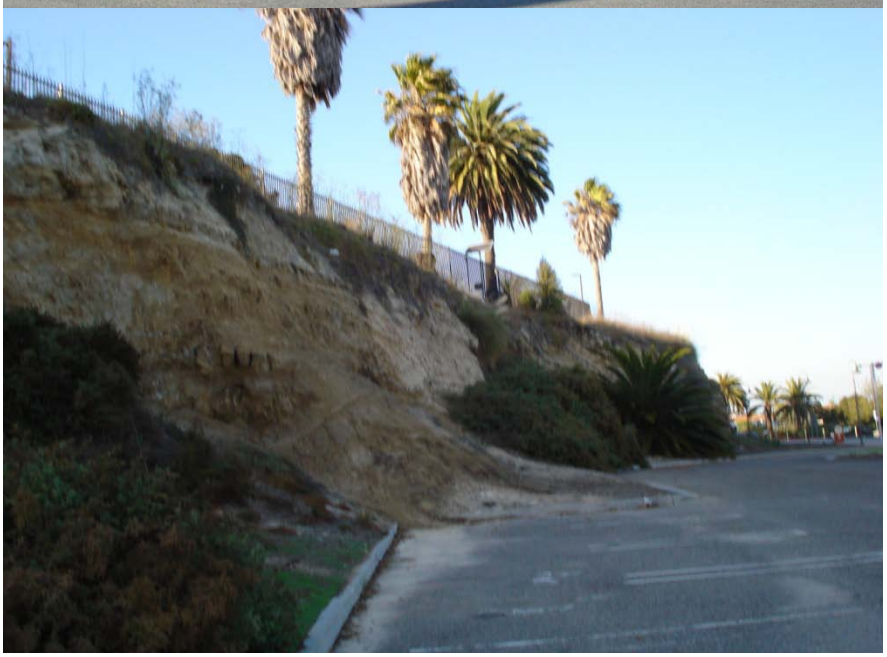
ENVIRONMENTAL ASSESSMENT FOR SLOPE STABILIZATION PROJECTS AT FORT MACARTHUR, SAN PEDRO, CALIFORNIA



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FINDING OF NO SIGNIFICANT IMPACT
FOR SLOPE STABILIZATION PROJECTS
AT FORT MACARTHUR, SAN PEDRO, CALIFORNIA
April 2012

Introduction: An Environmental Assessment (EA) was prepared to analyze the potential for significant environmental impacts associated with upcoming slope stabilization projects at Fort MacArthur, San Pedro, California. An east-facing bedrock bluff approximately 5,000 feet (ft) long, ranging from approximately 10 to 40 ft high, is located along the eastern border of the Fort. Portions of the coastal bluff are known to have been marginally stable to unstable. Stability of the bluff is the subject of several geological and geotechnical investigations spanning the past three decades. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The United States Air Force (USAF) divided the bluff into three defined areas for a phased slope stabilization effort: Phase I/II, Phase III, and Phase IV Slope. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area. The Phase I/II area is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half of the bluff alignment). The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope area consists of the remaining slope, approximately 2,700 ft.

The EA was prepared in accordance with the National Environmental Policy Act (NEPA) (42 US Code [USC] 4321 et seq.); Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508); Air Force Instruction 32-7061, *The Environmental Impacts Analysis Process* (32 CFR 989); Air Force Instruction 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP); and the California Environmental Quality Act (CEQA). This Finding of No Significant Impact (FONSI) is a document that briefly states why the Proposed Action will not significantly affect the environment and that an Environmental Impact Statement (EIS) will not be prepared.

Description of the Proposed Action: The Proposed Action includes the remaining slope stabilization efforts in the Phase III and Phase IV Slope areas. Completion of this work would be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope consists of the remaining area, approximately 2,700 ft.

There are many mitigation measures that are effective in stabilizing slopes. The USAF and its consultants identified the most effective remedial measures that can be economically constructed within the physical and property boundary constraints for each phase of the stabilization effort. These mitigation approaches include slope grading, dewatering, earthwork, structural stabilization, and material strengthening.

Alternatives Considered: The Alternative One (Proposed Action) and a No Action Alternative were evaluated for their potential direct, indirect, and cumulative impacts on the human environment. The Proposed Action is the USAF's preferred alternative.

The CEQ regulations implementing the NEPA require evaluation of the No Action Alternative, which serves as a baseline or benchmark to be used to compare the Proposed Action and Alternatives. Under the No Action Alternative, the USAF would not conduct any slope stabilization activities. The slopes would continue to experience failures, resulting in potential safety and security risks.

Anticipated Environmental Effects: Based on information gathered and presented in the EA, it has been determined that implementation of the Proposed Action would have no significant direct, indirect, or cumulative adverse impacts on the environment. Adverse impacts associated with implementing the Proposed Action would be local in context with the exception of air quality and transportation, which although regional in context, would still only constitute a minor adverse impact due to very low levels of anticipated emissions and increased traffic. Likewise, the intensity of potential adverse impacts is anticipated to be less than significant for all resources evaluated. Consequently, the overall environmental effect of implementing the Proposed Action is anticipated to be less than significant.

