impacts on the human environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of No Significant Impact (FONSI) is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45th CES/DEV  
Patrick AFB, FL 32925  
Attn: Environmental Coordinator

Brig. Gen. R.S. Dickman  
Commander 45th Space Wing



Approval Signature

21 Oct 93

Date

## Finding of No Significant Impact (FONSI)

### Proposed Banana River Shoreline Stabilization, Patrick AFB

The U.S. Air Force proposes to repair/stabilize non-contiguous segments of shoreline along approximately 4.2 miles of the Banana River along Patrick Air Force Base (AFB) through construction of a rip-rap/rock revetment system. The purpose of the proposed action is to stabilize the shoreline to prevent erosion along the Banana River from damaging critical utilities, housing areas and ancillary facilities, and from silting the south harbor channel. Alternatives considered in the EA include the proposed action as stated above, no action, and alternatives considered but eliminated from detailed study. Issues and concerns related to the implementation of the proposed stabilization project were identified through a scoping process that included reviews of existing published information, field surveys at Patrick AFB, and interviews with personnel on Patrick AFB.

The proposed action is the preferred alternative because it will stabilize critically eroding areas along the Banana River shoreline and prevent loss/relocation of facilities/structures critical to the operation of Patrick AFB. Implementing the proposed action will have positive impacts on land use by allowing existing adjacent land uses at the lift station, central area, and survival area to continue. Positive impacts to fish and wildlife habitat are anticipated through stabilization and maintenance of adjacent shoreline habitats and decreases in turbidity levels. Erosion control measures incorporated into the proposed action will prevent erosion and impacts to soils, as well as prevent turbidity and sedimentation impacts to water quality. There is no direct effect on the coastal zone by implementing the proposed action.

Although approximately 1.45 acres of wetlands will be lost by the proposed action, the loss of this resource is considered a minor impact. In addition, by implementing Section 404 permit conditions, no significant impacts will result to wetland resources or the endangered West Indian manatee. Temporary displacement of some species due to temporary increase in noise and human activity may occur, but this will not result in an impact to these species. Although the proposed action will impact the aesthetics of the beach by converting it from a sandy to a rocky shoreline, the impact is not significant compared to the no action alternative (loss of the beach through erosion). No significant impacts are anticipated to cultural resources due to implementation of permit conditions. Preliminary analyses indicate low levels of contamination from Landfill 5A and 5B in surface water, groundwater, and soil samples at this landfill. As a mitigation measure, work should not be conducted within the three segments adjacent to the landfill until all samples have been analyzed and results confirm the preliminary findings.

Cumulative impacts are not anticipated because future stabilization of additional segments of the shoreline is not reasonably foreseeable. No significant adverse impacts to the human environment are expected. The proposed action is consistent with the mission and operation of Patrick AFB and will not result in significant impacts to the environment.

Based on the summary of impacts in the attached environmental assessment, a Finding of No Significant Impact is made. An environmental impact statement is not necessary and will not be prepared. Comments or questions regarding this matter may be forwarded to:

Patrick Air Force Base  
45th CES/DEV  
Patrick AFB, FL 32925  
Attn: Environmental Coordinator

Brig. Gen. R.S. Dickman  
Commander, 45th Space Wing

  
Approval Signature

21 Oct 93  
Date

REMOVE, REPLACE, AND UPGRADE FUEL TANKS  
AT PATRICK AIR FORCE BASE, FLORIDA  
MILCON PROJECT SXHT 93-3004

FINDING OF NO SIGNIFICANT IMPACT

The proposed project includes the removal of seven underground storage tanks (USTs) and replacement with aboveground storage tanks (ASTs), upgrading of one UST system, replacement of one AST system, and upgrading of 14 ASTs. The 8 UST and 15 AST systems are regulated and are subject to 1993 and 1998 Florida Department of Environmental Protection deadlines, respectively. The existing USTs do not have required double walled underground pipe or dispenser liners or are subject to replacement requirements. The existing ASTs do not have required overfill protection, impervious secondary containment, or approved piping.

The proposed project includes the elements described below. Seven USTs will be removed and replaced with AST systems. Replacement ASTs will have concrete secondary containment, gauges, automatic overfill protection, check valves, gate valves, and double-walled underground piping. One UST will be upgraded with double-walled underground piping, dispenser liner, overfill protection, and emergency pump shut-off. One AST will be demolished along with the existing containment; a new tank and containment will be installed at a nearby location. Twelve ASTs will be upgraded by replacing underground piping with aboveground piping and repainting the exterior of all tanks and piping. Underground piping for 2 ASTs will be replaced with double-walled piping with interstitial monitoring.

Applicable regulations include AFM 88-15, AFR 144-16, Florida DER Ch. 17-761 and 17-762, and 40 CFR 280. In addition, it is Air Force policy to replace underground tanks with aboveground storage tanks wherever possible (AF Policy Letter 30 May, 1993).

Conclusion

This Environmental Assessment describes the proposed actions and alternatives, affected environment, and environmental consequences. The overall environmental consequences of the project will be positive, by removing present and future sources of contamination of soil and groundwater.

Initial remedial action to remove and dispose of petroleum-contaminated soil is included in this project. A temporary adverse environmental effect of the project will be release of volatile organic compounds during the excavation and on-site stockpiling of contaminated soil. The net effect of the project will be removal of existing hydrocarbon contamination and removal of future sources of contamination.

The proposed project qualifies for a Finding of No Significant Impact, as described in AFR 19-2, Attachment 7, Class Action 2.1, dated 2 August 1982.

Approved by Commander of 45 SPW

J. M. [Signature]

Date: 22 May 93

CONSTRUCTION ON WAREHOUSE ADDITION TO THE SELF HELP BUILDING  
PATRICK AIR FORCE BASE, FLORIDA

Finding Of No Significant Impact

The proposed action (AF form 332 # 77705) is to construct a 5,360 square foot concrete block addition to the existing Self Help building located on Patrick AFB. This action will provide storage for government materials and supplies. Work will include construction of the addition, extension of the fire alarm sprinkler system, and extension of electrical and potable water line to serve a drinking fountain.

An abbreviated Environmental Assessment, dated 13 April 1993, describes the proposed action, alternatives and affected environment. A permit for stormwater runoff will be requested from the St. Johns River Water Management District. A Patrick AFB digging permit is required prior to construction.

The impact of the proposed project on surrounding environmental attributes is not expected to be significant. Therefore, this action qualifies for a Finding Of No Significant Impact (FONSI) as described in AFR 19-2, Environmental Impact Analysis Process, dated 10 August 1982.

Approved: \_\_\_\_\_

*J. Moore*  
45 SPW/CC

Date: 3 Jun 93

# FINDING OF NO SIGNIFICANT IMPACT

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## PATRICK AIR FORCE BASE WASTEWATER TIE-IN WITH CITY OF COCOA BEACH, FLORIDA

Pursuant to the 1990 Indian River Lagoon System Act passed by the State of Florida (Chapter 90-262), the Environmental Planning Office (45 CES/DEV) at Patrick Air Force Base (PAFB) has conducted an assessment of the potential environmental consequences of a wastewater tie-in with the city of Cocoa Beach, Florida. The Act requires wastewater treatment plants by July 95 to stop discharging effluent to the Lagoon system and implement alternative means of utilizing reclaimed water.

**PROPOSED ACTION:** The objective of the proposed action is to comply with the Indian River Lagoon Act by pumping all domestic wastewater to the nearby City of Cocoa Beach, Florida, thereby eliminating all discharge of treated effluent to the Banana River. The two existing wastewater treatment plants of PAFB will be demolished. Two new wastewater lift stations will be constructed on PAFB. Emergency generators would provide emergency power at each lift station. Fourteen(14) and twenty (20) inch force mains would force the wastewater from PAFB to the City of Cocoa Beach wastewater treatment plant which is approximately 4.7 miles north of the Base. A sixteen(16) inch water line would return highly treated reuse effluent water from the Cocoa Beach wastewater treatment plant to the PAFB irrigation pond.

**ALTERNATIVES:** The only alternative to the Proposed Action considered in detail was an on-site wastewater treatment plant upgrade. Under this upgrade alternative, the South PAFB wastewater treatment plant would be replaced with an upgraded plant with effluent reuse water discharge to the golf course irrigation pond. The North PAFB wastewater

plant would be demolished. This alternative would still require a wet weather discharge to the River, and would not allow aquatic species composition and diversity to return to normal or background conditions. Reclaimed water availability would be limited and additional acreage would be required for percolation ponds and treatment facilities.

FINDINGS: Environmental consequences of the proposed action were determined to be not significant. The Banana River would benefit by the elimination of 90 tons/year of pollutants being discharged.

Aquatic species composition and diversity would return to normal or background conditions around the former outfall. Reclaimed (reuse) water would be available for all of PAFB.

Personnel health and safety, hazardous materials/waste considerations, wetlands and threatened/endangered species would not be significantly affected by the Proposed Action.

Reductions in land use, electrical and water resources, stormwater runoff, sludge disposal areas and monitoring requirements would result as compared to current operations.

There would be no impacts to ground water, cultural resources, noise and socio-economic factors.

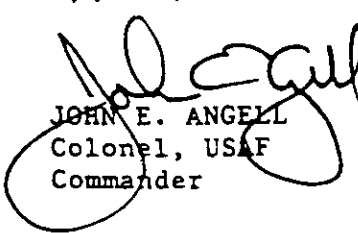
Slight impacts to air quality, groundwater, and soil would occur during construction activities. These impacts would be temporary and would be limited to the construction area.

Prior to demolition of the existing Base wastewater treatment plants, asbestos and lead base paint containing materials must be surveyed and any found must be removed and disposed of by a certified contractor. Demolition debris would require one-half acre of landfill disposal space.

Conclusion: As a result of the analysis of impacts in the environmental assessment, it was concluded that the proposed action would not have a significant effect on the human or natural environment and, therefore, an Environmental Impact Statement will not be prepared.

Approved:

Date: SEP 30 1992

  
JOHN E. ANGELL  
Colonel, USAF  
Commander

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)  
FOR  
REPLACEMENT HOUSING AT PATRICK AFB, FLORIDA**

**OVERVIEW AND PROPOSED ACTION**

Patrick AFB is a U.S. Air Force facility located in Brevard County, Florida that is the home of the 45th Space Wing. The mission has responsibility for safety, planning, engineering, launch, and range operations, among others. The proposed action at Patrick AFB is the demolition of existing housing and reconstruction of new housing units in the North and Central Housing areas on base. As a part of the proposed action, asbestos in the housing units will be removed. The existing housing structures date back to the 1950s and are deteriorating. Routine maintenance is barely able to keep the present housing in livable condition. It has been determined that the ongoing renovation program would not be cost-effective in addressing the problems with the housing units.

The proposed action involves replacing 557 housing units in North and Central Housing, including houses located on the beachfront, with an equal number of units. Military personnel would be moved into South Housing units in a phased approach as those units became available. The remainder of the military personnel and their families would seek housing in the local community. Other aspects of the proposed action include the construction of a safety barrier along Route A1A and an elevated crosswalk connecting the North Housing area with the Atlantic Beachfront area. The safety barrier would be intended to limit access to and egress from the base, protect children from potential traffic hazards, and lessen traffic noise in the housing areas. The proposed action is expected to take approximately 37 months.

Other alternatives considered in this Environmental Assessment include:

- No Action (condemnation of existing housing units, with eventual demolition and reconstruction)
- Transference of beachfront housing out of the housing inventory (leaving 504 units to be replaced as described in the proposed action)
- Concurrent evacuation of all housing to be demolished
- Renovation of North Housing, coupled with the condemnation of Central Housing.

**SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

**AIR**

Potential impacts from the proposed action will involve the use of heavy equipment and an increase in work-related traffic. No new stationary emission sources are required for implementation of the



proposed action. Fugitive dust will be generated during demolition and construction, but the impacts to air quality will be minor and of limited duration. A fugitive dust and wind mitigation plan will be prepared to identify specific measures to be used during site activities. This plan may include grading after demolition, discontinuation of demolition during high winds, wetting down of materials to control dusts, compacting the soil after demolition and grading, or temporary disruption of demolition activities.

#### GEOLOGY AND SOILS

There will be no drilling or intrusion into bedrock; therefore no impacts to geology will result from the proposed action. Soil erosion is expected to result from earth-moving activities, but use of standard best management practices will minimize any impacts. Under the proposed action, the dune areas will be reconstructed following demolition of the existing units.

#### WATER RESOURCES

Since the area to be disturbed will exceed 5 acres, an NPDES permit will be required from the U.S. Environmental Protection Agency (EPA) for stormwater discharges associated with construction activity. This permit will identify best management practices (such as sediment controls, retention and detention basins, and administrative controls for spill prevention) to be used during demolition and construction activities. Use of these practices will minimize impacts to surface water resources. Groundwater resources are not expected to be impacted in any way.

#### BIOLOGICAL RESOURCES

Although there are a number of threatened and endangered species utilizing the base at least seasonally, an informal consultation with the USFWS did not reveal any species known to directly utilize the proposed project area. The Atlantic beachfront area is used by sea turtles for nesting grounds from May to October. In order to avoid any impact on the nesting activities, consultation with the USFWS and FDNR will be required if the construction areas are to be lighted. Lighting must be kept to a minimum, and the use of low sodium lights will be required. Demolition will only take place during daylight hours from May to October. The dune area occupied by housing will be restored to natural conditions.

#### NOISE

Demolition and construction noise will result primarily from heavy equipment. The noise from these sources will be typical of residential housing construction and will be periodic and temporary. Impacts to residents can be minimized by the use of a phased evacuation approach.

## COASTAL ZONE

The preferred alternative will provide for reconstruction of the dune areas after demolition is completed. Dune reconstruction activities will provide a more stable, natural coastal zone environment.

## HAZARDOUS AND SOLID WASTE

All activities involving hazardous wastes generated during the demolition and construction process will be managed in accordance with regulatory requirements. Solid wastes generated will be primarily nonhazardous demolition wastes, which will be disposed of at the Brevard County landfill. Asbestos materials will be removed from the houses in accordance with USAF and other applicable regulations and will be disposed of at the Cape Canaveral asbestos landfill. Following removal of those houses located on the Installation Restoration Program (IRP) Landfill #1 site in the South Central Housing area, the cleared area will be posted to discourage access and will be revegetated pending future remedial investigation/feasibility study (RI/FS) activities.

## WASTEWATER

There will be no impacts to the existing wastewater treatment process, as there will be no increase in the total number of housing units.

## SOCIOECONOMICS

Replacement of the existing housing units will provide base residents with enhanced living conditions which should increase morale and promote a higher quality of life. Because the existing housing will be evacuated in phases, the impacts to the local community will be minimal, temporary and unavoidable. Restoring the ocean front housing area to its natural state would be an improvement to the visual environment.

## CULTURAL RESOURCES

No prehistoric or historic cultural resource will be impacted by the proposed action, according to the Florida State Historic Preservation Office.

## TRANSPORTATION

Impacts to transportation resulting from the proposed action will include increased truck traffic on major routes and a marginal increase in the number of worker vehicles commuting to the site. Truck traffic impacts should be unavoidable, but temporary, and can be minimized by the use of alternative routes to the mainland.

## FINDINGS

Based on the above summary, a Finding of No Significant Impact is made. An Environmental Assessment of the proposed action, is on file at:

Patrick AFB  
45th CES/DE  
Patrick AFB, FL 32925  
ATTN: Environmental Coordinator

The Finding of No Significant Impact (FONSI) for this environmental assessment for replacement housing at Patrick Air Force Base, Florida is approved by:

45th Space Wing Commander  
Brig. Gen. J. R. Morrell

J. Morrell  
Approval Signature

3 July 92  
Date

FINDING OF NO SIGNIFICANT IMPACT (FONSI)  
RELAY MIRROR EXPERIMENT  
MAUI, HAWAII

INTRODUCTION

As part of the Strategic Defense Initiative, the Relay Mirror Experiment (RME) is being proposed by the U.S. Air Force (USAF) to (1) demonstrate the ability to transmit a laser over a distance of up to 1,000 kilometers by reflecting it off a satellite-based mirror and directing it accurately to a ground-based receiving station, (2) control the satellite-based mirror angle via beacon beams from the ground, and (3) measure the effects of atmospheric turbulence and refraction on the relay laser.

PROPOSED ACTION

The U.S. Air Force RME is a short-term (approximately 6 months) technical experiment designed to demonstrate and evaluate the ability to transmit a low-power laser beam over long distances, point it accurately at a mirror mounted on a satellite, and reflect the laser beam precisely to a receiving station on the ground. Ground facilities required to support the RME include a transmitting station, or laser source system (LSS), and a temporary receiving station, also known as the Experiment Scoring and Control Center (ESCC). These two facilities must be located approximately 12 to 24 miles apart and have predominantly clear weather conditions.

The LSS would include the relay laser source, a beacon laser source, laser control equipment, and laser beam director. The beam director would aim the relay and the beacon beams from the ground to the orbiting satellite. The relay beam would then be reflected to the ESCC.

The LSS requires close proximity to a facility with existing laser beam tracking capabilities. The beam director would be located in existing facilities, or require only minor additions to existing facilities.

The ESCC site would support the following RME functions: administration, communication, experiment calibration, experiment operations, and weather/atmospheric observations. Each function requires a separate facility which would consist of reinforced concrete block structures or temporary structures. The facilities and parking lot would require approximately three to four acres of land. Operation of the ESCC would create 12 new temporary jobs and require approximately 30 additional highly trained employees. In the event that a second operating shift were required, an additional 30 highly trained employees would be needed. Operation of the LSS would require no new employees.

The proposed location for the RME LSS is the Air Force Maui Optical Station (AMOS) on top of Mount Haleakala, Maui, Hawaii. The ESCC site is proposed to be constructed on land currently planned for the antenna farm of the Maui Research and Technology Park near Kihei, Maui, Hawaii. The alternatives to the proposed action are either (1) one of two alternative ESCC sites on Maui (the Old Maui Airport or the Puunene AVCO site) or (2) an alternative LSS and ESCC site located in Florida. The alternative LSS would be located at the U.S. Air Force Malabar Tracking Station, and the associated ESCC site would be at Patrick AFB.

## **FINDINGS**

Based upon the above, a Finding of No Significant Impact is made. An Environmental Assessment for the proposed action, dated October 1987, is on file at:

HQ Space Division/DEV  
P.O. Box 92960  
Los Angeles, CA 90009-2960  
ATTENTION: Mr. Robert C. Mason

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## 1. TITLE OF PROPOSED ACTION

DRAWDOWN OF O-2A AIRCRAFT, PATRICK AFB FL

## 2. CONTROL NUMBER

## 3. CERTIFICATION

Environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives  
 AF Form 813 dated \_\_\_\_\_, sheets \_\_\_\_\_ to \_\_\_\_\_, sheets \_\_\_\_\_ to \_\_\_\_\_.) The assessment of environmental effects is attached

## 4. NAME AND GRADE OF ENVIRONMENTAL PLANNER

CHARLES F. FOSTER, GS-12

## SIGNATURE

*Charles F. Foster*

## DATE

20 JUNE 1986

## 5. COMMENTATION

Reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☒ 30 day waiting period required

☐ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

## 6. NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL, GM-14

## SIGNATURE

*Floyd L. Furnell*

## DATE

23 JUN '86

## 7. REMARKS

Finding of No Significant Impact attached.

## ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

JERRY L. SINCLAIR  
Colonel, USAF

## SIGNATURE

*Jerry L. Sinclair*

## DATE

27 JUN 1985

## ORGANIZATION CONCURRENCE (INITIATING LEVEL)

### NAME AND GRADE, ORGANIZATION COMMANDER

JOHN W. MANSUR  
Colonel, USAF

## SIGNATURE

*John W. Mansur*

## DATE

27 JUN 1986

## ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED)

FRANK P. GALLAGHER, Major, USAF, BSC

Chief, Environmental Planning Division

DCS/Engineering and Services

## SIGNATURE

*Frank P. Gallagher*

## DATE

11 JUL 1986

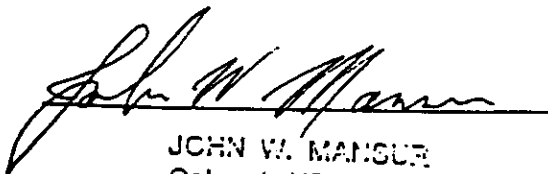
## FINDING OF NO SIGNIFICANT IMPACT

### Drawdown of O-2A Aircraft

Patrick AFB, Florida

1. The Environmental Assessment on the drawdown of the O-2A aircraft concludes that there will be no significant environmental effects caused by this action. The drawdown of the O-2A aircraft at Patrick AFB Florida is part of the initial step toward phase-out of all O-2As in Tactical Air Command (TAC). O-2A phase-out is desired due to adverse logistical requirements, safety features and limited combat capability.
2. TAC proposes drawdown of the twelve O-2A aircraft at Patrick AFB in the fourth quarter of fiscal year 1986.
3. The potential manpower changes produced by the drawdown would effect no more than 128 personnel with most assigned to other duties.
4. The O-2A aircraft produce a very small percentage (5%) of the total hydrocarbons, nitrogen oxides and sulfur oxides generated at Patrick AFB. A relatively high percentage of particulate matter and carbon monoxide is due to the fact that the O-2A is an older model of aircraft using a reciprocating engine fueled with avgas that does not burn the fuel as efficiently as more modern engines which burn at a higher temperature. A minor reduction of Base fuel contaminant emissions will result.
5. The drawdown of the O-2A's will result in minor reduction in total noise level and frequency.
6. Minor reduction in base traffic, water consumption, sewage treatment load, electrical consumption, base wire and radio traffic is expected.

CONCLUSION: Considering all environmental aspects which could be impacted by the deletion of the O-2A aircraft, a Finding of No Significant Impact (FONSI) is concluded. The original Environmental Assessment dated June 1986 which analyzes the possible environmental impacts of this action is on file at 6550 ABG/DEEV, Patrick Air Force Base, Florida.

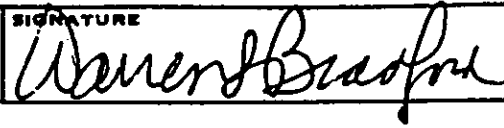

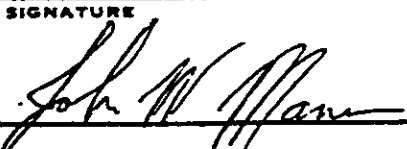



JOHN W. MANSUR  
Colonel, USAF  
Commander

27 Feb 86

Date

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

<b>1. TITLE OF PROPOSED ACTION</b> CONSTRUCT TRAFFIC CHECK HOUSE AND ROADWAY IMPROVEMENTS, AMENDMENT #2		<b>2. CONTROL NUMBER</b>
<b>CERTIFICATION</b> An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives Attachment 1, AF Form 813 dated _____, sheets _____ to _____, Attachment 2, sheets _____ to _____. The assessment of environmental effects is attached		
<b>NAME AND GRADE OF ENVIRONMENTAL PLANNER</b>  WARREN S. BRADFORD, GM-13	<b>SIGNATURE</b> 	<b>DATE</b>  15 Jul 86
<b>RECOMMENDATION</b> I have reviewed the attached DOPAA and environmental assessment and recommend: <input checked="" type="checkbox"/> Finding of no significant impact  <input checked="" type="checkbox"/> 30 day waiting period required <input type="checkbox"/> 30 day waiting period not required  <input type="checkbox"/> Proposed draft environmental impact statement required		
<b>NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH</b>  FLOYD L. FURNELL, GM-14	<b>SIGNATURE</b> 	<b>DATE</b>  15 July 86
<b>REMARKS</b>  1. Basic assessment was approved by the ESMC Environmental Protection Committee on 27 May 1982 and by the AFSC on 22 July 1982. The first amended assessment was approved by the ESMC Environmental Protection Committee on 2 November 1982 and by the AFSC on 2 December 1982.  2. A news release of the change will be published by Public Affairs when construction begins in lieu of another FONSI.		
<b>6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)</b>		
<b>NAME AND GRADE OF CHAIRPERSON, EPC</b> JOHN W. MAUSUR COLONEL, USAF COMMANDER	<b>SIGNATURE</b> 	<b>DATE</b>  18 JUL 1986
<b>7. ORGANIZATION CONCURRENCE (INITIATING LEVEL)</b>		
<b>NAME AND GRADE, ORGANIZATION COMMANDER</b>	<b>SIGNATURE</b>	<b>DATE</b>
<b>8. ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED)</b>		
<b>NAME AND GRADE OF CHAIRPERSON, EPC</b> FRANK P. GALLAGHER III, Lt Col, USAF, BSC Chairman, Environmental Protection Comm., HQ AFSC	<b>SIGNATURE</b> 	<b>DATE</b>  19 AUG 1986



FINDING OF NO SIGNIFICANT IMPACT  
LOW ALTITUDE TACTICAL NAVIGATION AREA  
PATRICK AIR FORCE BASE, FLORIDA

The 549th Tactical Air Support Training Squadron (TASTS), located at Patrick AFB has need for a larger Low Altitude Tactical Navigation (LATN) area to train Forward Air Controllers in low airspeed tactical aircraft (O-2, OV-10 and A-10). The Marian MOA (Military Operating Area) located in east central Florida and currently used by the 549th, is small and familiar to aircrews which results in unrealistic and inadequate training. The proposed larger LATN area surrounds the Marian MOA and is approximately 60 miles wide (east to west) and 65 to 80 miles long (south to north). The larger area will expose aircrews to low altitude navigation techniques which will enhance their survivability in a surface-to-air missile environment.

All low altitude sorties will be conducted between 500 and 1500 feet above the ground and in accordance with all applicable Air Force and FAA regulations. Six to eight low altitude flights per day, excluding weekends and holidays, may be increased to twenty per day during nine to ten weeks per year when A-10 aircraft may fly at low altitude between Patrick AFB and the Marian MOA. The 549th will control flights to ensure that ground points will not be overflown more than once a day at low altitude.

The proximity of the proposed LATN area to Patrick AFB significantly increases training time with potential savings in fuel consumption. The only reasonable alternative is to shift the boundaries of the proposed area. No action would result in continuing the unrealistic and inadequate training of Forward Air Controllers.

Ground level sound measurements of the three aircraft were measured while making overhead passes at 500 feet were: OV-10, 82 dBA; O-2, 83 dBA; and A-10, 91 dBA. These sound levels are not hazardous to personnel on the ground.

The only potential environmental effects would be noise effects on wildlife or objections from residents living in the LATN area. Comments were solicited from all appropriate federal and state agencies to identify any noise sensitive areas. Objections expressed by residents in the southeastern corner of the LATN area were countered by moving the boundaries in this corner to the west and north which excludes these noise sensitive areas. Considering the low frequency of flights and controls to be exercised, the effects on wildlife would be insignificant. Wildlife agencies reviewing the proposed action did not object or express any concern.

The proposed action will not affect air quality, coastal waters or shorelines or coastal living resources and is therefore considered consistent with the Florida Coastal Zone Management Program. This consistency was confirmed by the State Clearinghouse.

CONCLUSION: As a result of the insignificant anticipated impacts in all environmental factors, a Finding of No Significant Impact (FONSI) is made for the proposed LATN area. An Environmental Assessment, dated September 1985, which analyzes the proposed project is on file at: 6550 ABG/DEEV, Patrick Air Force Base, Florida.

APPROVED:

  
ESMC/EC

DATE:

24 Oct 85

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

<b>TITLE OF PROPOSED ACTION</b> LOW ALTITUDE TACTICAL NAVIGATION (LATN) AREA, PATRICK AFB FL	<b>2. CONTROL NUMBER</b> _____
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**CERTIFICATION**

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (which 1, AF Form 813 dated \_\_\_\_\_, sheets \_\_\_\_\_ to \_\_\_\_\_.) The assessment of environmental effects is attached (in 2, sheets \_\_\_\_\_ to \_\_\_\_\_.)

<b>NAME AND GRADE OF ENVIRONMENTAL PLANNER</b> CHARLES F. FOSTER, GS-12	<b>SIGNATURE</b> <i>Charles F. Foster</i>	<b>DATE</b> 8 Oct. 1985
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**RECOMMENDATION**

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☒ 30 day waiting period required  
☐ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

<b>NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH</b> FLOYD L. FURNELL, GM-14	<b>SIGNATURE</b> <i>Floyd L. Furnell</i>	<b>DATE</b> 9 Oct 85
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**REMARKS**

FINDING OF NO SIGNIFICANT IMPACT ATTACHED.

<b>ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)</b>		
<b>NAME AND GRADE OF CHAIRPERSON, EPC</b> [Signature] Colonel, USAF Commander	<b>SIGNATURE</b> <i>[Signature]</i>	<b>DATE</b> 24 Oct 85

<b>ORGANIZATION CONCURRENCE (INITIATING LEVEL)</b>		
<b>NAME AND GRADE, ORGANIZATION COMMANDER</b> [Signature]	<b>SIGNATURE</b> <i>[Signature]</i>	<b>DATE</b> 24 Oct 85

<b>ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED)</b>		
<b>NAME AND GRADE OF CHAIRPERSON, EPC</b>	<b>SIGNATURE</b>	<b>DATE</b>

## FINDING OF NO SIGNIFICANT IMPACT

### TEMPORARY LOCATION OF RADAR 7.14

Patrick Air Force Base, Florida

An AN/FPQ-14 Radar, Radar 7.14, formerly located at Grand Turk Air Station, must be modified and its operation capability checked out and tested prior to installation at the new Jonathan Dickinson Tracking Station in 1985. Temporary installation of this radar near contractor operated shops at Patrick Air Force Base (PAFB) is the only feasible location considering time constraints and modification requirements.

The radar will be installed on a new concrete foundation to be constructed within a fenced paved area west of Building 981. The radar will be controlled from Building 981 with power and control cables extending from the building to the radar. There will be no significant adverse environmental effects resulting from construction and subsequent operation of the radar except for the emittance of radiation from the radar antenna which can rotate through 0° to 360° azimuth and 0° to 90° elevation.

Radiation hazard distances have been calculated for biological, electro-explosive devices (EED) and fuel transfer operation exposures using formulas from AFOSH standard 161-9, AFR 127-100 and AF T.O. 312-10-4. The calculated values are:

Biological, 10 mW/cm <sup>2</sup>	-	1957 feet
5 mW/cm <sup>2</sup>	-	2767 feet
1 mW/cm <sup>2</sup>	-	6190 feet

EED, in storage, transport, exposed - 1966 feet  
or on aircraft in flight

in parked or taxiing aircraft - 197 feet

Fuel transfer operations - 3095 feet

Radiation hazards will not exist if the narrow beam of radiation is directed above locations where possible exposure could occur. This will be accomplished by imposing operating constraints on the radar which will prohibit radiation when the antenna is pointed below specified angles of elevation. It should be noted that a radar of similar power and capabilities, Radar 0.13, located approximately 100 feet east of the proposed Radar 7.14 location, has been operated safely for many years with site specific operating restraints. As soon as Radar 7.15 is installed, the ESMC Radiation Protection Officer (RPO) will conduct a field survey to measure actual radiation power densities at various locations. The RPO and Safety personnel will utilize this data to establish site specific operating constraints for Radar 7.14. These constraints will ensure that no hazardous radiation conditions will occur for biological, EED or fuel transfer exposures.

There will be no significant adverse environmental effects resulting from this project.

There will be no significant adverse effects on air quality, coastal waters or coastal living resources. This project is therefore determined to be consistent with the State of Florida Coastal Zone Management Program.

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## TITLE OF PROPOSED ACTION

TEMPORARY LOCATION OF RADAR 7.14, PAFB

## 2. CONTROL NUMBER

PA 84-3216

## CERTIFICATION

Environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives  
 AF Form 813 dated \_\_\_\_\_, sheets \_\_\_\_\_ to \_\_\_\_\_  
 4 sheets to \_\_\_\_\_  
 The assessment of environmental effects is attached

## NAME AND GRADE OF ENVIRONMENTAL PLANNER

CHARLES F. FOSTER GS-12

## SIGNATURE

*Charles F. Foster*

## DATE

10 MAY 1984

## RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

— Finding of no significant impact

☒ 30 day waiting period required

☐ 30 day waiting period not required

— Proposed draft environmental impact statement required

## NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

LOYD L. FURNELL GM-14

## SIGNATURE

*Lloyd L. Furnell*

## DATE

11 May 84

## REMARKS

— Finding of No Significant Impact attached.

## ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

MARVIN L. JONES  
Colonel, USAF,  
Commander.

### SIGNATURE

*Marvin L. Jones*

### DATE

17 MAY 1984

## ORGANIZATION CONCURRENCE (INITIATING LEVEL)

### NAME AND GRADE, ORGANIZATION COMMANDER

Colonel, USAF,  
Commander

### SIGNATURE

*Marvin L. Jones*

### DATE

17 MAY 1984

## ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED)

THAYER J. LEWIS, COL, USAF, BSC  
Chairman

### SIGNATURE

*Thayer J. Lewis*

### DATE

16 JUL 1984

AFSC Environmental Protection Committee

FINDING OF NO SIGNIFICANT IMPACT

INSTALL NEW WEATHER RADAR, FACILITY 423  
PATRICK AIR FORCE BASE, FLORIDA

The Air Weather Service requires a replacement radar for the FPS-77. Although tied into the Range Control Center, CCAFS the radar cannot be installed at the Cape because of RF Interference. The requirement for this project is the DOD Shuttle Payloads Protection Program.

Install a C-Band weather radar/WSR-74C (Transmitter/Receiver and associated hardware) on the roof of Building 423, Patrick Air Force Base. Use existing wideband circuits involving six repeater stations to carry data and control from Building 423, Patrick Air Force Base to the Range Control Center, Cape Canaveral Air Force Station. Data will be transmitted by hard line. Repeater equipment will be located in government facilities in Cocoa Beach.

Biological radiation hazard distances were calculated IAW AFOSH Standard 161-9 and T.O. 31 Z-10-4 and are as follows:

Biological hazard distance to a 10mW/cm <sup>2</sup> limit	125 feet
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Biological hazard distance to a 5 mW/cm <sup>2</sup> limit	177 feet
---	----------

Location of the new radar is satisfactory from a health physics standpoint. It may be necessary to restrict access to portions of the roof of Building 423 adjacent to the penthouse after this system is installed. Any such restrictions will be determined by a comprehensive on-site radiation protection survey by the ESMC Radiation Protection Officer before the system is placed into routine operation. Radiation hazards to adjacent buildings, water towers, etc. should be considered negligible.

It has been determined that there will be no significant adverse environmental effects resulting from this project.

There being no significant adverse effects foreseen in air quality, coastal waters, and coastal living resources, the project is therefore determined to be consistent with the State of Florida Coastal Zone Management Program.

10 August 1982

ENVIRONMENTAL ASSESSMENT CERTIFICATE		
1. TITLE OF PROPOSED ACTION <b>Install New Weather Radar, Fac 423, PAFB</b>		2. CONTROL NUMBER
3. CERTIFICATION An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (ATCH 1, AF Form 813 dated . . . . . sheet to . . . . . sheet) The assessment of environmental effects is attached (ATCH 2, sheet . . . . .)		
NAME AND GRADE OF ENVIRONMENTAL PLANNER <b>WARREN S. BRADFORD GM-13</b>		SIGNATURE <i>Warren S. Bradford</i> DATE <b>14 Apr 83</b>
4. RECOMMENDATION I have reviewed the attached DOPAA and environmental assessment and recommend: <input checked="" type="checkbox"/> Finding of no significant impact <input type="checkbox"/> 30 day waiting period required <input type="checkbox"/> 30 day waiting period not required <input type="checkbox"/> Proposed draft environmental impact statement required		
NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH <b>FLOYD L. FURNELL GM-13</b>		SIGNATURE <i>Floyd L. Furnell</i> DATE <b>5 May 83</b>
5. REMARKS <b>FONZI attached.</b>		
6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)		
NAME AND GRADE OF Chairman, EPC <b>MARVIN L. JONES, Colonel, USAF Commander</b>		SIGNATURE <i>Marvin L. Jones</i> DATE <b>11 MAY 1983</b>
7. ORGANIZATION CONCURRENCE (INITIATING LEVEL)		
NAME AND GRADE, ORGANIZATION COMMANDER <b>N/R</b>		SIGNATURE  DATE 
8. ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED)		
NAME AND GRADE OF CHAIRPERSON, EPC		SIGNATURE  DATE 

AF FORM 815 PREVIOUS EDITION IS OBSOLETE.

AF Form 815, Environmental Assessment Certificate.



## FINDING OF NO SIGNIFICANT IMPACT

### RIVERSIDE RECREATIONAL AREA FACILITIES PATRICK AIR FORCE BASE, FLORIDA

The projects develop the natural resources for the Base Outdoor Recreation Plan and construct a Clubhouse to support the Skeet/Trap Range. The proposed facilities will improve the quality of life of Patrick military community by providing new and improved leisure time recreational facilities. The projects all will be located in and adjacent to the "Survival Area," on the Banana River south of the east-west runway.

The "Survival Area" is the only remaining area of the base that is largely undeveloped. Its scenic and recreation potential should be protected as future development occurs in the coming years. Recent construction of a force main sewer line to the main base sewage treatment plant from the firing ranges and the picnic area will accelerate future growth plans by eliminating need for undesirable sewage holding tanks, septic tanks and drainfields. Efficient planning for that area is necessary to avoid unnecessary loss of trees and vegetation, to preserve the vista, and to avoid runoff problems from paving and other construction. The on-board Architect-Engineer Master Planner is currently identifying "Survival Area" topographic details, future development alternatives of the "Survival Area," and the recommended "carrying capacity" to describe how development can occur without hurting the natural environment.

Besides the skeet range clubhouse, specific proposed projects include: A FAMCAMP - sixteen parking spaces for self-contained recreational vehicles; two rustic picnic pavilions with grill and restrooms; installation of playground equipment; a 200 foot fishing and boat pier to extend into the Banana River; a boat launching ramp; and self-help scout camp improvements.

Although alternative sites were considered, the siting of those projects is specifically oriented to the use of this scenic area as best suitable land use and conforms to base master planning. The Skeet Range Clubhouse should be located adjacent to the Skeet Range facility. Even though in the 100-year floodplain area it would be "demonstrably inappropriate" (as defined in the National Flood Insurance Program) to be located elsewhere.

The pier and boat ramp will require Joint Corps of Engineers/Department of Environmental Regulation permitting. This will ensure appropriate public notice and coordination with interested Federal, State and other environmental activities.

Overall the adverse environmental impacts are believed to be either non-existent or insignificant. The projects are considered consistent with the approved State of Florida Coastal Management Program in view of lack of significant adverse impact on Coastal Waters, Air Quality, Coastal Living Resources. Projects will be coordinated with State and Region Clearinghouses in accordance with OMB A-95 procedures.

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

1. TITLE OF PROPOSED ACTION Riverside Recreational Area Facilities		2. CONTROL NUMBER Various	
3. CERTIFICATION An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (AF Form 813 dated 10/82) and the assessment of environmental effects is attached (AF Form 813 dated 10/82).			
NAME AND GRADE OF ENVIRONMENTAL PLANNER WARREN S. BRADFORD GM-13		SIGNATURE <i>Warren S. Bradford</i> DATE 12 Apr 83	
4. RECOMMENDATION I have reviewed the attached DOPAA and environmental assessment and recommend: <input checked="" type="checkbox"/> Finding of no significant impact <input checked="" type="checkbox"/> 30 day waiting period required Accomplish OMB A-95 Coordination <input type="checkbox"/> 30 day waiting period not required <input type="checkbox"/> Proposed draft environmental impact statement required			
NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH FLOYD L. FURNELL		SIGNATURE <i>Floyd L. Furnell</i> DATE 12 Apr 83	
5. REMARKS FONZI attached.			
6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL) NAME AND GRADE OF CHAIRPERSON, EPC MARVIN L. JONES Colonel, USAF SIGNATURE <i>Marvin L. Jones</i> DATE 21 APR 1983			
7. ORGANIZATION CONCURRENCE (INITIATING LEVEL) NAME AND GRADE, ORGANIZATION COMMANDER SIGNATURE DATE			
8. ENVIRONMENTAL PROTECTION COMMITTEE CONCURRENCE (HIGHER LEVELS, AS REQUIRED) NAME AND GRADE OF CHAIRPERSON, EPC SIGNATURE DATE			

**AF Form 815, Environmental Assessment Certificate.**

PROPOSED

FINDING OF NO SIGNIFICANT IMPACT

BEACH & SHORE RESTORATION & PROTECTION, 5 YEAR PLAN

PATRICK AIR FORCE BASE, FLORIDA

Purpose of and Need for Action

To prevent erosion of the ocean duneline and the riverbank, which if left uncorrected, will result in damage to government facilities.

Description of Proposed Action

The five year plan includes specific projects for the period FY 82 - FY 86 concerning; beach restoration on the Banana River, dune restoration landward of mean high water on the Atlantic Ocean duneline, beach dune crosswalks and revegetation to preserve the dunes, and revegetation of the riverbanks to retard wind tide erosion.

Sand hauling from the Cape Canaveral Air Force Station Trident Basin stockpile will be accomplished by contract. Base Civil Engineering will most likely spread and level delivered sand as required. Beach crosswalks and revegetation will be accomplished by contract. Local community activities also assist in revegetation programs.

A previous project in 1979, involving 50,000 cubic yard movement was conducted without significant problems. Later several hundred thousand cubic yards were transported for a Corps of Engineers project in Indialantic.

SUMMARY OF ENVIRONMENTAL IMPACT

No significant adverse environmental effects are foreseen from actions identified in this plan.

Benefits will accrue from the return of ocean duneline to natural state and the land reclamation/erosion curtailment of the riverbank. Protection of government property, State Road A1A and return of diminished beach areas will result.

It has been determined that there will be no effect on species listed as endangered or threatened in accordance with the 1978 Amendments of the Endangered Species Act.

Truck traffic can be a potential source of irritation to motorists, residents, or businesses along the round trip sand transport route.

This plan is consistent with the Florida Coastal Zone Management Program.

The environmental assessment for this plan is on file in Base Civil Engineering, 6550 Air Base Group, Patrick Air Force Base, Florida.

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## TITLE OF PROPOSED ACTION

Repair O/H Electrical, Housing Areas, Phase I

## 2. CONTROL NUMBER

PA 81-0046

## CERTIFICATION

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (Atch 1, AF Form 813 dated , sheets to .) The assessment of environmental effects is attached (Atch 2, sheets to .)

## NAME AND GRADE OF ENVIRONMENTAL PLANNER

WARREN S. BRADFORD

GS-12

## SIGNATURE

*Warren S. Bradford*

## DATE

16 Sept 81

## 4. RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☐ 30 day waiting period required

☐ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

## NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL

GS-13

## SIGNATURE

*Floyd L. Furnell*

## DATE

18 Sep 81

## 5. REMARKS

## 6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

MARVIN L. JONES, Colonel, USAF  
Commander

### SIGNATURE

*Marvin L. Jones*

### DATE

29 Sep 81

## 7. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

### NAME AND GRADE OF CHAIRPERSON, EPC

### SIGNATURE

### DATE

## 8. ORGANIZATION CONCURRENCE

concur with the recommendation for the preparation of a proposed draft EIS.

### Name and grade of project officer,

### Telephone number

### NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE

### SIGNATURE

### DATE

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## 1. TITLE OF PROPOSED ACTION

Construct Recreational Complex, Patrick Air Force Base

## 2. CONTROL NUMBER

PA 81-0058

## 3. CERTIFICATION

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (Atch 1, AF Form 815 dated , sheets to .) The assessment of environmental effects is attached (Atch 2, sheets to .)

## NAME AND GRADE OF ENVIRONMENTAL PLANNER

WARREN S. BRADFORD, GS-12

## SIGNATURE

*Warren S. Bradford*

## DATE

2 June 1981

## 4. RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

☐ Finding of no significant impact

☒ 30 day waiting period required

☐ 30 day waiting period not required

Allow for public review before final determination of FONSI before any action begins.

☐ Proposed draft environmental impact statement required

## NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL, GS-13

## SIGNATURE

*Floyd L. Furnell*

## DATE

24 June '81

## 5. REMARKS

## 6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

MARVIN L. JONES  
Colonel, USAF

### SIGNATURE

*Marvin L. Jones*

### DATE

13 JUL 1981

## 7. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

### NAME AND GRADE OF CHAIRPERSON, EPC

Chairman

AFSC Environmental Protection Committee

### SIGNATURE

*John L. Johnson*

### DATE

4 AUG 1981

## 8. ORGANIZATION CONCURRENCE

I concur with the recommendation for the preparation of a proposed draft EIS.

Name and grade of project officer,

Telephone number

### NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE

### SIGNATURE

### DATE

**PROPOSED**  
**Finding of No Significant Impact**

**Construct Recreational Complex, Patrick Air Force Base**  
**PA 81-0058**

**Situation:**

Patrick Air Force Base plans to construct an Athletic Complex on federal land, a 16 acre vacant site in the southwest corner of the Capehart Housing. The complex is designed to provide year-round outdoor recreation activities for active duty and retired military personnel and their dependents. Intramural, youth, and command team sports will be encouraged. No other base site is available that would be large enough for this facility.

**Summary of Proposed Action:**

New construction includes: a paved 1/4 mile oval track; a football field within the track; two softball fields; a central two-story facility for press-box, snack bar, and restrooms; three electric scoreboards; central area bleachers; paved parking for 200 vehicles; paved access road off Patrick Drive; a central bleachers public address system and field lighting.

The construction of well landscaped athletic facilities and grounds with perimeter trees is expected to improve the appearance and use of the present vacant land. The facility will be used for day and night activities. Forecasted usage indicates lighting normally until 2200 hours summer and 2130 winter, except for special events/tournaments. Lighting will be designed to confine lighting to the playing fields.

**Conclusion:**

Probable annoyances to military residents to the east, north, and south and civilian residents to the south and west are: spontaneous crowd noise; field lighting; and automobile traffic after athletic events.

This project was coordinated with the Brevard County Planning and Zoning Department on 17 July 1980. The department interposed no objection to the project. The department requested safeguards set forth in Paragraph 48, Section 25, Appendix C, Zoning, Brevard County: a setback of 300 feet should be maintained from the existing residential development to the activity sites; and lighting designed so that it shines only on the subject use and not directly on a public street or residential area.

A final design configuration will be coordinated with the Brevard County Planning and Zoning Department prior to construction activities. When these conditions are incorporated in final design, there are no significant environmental effects expected from the project construction and operation.

An Environmental Assessment, Construct Recreational Complex, Patrick Air Force Base, approved 4 August 1981 is on file at 6550ABG/DEEV, Patrick AFB.

*Utch 22*

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## 1. TITLE OF PROPOSED ACTION

Aerial Spray of Pesticide for Mosquito Control, PAFB & CCAFS

## 2. CONTROL NUMBER

## 3. CERTIFICATION

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (Atch 1, AF Form 815 dated , sheets to .) The assessment of environmental effects is attached (Atch 2, sheets to .)

### NAME AND GRADE OF ENVIRONMENTAL PLANNER

WARREN S. BRADFORD, GS-12

### SIGNATURE

*Warren S. Bradford*

### DATE

31 March 81

## 4. RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☐ 30 day waiting period required

☒ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

### NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL, GS-13

### SIGNATURE

*Floyd L. Furnell*

### DATE

31 Mar 81

## 5. REMARKS

## 6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON

MARVIN L. JONES

Colonel, USAF

Vice Commander

### SIGNATURE

*Marvin L. Jones*

### DATE

6 APR 1981

## 7. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

### NAME AND GRADE OF CHAIRPERSON, EPC

Chairman

AFSC Environmental Protection Committee

### SIGNATURE

*Richard J. Humerickson*

### DATE

11 MAY 1981

## 8. ORGANIZATION CONCURRENCE

concur with the recommendation for the preparation of a proposed draft EIS.

### Name and grade of project officer.

### Telephone number

### NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE

### SIGNATURE

### DATE



# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## 1. TITLE OF PROPOSED ACTION

Aircraft Corrosion Control Facility, Patrick Air Force Base

2. CONTROL NUMBER

## CERTIFICATION

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives (Atch 1, AF Form 815 dated . sheets to .) The assessment of environmental effects is attached (Atch 2, sheets to .)

## NAME AND GRADE OF ENVIRONMENTAL PLANNER

WARREN S. BRADFORD

GS-12

## SIGNATURE

*Warren S. Bradford*

## DATE

3 Feb 1981

## 4. RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☐ 30 day waiting period required

☒ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

## NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL

GS-13

## SIGNATURE

*Floyd L. Furnell*

## DATE

3 Feb 1981

## 5. REMARKS

## 6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

MARVIN L. JONES

Colonel, USAF

### SIGNATURE

*Marvin L. Jones*

### DATE

6 FEB 1981

## 7. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

### NAME AND GRADE OF CHAIRPERSON, EPC

MARLAN J. HUMERICKHOUSE, COL, USAF BSC

Chairman  
AFSC Environmental Protection Committee

### SIGNATURE

*Marlan J. Humerickhouse*

### DATE

13 Mar 81

## ORGANIZATION CONCURRENCE

concur with the recommendation for the preparation of a proposed draft EIS.

Name and grade of project officer,

Telephone number

## NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE

### SIGNATURE

### DATE

## ENVIRONMENTAL ASSESSMENT

### CONSTRUCT TEMPORARY LODGING FACILITY (TLF), PA 81-0123

#### PATRICK AIR FORCE BASE, FLORIDA

#### SECTION A: DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

##### 1. Purpose of and Need for Action

Approximately 1,800 PCS families are processed each year, with an average of 173/month for the six most active months. Some require these accommodations for only a few days, with others for as long as 30-60 days. It is impossible for PCS families to find adequate quarters for a reasonable cost off-base. Base facilities are not available. Rental rates off-base have inflated beyond the means of lower grade airmen, because the area is a winter resort.

##### 2. Description of Proposed Action and Alternatives

a. Construct a 24 unit motel-type facility. Each unit is to contain a private bath, bath closet, efficiency kitchen, and sleeping provisions. The size of each unit will be approximately 368 square feet and will be furnished with a queen-size bed, two night stands, sofa bed, dresser, range, refrigerator, table and chairs, desk, rug, and luggage rack.

b. Alternatives are: Do nothing; deferred action; other location.

#### SECTION B: ENVIRONMENTAL CONSEQUENCES

c. There are no other effects anticipated on coastal living resources including productivity, diversity, dynamics, wildlife habitat and migratory routes. Patrick Air Force Base has constructed many dune crossways to protect the duneline and dune vegetation. If another is required at this location, it will be programmed.

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

**TITLE OF PROPOSED ACTION**  
MARINA FACILITIES DAMAGE - PA 80-0125

**2. CONTROL NUMBER**  
80-6

**CERTIFICATION**

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives  
 Atch 1, AF Form 813 dated \_\_\_\_\_, sheets \_\_\_\_\_ to \_\_\_\_\_.) The assessment of environmental effects is attached (Atch 2, sheets \_\_\_\_\_ to \_\_\_\_\_.)

**NAME AND GRADE OF ENVIRONMENTAL PLANNER**  
WARREN S. BRADFORD, GS-12

**SIGNATURE**  
*Warren S. Bradford*

**DATE**  
20 June 80

**4. RECOMMENDATION**

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☐ 30 day waiting period required

☒ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

**NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH**

FLOYD L. FURNELL, GS-13

**SIGNATURE**  
*Floyd L. Furnell*

**DATE**  
20 June '80

**5. REMARKS**

**6. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)**

**NAME AND GRADE OF CHAIRPERSON, EPC**  
MARVIN L. JONES, Colonel, USAF

**SIGNATURE**  
*Marvin L. Jones*

**DATE**  
24 June 1980

**7. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)**

**NAME AND GRADE OF CHAIRPERSON, EPC**  
PRESTON C. ROGERS, JR.  
Environmental Protection Scientist  
Environmental Protection Office

**SIGNATURE**  
*P. C. Rogers*

**DATE**  
1 Aug 80

**8. ORGANIZATION CONCURRENCE**

concur with the recommendation for the preparation of a proposed draft EIS.

**Name and grade of project officer,**

**Telephone number**

**NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE**

**SIGNATURE**

**DATE**

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

## TYPE OF PROPOSED ACTION

UPGRADE SEWAGE TREATMENT PLANTS PA 80-0140

CONTROL NUMBER  
80-3

## CERTIFICATION

environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives  
 1. At Form 513 dated N/A sheets to 3 and Appendix A  
 2. The assessment of environmental effects is attached (Atch 3, sheets

## NAME AND GRADE OF ENVIRONMENTAL PLANNER

WARREN S. BRADFORD, GS-12

## SIGNATURE

*Warren S. Bradford*

DATE  
8 Apr 1980

## RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:  
☒ Finding of no significant impact

☐ 30 day waiting period required  
☒ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

## NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

FLOYD L. FURNELL, GS-13

## SIGNATURE

*Floyd L. Furnell*

## DATE

10 Apr 80

## ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

### NAME AND GRADE OF CHAIRPERSON, EPC

JOHN S. BURKLUND, Colonel, USAF

## SIGNATURE

*John S. Burkland*

## DATE

11 Apr 80

## ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

### NAME AND GRADE OF CHAIRPERSON, EPC

## SIGNATURE

## DATE

## REMARKS

Comments and recommendations for the preparation of a proposed draft EIS.

## NAME AND GRADE OF CHAIRPERSON, EPC

## NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING

Telephone number

## SIGNATURE

## DATE

# ENVIRONMENTAL ASSESSMENT CERTIFICATE

TITLE OF PROPOSED ACTION

**SPRINKLER IRRIGATION SYSTEM DORMS & VOQS PA 80-0112**

CONTROL NUMBER

**80-1**

## CERTIFICATION

An environmental assessment has been accomplished under my direction, based on the attached description of the proposed action and alternatives  
 1. AF Form 815 dated 1 3 sheets in 1 The assessment of environmental effects is attached (Attach 2, sheets

NAME AND GRADE OF ENVIRONMENTAL PLANNER

**WARREN S. BRADFORD, GS-12**

SIGNATURE

*Warren S. Bradford*

DATE

**17 March 1980**

## 4. RECOMMENDATION

I have reviewed the attached DOPAA and environmental assessment and recommend:

☒ Finding of no significant impact

☐ 30 day waiting period required

☒ 30 day waiting period not required

☐ Proposed draft environmental impact statement required

NAME AND GRADE, CHIEF, ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH

**FLOYD L. FURNELL, GS-13**

SIGNATURE

*Floyd L. Furnell*

DATE

**17 Mar 80**

## 5. REMARKS

ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (INITIATING LEVEL)

NAME AND GRADE OF CHAIRMAN, EPC

**JOHN S. BURKLUND, Colonel, USAF**

SIGNATURE

*John S. Burklund*

DATE

**24 Mar 80**

ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (HIGHER LEVELS, AS REQUIRED)

NAME AND GRADE OF CHAIRMAN, EPC

**SC Environmental Protection Committee**

SIGNATURE

*Mark J. Humerickhouse*

DATE

**21 Apr 80**

ORGANIZATION CONCURRENCE

I concur with the recommendation for the preparation of a proposed draft EIS.

NAME AND GRADE OF PROJECT OFFICER

NAME AND GRADE, ORGANIZATION COMMANDER, INITIATING OFFICE

Telephone number

SIGNATURE

DATE

FORM 815

## Finding of No Significant Impact

### Reconstruct Dunes, PA 79-0040

#### Situation:

High waves caused by Hurricane David on 3 Sep 79 eroded Patrick ocean-front dunes. The dune is vulnerable to further damage by storm this winter. Additional erosion may permit waves to breach the dune damaging Government property.

#### Summary of Proposed Action:

50,000 cubic yards of sand from a Government-owned stockpile at Cape Canaveral Air Force Station will be moved to staging location at Patrick Air Force Base. Government personnel and equipment will spread the sand along the dune to reconstruct it to the approximate profile existing before the storm. This restoration method was recommended by the US Army Corps of Engineers in their Beach Erosion Control Study, February 1976. Sand will be delivered and stockpiled over a one-year period but dune replenishment action will be stopped May through October to preclude interference with the peak nesting period of sea turtles in June, July and August. Sand replenishment will not displace water in the submerged or transitional zone. Sea oats and other dune vegetation will not be covered.

Sand deliveries involve a 35 mile round trip between Cape Canaveral and Patrick Air Force Base with deliveries planned between 7:15 a.m. 3:30 p.m. Monday through Friday excluding government holidays. The truck traffic can be a potential source of irritation to motorists, residents, or businesses along the round trip transport route.

It has been determined that there will be no effect on species listed as endangered or threatened in accordance with the 1978 Amendments of the Endangered Species Act.

The sand from the replenished dune, which eventually will wash in and out during stormy high water periods is not expected to be a source of any pollution since it is the natural sand of the coastal area removed during the construction of the Trident Basin at Cape Canaveral.

#### Conclusion:

No significant adverse environmental effects foreseen as a result of the dune repair project. The benefit to accrue from this project is the return of a dune line above mean high water to approximate its natural state before Hurricane David. The natural barrier will again provide the property protection westward and the aesthetics of the beach recreational area. An Environmental Assessment "Reconstruct Dunes, Patrick AFB" dated 26 Oct 79 is on file at 6550 ABW/DEEV, Patrick AFB.

DEPARTMENT OF THE AIR FORCE  
ENVIRONMENTAL ASSESSMENT

FOR

CONTRACT OPERATION

BY

6550 ABW BASE SUPPLY

PATRICK AIR FORCE BASE, FLORIDA 32925

PREPARED: 28 February 1977


REVISED: 14 June 1977

REVISED: 30 November 1978

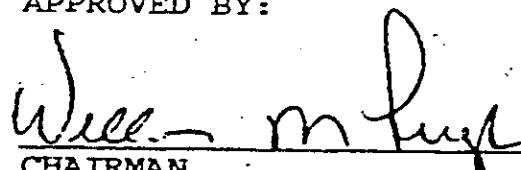
REVISED: 22 January 1979

PROPOSED START DATE: 1 October 1979

PREPARED BY:

  
JOHN E. SACCO, Captain, USAF  
6550 ABW/LGS  
PATRICK AFB FL 32925  
854-5315

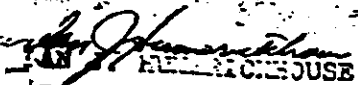
APPROVED BY:

  
CHAIRMAN  
ENVIRONMENTAL  
PROTECTION COMMITTEE

APPROVED BY:

  
JACK L. PRICE, Colonel, USAF  
6550 ABW Commander

PREPARED IN ACCORDANCE WITH AFR 19-2 IN COMPLIANCE  
WITH THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

  
WILLIAM M. LUPTON, Lt Col, USAF  
Environmental Protection Committee

87 FEB 1979

This action does not require an  
environmental statement using  
the criteria of AFR 19-2.

DEPARTMENT OF THE AIR FORCE

AIR FORCE SYSTEMS COMMAND

ENVIRONMENTAL ASSESSMENT

FOR

INSTALLATION OF SILVER RECLAMATION


PROCESSOR

PATRICK AFB, FLORIDA

Preparation Date - 4 Oct 78

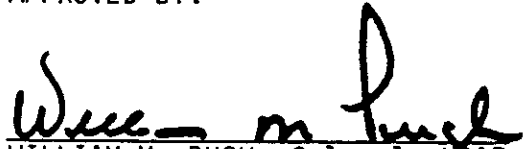
Proposed Start Date - 15 Nov 78

PREPARED BY:



WARREN S. BRADFORD  
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JACK L. PRICE, Colonel, USAF  
Commander, 6550th Air Base Wing

Prepared in accordance with AFR 19-2 in compliance with the National  
Environmental Policy Act of 1969.



AIR FORCE SYSTEMS COMMAND

DEPARTMENT OF THE AIR FORCE

TACTICAL AIRCREW TRAINING

FORMAL

ENVIRONMENTAL ASSESSMENT

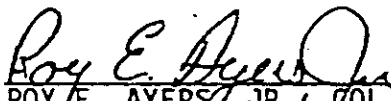
FOR

919 SPECIAL OPERATIONS GROUP

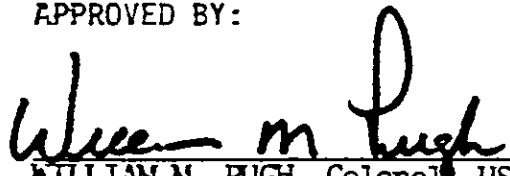
Preparation Date 15 Aug 78

Proposed Start Date 1 Sep 78


PREPARED BY:

  
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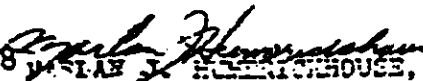
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Prepared in accordance with AFR 19-2 in compliance with the  
National Environmental Policy Act of 1969.

This action does not require an  
environmental statement using  
the criteria of AFR 19-2.

SEP 13 1978

  
WILLIAM J. RUCKELSHAUS, Lt Col, USAF  
Chairman  
AFSC Environmental Protection Committee

DEPARTMENT OF THE AIR FORCE  
AIR FORCE SYSTEMS COMMAND

ENVIRONMENTAL ASSESSMENT

FOR

ALTERATIONS AND ADDITIONS TO THE  
PLATING SHOP IN THE N.E. CORNER OF FACILITY 313  
AND  
THE INDUSTRIAL WASTE TREATMENT PLANT, FACILITY 323  
PATRICK AIR FORCE BASE, FLORIDA  
PA 78-0064

"PREPARED IN ACCORDANCE WITH AFR 19-2 IN COMPLIANCE WITH THE NATIONAL  
ENVIRONMENTAL POLICY ACT OF 1969"

PROPOSED ACTION START DATE: 1 SEPTEMBER 1978

PREPARED BY:

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CHAIRMAN, ENVIRONMENTAL  
PROTECTION COMMITTEE

APPROVED BY:

*William M. Pugh*

WILLIAM M. PUGH  
Colonel, USAF  
Commander  
3 May 1978

This action does not require an  
environmental statement using  
the criteria of AFR 19-2.

*Harlan J. Rumerickhouse*  
HARLAN J. RUMERICKHOUSE, Lt Col, USAF BSC  
Chairman  
AFSC Environmental Protection Committee\*

JUN 14 1978

**APPENDIX B**  
**OVERVIEW OF PATRICK AFB GENERAL PLAN**

## **Overview of Patrick AFB General Plan**

The primary goal of the Patrick AFB General Plan is to provide the base a framework for making effective programming, design, construction, and resource management decisions. Within this framework are a series of specific objectives to correct current land use incompatibilities and Clear Zone violations; to ensure environmental compliance; to evaluate the capacity of the base for future growth; and to maintain approved architectural guidelines. The Patrick AFB General Plan outlines the specific plan goals and objectives as follows:

### **Land use incompatibilities**

1. Separating quality of life and/or housing facilities from industrial and/or aircraft operation complexes.
2. Grouping of compatible activities in a consolidated structure of area.

### **Airfield Clear Zone violations**

1. Identifying inhabited facilities within the Clear Zone for displacement to existing or constructed structures.
2. Prioritize displacement actions consistent with practicality and current fiscal realities.

### **Environmental Compliance**

1. Maintaining compliance with Federal, state, and local environmental regulations.
2. Minimizing disruption and/or exploitation of endangered and threatened species habitat and wetland areas.

### **Evaluate the base's capacity to accommodate future growth**

1. Analyzing existing land use classes for potential area development plans.
2. Assessing the capability of the existing infrastructure.
3. Evaluating new construction based on long-range goals and objectives.
4. Improving traffic circulation.

### **Define and follow architectural design guidelines**

1. Strengthening compliance with current *Patrick AFB Facilities Excellence Plan*.
2. Establishing a desired range of building and site prominence based upon their function and public exposure.
3. Continuing to build and enhance existing facilities that are responsive to a Mediterranean-style of architecture.
4. Continuing to design facilities that are responsive to the climate such as pitched roofs, covered entrances, and large overhangs.
5. Using landscaping to complement facilities, separate functions, and focus views.

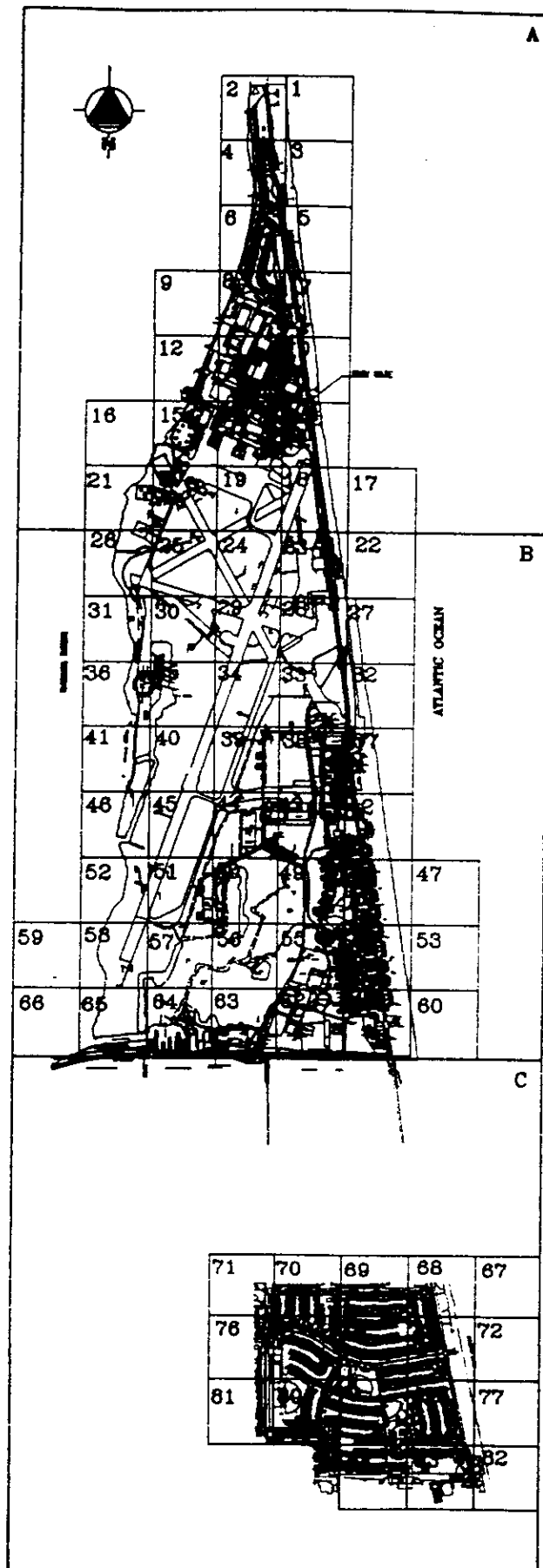
**APPENDIX C**  
**DISCUSSION OF AERIAL PHOTOGRAGHS**

## **Aerial Photography**

As part of the Programmatic Environmental Assessment for Development and Maintenance of Patrick Air Force Base, aerial photographs were taken of the entire base.

The main base and south housing areas were divided into a grid containing 81 squares. Eighty-one black and white aerial photographs at a scale of 1"=50' are provided. Additionally, color infrared aerial photographs were also taken of the base. Color infrared aerial photos at a scale of 1"=100' were completed for the main base and south housing. Grid maps of Patrick AFB illustrating the location of these aerial photographs are included in this appendix.

All aerial photos for this project were turned in to CES/CEV on 12 February 1997.



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**APPENDIX D**  
**APPLICABLE LAWS AND REGULATIONS**



## APPLICABLE FEDERAL LAWS AND REGULATIONS

The following Federal environmental laws and regulations were reviewed to assist on determining significance of environmental impacts under the National Environmental Policy Act. Other applicable state and local laws and regulations were also reviewed in the same context.

**Air Quality** - The **Clean Air Act** seeks to achieve and maintain air quality to protect public health and welfare (42 USC 7401 et seq.). To accomplish this, Congress directed the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS). Primary standards protect public health; secondary standards protect public welfare (e.g., vegetation, property damage, scenic value). The NAAQS address six criteria pollutants: carbon monoxide, nitrogen oxides, lead, sulfur dioxides, ozone, and particulates.

Primary responsibility to implement the Clean Air Act rests with each state. However, each state must submit a state implementation plan (SIP) outlining the strategy for attaining and maintaining the NAAQS within the deadlines established by the act. If the state does not provide a SIP that is acceptable to the EPA, the EPA will provide a SIP which the state is then required to enforce.

The Clean Air Act mandates establishment of performance standards, called New Source Performance Standards, for selected categories of new and modified stationary sources to keep new pollution to a minimum. Under the act, the EPA can establish emission standards for hazardous air pollutants for both new and existing sources. So far, the EPA has set air emission standards for beryllium, mercury, asbestos, vinyl chloride, and other hazardous materials including radioactive materials.

The Clean Air Act also seeks to prevent significant deterioration of air quality in areas where the air is cleaner than that required by the NAAQS. Areas subject to prevention of significant deterioration regulations have a Class I, II, or III designation. Class I allows the least degradation.

Nonattainment policies also exist. A nonattainment area is one where monitoring data or air quality modeling demonstrates a violation of the NAAQS. The most widespread violation of NAAQS is related to ozone. For ozone, urban areas are sorted into five categories: marginal, moderate, serious, severe, and extreme. Additionally, stratospheric ozone and climate protection policies have been established. Interim reductions in the phaseout of chlorofluorocarbons, methyl chloroforms, and halons have been mandated. Hydrochlorofluorocarbons must be phased out of production beginning in 2015, with production elimination set for 2030. State and local governments are required to implement policies which prevent construction or modification of any source that will interfere with attainment and maintenance of ambient standards. A new source must demonstrate a net air quality benefit. The source must secure offsets from existing sources to achieve the air quality benefit.

The Clean Air Act Amendments of 1990 represent the first significant revisions to the Clean Air Act in the past 13 years (42 USC 7401 et seq.). The amendments strengthen and broaden earlier

legislation by setting specific goals and timetables for reducing smog, airborne toxins, acid rain, and stratospheric ozone depletion over the next decade and beyond.

The Clean Air Act Amendments of 1990 contain eight major titles which address various issues of the National Air Pollution Control Program. Title I, Attainment and Maintenance of National Ambient Air Quality Standards, mandates technology-based emissions control for new and existing major air pollution sources. Title II, Mobile Sources, deals with emissions control for motor vehicles in the form of tailpipe standards, use of clean fuels, and mandatory acquisition of clean-fuel vehicles. Hazardous Air Pollutants, Title III, mainly addresses the control of hazardous air pollutants (HAP) and contingency planning for the accidental release of hazardous substances. There are 189 HAPs identified in the new amendments. Title IV, Acid Rain, focuses on the reduction of sulfur dioxide and nitrogen oxides in the effort to eliminate acid rain. Permits, Title V, establishes a nationwide permit program for air pollution sources. The permits will clarify operating and control requirements for affected stationary sources. Stratospheric Ozone Protection, Title VI, restricts the production and use of chlorofluorocarbons, halons, and other halogenated solvents which, when released into the atmosphere, contribute to the decomposition of stratospheric ozone. Title VII, Enforcement, describes civil and criminal penalties which may be imposed for the violation of new and existing air pollution control requirements. Title VIII, Miscellaneous Provisions, similar to Title IV, addresses issues concerned with acid rain reduction.

**Natural Resources - The Endangered Species Act** declares that it is the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species (16 USC 1531 et seq.). Further, the act directs Federal agencies to use their authorities in furtherance of the purposes of the act.

Under the Endangered Species Act, the Secretary of the Interior creates lists of endangered and threatened species. The term endangered species means any species which is in danger of extinction throughout all or a significant portion of its range. The act defines a threatened species as any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

A key portion of the Endangered Species Act for Federal activities is Section 7 consultation. Under Section 7 of the act, every Federal agency must consult with the Secretary of the Interior, U.S. Fish and Wildlife Service (USFWS), to ensure that any agency action (authorization, funding, or execution) is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species.

The **Bald and Golden Eagle Protection Act** establishes penalties for the unauthorized taking, possession, selling, purchase, or transportation of bald or golden eagles, their nests, or their eggs (16 USC 668 et seq.). Any Federal activity that might disturb eagles requires consultation with the USFWS for appropriate mitigation.

Through the **Fish and Wildlife Coordination Act**, Congress encourages all Federal departments and agencies to utilize their statutory and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities, to conserve and promote

conservation of nongame fish and wildlife and their habitats (16 USC 2901 et seq.). Further, the act encourages each state to develop a conservation plan.

The **Fish and Wildlife Coordination Act** requires a Federal department or agency that proposes or authorizes the modification, control, or impoundment of the waters of any stream or body of water (greater than 10 acres), including wetlands, to first consult with the USFWS. Any such project must make adequate provision for the conservation, maintenance, and management of wildlife resources. The act requires a Federal agency to give full consideration to the recommendations of the USFWS and to any recommendations of a state agency on the wildlife aspects of a project.

The **Migratory Bird Treaty Act** protects many species of migratory birds (16 USC 703-712). Specifically, the act prohibits the pursuit, hunting, taking, capture, possession, or killing of such species or their nests and eggs. The act further requires that any affected Federal agency or department must consult with the USFWS to evaluate ways to avoid or minimize adverse effects on migratory birds.

The **Marine Mammal Protection Act** (16 USC 1361 et seq) establishes a moratorium on the taking and importation of marine mammals and marine mammal products. The act also provides for penalties for the use of fishing methods in contravention of any regulations or limitations enacted by governmental agencies to achieve the purposes of the Marine Mammal Act. The Marine Mammal Commission, which was established under this act, reviews laws and international conventions, studies world-wide populations, and makes recommendations to Federal officials concerning marine mammals.

The **National Marine Sanctuaries Act** (16 USC 1431), which is Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, seeks to enhance both public awareness and conservation of the marine environment. The purpose and policies of the act are to identify areas of national significance, to provide coordinated management of these marine areas, to support scientific research of these areas, to enhance public awareness of the marine environment, and to facilitate public use of marine resources when not in conflict with the other policies.

**Cultural Resources** - The **Antiquities Act of 1906** (16 USC 431-433) authorizes the President to designate historic and natural resources of national significance located on Federally owned or controlled land as national monuments. Historic and prehistoric ruins and objects of antiquity located on Federal lands are protected under this act with criminal sanctions against excavation, injury, or destruction.

The **Historic Sites Act of 1935** (16 USC 461-467) establishes the national policy of preservation of historic resources for public use. The act gives the Secretary of the Interior the power to complete historic surveys and to document, evaluate, acquire, and preserve archaeological and historic sites.

The **National Historic Preservation Act of 1966** (16 USC 470-470w-6) directs Federal agencies to assume responsibility for considering historic resources in their activities. Section 106 of this act requires Federal agencies to take into account the effect of undertakings on historic properties. This act also establishes the Advisory Council on Historic Preservation and its authority in implementing

Section 106. The Secretary of the Interior is authorized by this act to expand and maintain the National Register of Historic Places (NRHP) and establishes property nomination procedures.

**Executive Order No. 11593, *Protection and Enhancement of the Cultural Environment***, 3 CFR 154 (1971), reprinted in 16 USC 470, directs Federal agencies to take a leadership role in preserving, restoring, and maintaining the historic and cultural environment. Until the Federal agencies have made efforts to locate, inventory, and nominate properties to the NRHP, they are directed to exercise caution to ensure that potentially qualified Federal properties are not inadvertently transferred, sold, demolished, or substantially altered.

The **Historic and Archaeological Data Preservation Act of 1974** (16 USC 469-469c) directs Federal agencies to notify the Secretary of the Interior when their undertakings may result in irreparable damage to archaeological resources. The agency may undertake recovery, protection, and preservation of data or request the Secretary of the Interior to undertake preservation measures.

The **American Indian Religious Freedom Act of 1978** (42 USC 1996) directs managers of Federally owned or controlled lands to act in such a way as to protect and preserve American Indian access to sacred lands and their rights to worship in their traditional manner. The purpose of this act is to reaffirm American Indian rights of religious freedom guaranteed by the First Amendment of the U.S. Constitution.

The **American Indian Graves Protection and Repatriation Act** (25 USC 3001-3013) requires any Federal, state, or local agency, or institutions, such as museums, which receive Federal funds to document American Indian human remains and cultural items within their collections and notify all Indian Tribes and Native Hawaiian organizations that are or are likely to be affiliated with such holdings. Museums and Federal agencies are also required to provide an opportunity for the repatriation of appropriate human remains. The act stipulates that Federal agencies are responsible for ensuring that these requirements are fulfilled for all collections from their lands.

**General** - The **National Environmental Policy Act (NEPA)** (42 USC 4321 et seq.) is the basic United States charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. NEPA contains "action-forcing" provisions to make sure that Federal agencies act according to the letter and the spirit of the act. NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

The Council on Environmental Quality Regulations for Implementing the Procedural Provision of the NEPA (40 CFR 1500-1508) are issued pursuant to NEPA; the Environmental Quality Improvement Act of 1970, as amended (42 USC 4371 et seq.); Section 309 of the Clean Air Act, as amended (42 USC 7609); and Executive Order 11514, *Protection and Enhancement of Environmental Quality* (as amended by Executive Order 11991). The purpose of the regulations is

to provide direction to Federal agencies so they understand how to comply with the procedures and achieve the goals of the NEPA process.

***Hazardous Materials and Waste*** - Under the **Resource Conservation and Recovery Act (RCRA)**, Congress declares the national policy of the United States to be, whenever feasible, the reduction or elimination, as expeditiously as possible, of hazardous waste (42 USC 6901 et seq.). Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.

RCRA defines waste as hazardous through four characteristics: ignitability, corrosivity, reactivity, or toxicity. Once defined as a hazardous waste, RCRA establishes a comprehensive cradle-to-grave program to regulate hazardous waste from generation through proper disposal or destruction.

RCRA also establishes a specific permit program for the treatment, storage, and disposal of hazardous waste. Both interim status and final status permit programs exist.

Any underground tank containing hazardous waste is also subject to RCRA regulation. Under the act, an underground tank is one with 10 percent or more of its volume underground. Underground tank regulations include design, construction, installation, and release-detection standards.

RCRA defines solid waste as any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-liquid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities.

To regulate solid waste, RCRA provides for the development of state plans for waste disposal and resource recovery. RCRA encourages and affords assistance for solid waste disposal methods that are environmentally sound, maximize the utilization of valuable resources, and encourages resource conservation. RCRA also regulates mixed wastes. A mixed waste contains both a hazardous waste and radioactive component.

**The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** - commonly known as Superfund - provides for funding, cleanup, enforcement authority, and emergency response procedures for releases of hazardous substances into the environment (42 USC 9601 et seq.).

CERCLA covers the cleanup of toxic releases at uncontrolled or abandoned hazardous waste sites. By comparison, the principal objective of RCRA is to regulate active hazardous waste storage, treatment, and disposal sites to avoid new Superfund sites. RCRA seeks to prevent hazardous releases; a release triggers CERCLA.

The goal of the CERCLA-mandated program (Superfund) is to clean up sites where releases have occurred or may occur. A trust fund supported, in part, by a tax on petroleum and chemicals supports the Superfund. The Superfund allows the Government to take action now and seek reimbursement later.

CERCLA also mandates spill-reporting requirements. The act requires immediate reporting of a release of a hazardous substance (other than a Federally permitted release) if the release is greater than or equal to the reportable quantity for that substance.

Title III of the **Superfund Amendments and Reauthorization Act (SARA)**, known as the **Emergency Planning and Community Right to Know Act of 1986** (42 USC 11001 et seq.), requires immediate notice for accidental releases of hazardous substances and extremely hazardous substances; provision of information to local emergency planning committees for the development of emergency plans; and availability of Material Safety Data Sheets, emergency and hazardous chemical inventory forms, and toxic release forms.

The Emergency Planning and Community Right to Know Act of 1986 requires each state to designate a state emergency response commission. In turn, the state must designate emergency planning districts and local emergency planning commissions (42 USC 11001 et seq.). The primary responsibility for emergency planning is at the local level.

The **Toxic Substances Control Act (TSCA)** authorizes the administrator of the EPA broad authority to regulate chemical substances and mixtures which may present an unreasonable risk of injury to human health or the environment (15 USC 2601 et seq.).

Under TSCA the EPA may regulate a chemical when the administrator finds that there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture poses or will pose an unreasonable risk of injury to health or the environment.

Under TSCA the EPA administrator, upon finding of unreasonable risk, has a number of regulatory options or controls. The EPA's authority includes total or partial bans on production, content restrictions, operational constraints, product warning statements, instructions, disposal limits, public notice requirements, and monitoring and testing obligations.

The TSCA Chemical Substance Inventory is a data base support for assessing human health and environmental risks posed by chemical substances. As such, the inventory is not a list of toxic chemicals. Toxicity is not a criterion used in determining the eligibility of a chemical substance for inclusion on the inventory.

The **Transportation Safety Act of 1974**, subtitled the Hazardous Materials Transportation Act (49 USC 1801-1819), centralized in the Department of Transportation the authority to promulgate and enforce hazardous materials regulations for all modes of transportation. These regulations may govern any safety aspect of transporting hazardous materials, including the packing, repacking, handling, labeling, marking, placarding, and routing (other than with respect to pipelines).

Other areas subject to regulation by the Department of Transportation are the manufacturing, fabricating, marking, maintenance, reconditioning, repairing, and testing of any package or container which is certified or sold for use in transporting hazardous materials. The registration of applicable personnel involved with these operations may also be required and regulated.

The law authorized the establishment of criteria for the handling of hazardous materials. This criteria may include the designation of a minimum number of personnel to be involved in hazardous materials shipments, the establishment of minimum qualifications and training levels for such personnel, requirements for inspection, specifications for equipment to be used for the detection of hazardous materials, and the establishment of a system of monitoring safety assurance procedures for the transportation of hazardous materials.

The **Pollution Prevention Act of 1990** (42 USC 13101 et seq.) declares it to be national policy of the United States that pollution should be prevented or reduced at the source through cost-effective changes in production, operation, and raw materials use whenever feasible. Pollution that cannot be prevented should be recycled, or if it cannot be recycled then viable treatment techniques may be used whenever feasible. Disposal or other means of release into the environment should be employed only as a last resort. The Pollution Prevention Act states that all pollution control measures and/or procedures use should be conducted in an environmentally safe manner.

**Health and Safety** - The purpose of the **Occupational Safety and Health Act** (PL 91-596) is to assure, so far as possible, every working man and woman in the nation safe and healthful working conditions and to preserve human resources.

The act further provides that each Federal agency has the responsibility to establish and maintain an effective and comprehensive occupational safety and health program that is consistent with national standards. Each agency must:

- provide safe and healthful conditions and places of employment;
- acquire, maintain, and require use of safety equipment;
- keep records of occupational accidents and illnesses; and
- report annually to the Secretary of Labor.

Finally, the Superfund Amendments and Reauthorization Act (42 USC 9601 et seq.) requires the Occupational Safety and Health Administration to issue regulations specifically designed to protect workers engaged in hazardous waste operations. The hazardous waste rules include requirements for hazard communication, medical surveillance, health and safety programs, air monitoring, decontamination, and training.

**Land Use** - The **Coastal Barrier Resources Act of 1983** is designed to curtail Federal subsidization of development on fragile coastal barriers (16 USC 3501). The act prohibits designated Federal expenditures and financial assistance, including flood insurance, for development within the coastal barrier system.

The **Coastal Zone Management Act of 1972** (16 USC 1451 et seq.) is designed to preserve and develop the resources of the coastal zone. The act seeks to do so by providing funds to states that develop and implement programs for management of land and water uses consistent with the act's standards.

**Executive Order 11988** (amended by Executive Order 12148) was designed to improve Federal policy on floodplain management. The order required Federal agencies to avoid direct or indirect

support of floodplain development when there is a "practicable" alternative. The order applies to acquisition, disposal, or management of Federal land; undertaking, financing, or assisting construction projects; and conducting activities affecting land use, including planning, regulating, and licensing.

**Executive Order 11990** was designed to prevent Federal agencies from causing or encouraging unnecessary destruction of wetland areas.

The **Farmland Protection Act of 1981** (7 USC 4201 et seq.) is designed to require Federal agencies to consider alternatives to projects that would convert farmlands to nonagricultural use. The reach of the act is limited to procedures to assure that the actions of Federal agencies do not cause U.S. farmland to be irreversibly converted to nonagricultural uses in case in which other national interests do not override the importance of the protection of farmland not otherwise outweigh the benefits of maintaining farmland resources.

The **Federal Land Policy and Management Act of 1976** (43 USC 1701 et seq.) repeated a number of public land statutes and instituted a number of new programs including review of all lands managed by the Bureau of Land Management for possible designation by Congress as "wilderness," including a stipulation that the Federal agency must manage the public lands so as not to impair their wilderness potential.

The **Wilderness Act of 1964** (16 USC 1131-1136) provided Congressional protection of several named wilderness areas and also established a National Wilderness Preservation System for inclusion of lands within national forests, national parks, and national wilderness refuges.

**Noise** - The **Federal Noise Control Act** directs all Federal agencies to the fullest extent within their authority to carry out programs within their control in a manner that furthers the promotion of an environment free from noise that jeopardizes the health or welfare of any American (42 USC 4901 et seq.). The act requires a Federal department or agency engaged in any activity resulting in the emission of noise to comply with Federal, state, interstate, and local requirements respecting control and abatement of environmental noise.

**Water Resources** - The objective of the **Clean Water Act** is to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 USC 1251 et seq.).

The Clean Water Act prohibits any discharge of pollutants into any public waterway unless authorized by a permit (33 USC 1251 et seq.). Under the Clean Water Act the National Pollutant Discharge Elimination System (NPDES) permit establishes precisely defined requirements for water pollution control.

NPDES permit requirements typically include effluent limitations (numerical limits on the quantity of specific pollutants allowed in the discharge); compliance schedules (abatement program completion dates); self-monitoring and reporting requirements; and miscellaneous provisions governing modifications, emergencies, etc.



Under the Clean Water Act the EPA is the principal permitting and enforcement agency for NPDES permits. This authority may be delegated to the states. At this writing the State of Florida does not have NPDES permitting authority.

The Clean Water Act requires all branches of the Federal government involved in an activity that may result in a point-source discharge or runoff of pollution to U.S. waters to comply with applicable Federal, interstate, state, and local requirements.

The **Safe Drinking Water Act** sets primary drinking water standards for owners or operators of public water systems and seeks to prevent underground injection that can contaminate drinking water sources (42 USC 300f et seq.). Under the Safe Drinking Water Act, the EPA has adopted National Primary Drinking Water Regulations (40 CFR Part 141) that define maximum contaminant levels in public water systems. In addition, under the Safe Drinking Water Act the EPA may adopt a regulation that requires the use of a treatment technique in lieu of a maximum contaminant level. The EPA may delegate primary enforcement responsibility for public water systems to a state.

**APPENDIX E**  
**PATRICK AFB COMPONENT PLANS**

COMPONENT PLANS OF THE GENERAL PLAN FOR PATRICK AFB

Component Plan Title	Description
Integrated Natural Resource Management Plan	An inventory of natural resources and procedures for managing and conserving soil, native habitats, beaches, fish, and wildlife. Light management policies to minimize interference with sea turtle nesting and hatching behavior.
OPLAN 19-14	Guidelines for collection, management, transportation and disposition of hazardous wastes generated by the 45th Space Wing.
Lead-Based Paint Management Plan	Provide effective guidance to manage lead-based paint at Patrick AFB.
Asbestos Management Plan	Provides organizational responsibilities and procedures that will protect base personnel, their families, and other occupants of site facilities from potential exposures to airborne asbestos fibers.
Cultural Resources Management Plan	Any facility that has historical significance requires protection under the National Historic Preservation Act. Over 70 facilities at Patrick AFB have been determined to have historical significance.