30-Day Public and Agency Review Period: The EA and a draft copy of this FONSI were made available to the general public and applicable government agencies for review and comment during a 30-day period that commenced with the publication of a Notice of Availability in *The Daily Breeze* and *Long Beach Press Telegram* newspapers on February 12, 2012. Copies of the EA along with instructions for submitting comments were available at the San Pedro Regional Library, 931 South Gaffey Street, San Pedro, California 90731; and on the internet. Copies of the documents were also sent directly to applicable agencies for review.

Public and Agency Comments Received: No comments from the public or government agencies were received during the 30-day public comment period.

Findings: Based on the analysis contained in the EA, I have concluded that implementation of the Proposed Action would not constitute a major federal action significantly affecting the quality of the human environment. Consequently, implementation of the Proposed Action does not require the preparation of an EIS.

Approved By:

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04 April 2012

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Colonel, USAF
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Date

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HOW THIS ENVIRONMENTAL ASSESSMENT IS ORGANIZED

The EXECUTIVE SUMMARY briefly describes the Proposed Action and Alternatives. Impacts and conclusions are summarized.

ACRONYMS AND ABBREVIATIONS

SECTION 1 PURPOSE AND NEED discusses the purpose and need for the Proposed Action, the regulatory background surrounding this project, and the scope of this Environmental Assessment.

SECTION 2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES discusses the Proposed Action and alternatives addressed in this Environmental Assessment.

SECTION 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES describes the existing environment within the Region of Influence. It also provides a comparison of environmental consequences associated the alternative. Conservation and mitigation measures are also addressed in this section.

SECTION 4 FINDINGS AND CONCLUSIONS

SECTION 5 REFERENCES provides bibliographical information for sources cited in the text of this Environmental Assessment.

SECTION 6 LIST OF PREPARERS AND CONTRIBUTORS

SECTION 7 DISTRIBUTION LIST

SECTION 8 LIST OF INDIVIDUALS AND AGENCIES CONSULTED

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ENVIRONMENTAL ASSESSMENT

SLOPE STABILIZATION PROJECTS AT FORT MACARTHUR, SAN PEDRO, CALIFORNIA

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) was prepared to analyze the potential environmental effects associated with upcoming slope stabilization projects at Fort MacArthur, California.

Fort MacArthur contains approximately 93 acres of federal land managed by the Los Angeles Air Force Base. The Fort is located in San Pedro, California, approximately 25 miles south of downtown Los Angeles. The Fort is surrounded primarily by residential areas to the north, west, and south, with some scattered commercial development. The Port of Los Angeles and Cabrillo Marina are on its eastern border.

The Proposed Action, which is the USAF's preferred alternative, includes the slope stabilization efforts in the Phase III (South East) and Phase IV (North East) Slope areas. Completion of this work would be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the southern half of the bluff alignment. The Phase IV Slope consists of the remaining area, approximately 2,700 feet.

The purpose of the Proposed Action is to stabilize the slopes located along the eastern boundary of Fort MacArthur. The stabilization is needed to ensure the safety of residents living in Fort MacArthur's housing areas and the general public that uses the sidewalk, roads, and parking areas at the base of the slopes. Additionally, slope stabilization is necessary to maintain the Installation's physical security requirements.

In accordance with the Council on Environmental Quality (CEQ) regulations implementing the NEPA, the No Action Alternative must be discussed and serves as a baseline or benchmark to be used to compare with the Proposed Action and Alternatives. Under the No Action Alternative, the USAF would not conduct any slope stabilization activities. The slopes would continue to experience failures, resulting in potential safety and security risks.

No significant impacts are anticipated to result from implementing the Proposed Action. The slope stabilization would have minor adverse impacts to regional air quality, transportation, and the noise environment. However, these effects would be less than significant. Likewise, the impacts for all other resources evaluated are anticipated to be less than significant. Implementation of the Proposed Action would also have direct, beneficial impacts to topography, geology, and soils; biological resources; visual resources; and health and human safety. A summary of potential impacts and measures to minimize adverse impacts of the Proposed Action is provided in Table EX-1.

Based on the analysis contained herein, it is the conclusion of this EA that the Proposed Action or the No Action Alternative, would not constitute a major federal action with significant impact on human health or the environment and that a Finding of No Significant Impact for the Proposed Action should be issued to conclude the NEPA documentation process. Table EX-1 lists a summary of potential impacts and measures to minimize them.

Table EX-1. Summary of Potential Impacts and Measures to Minimize Impacts for the Proposed Action

Resource Area	Level of Impact: Significant	Level of Impact: Less than Significant	Level of Impact: No Impact	Summary of Potential Impacts and Measures to Minimize Impacts
Land use		X		There would be no significant impacts to land use as a result of implementing the Proposed Action. Stabilization would improve the current condition of the slopes.
Topography, Geology, and Soils		X		No significant impacts are anticipated as a result of implementing the Proposed Action. Minor, short-term negative impacts to soils may occur during stabilization activities. The USAF would obtain applicable permits and implement best management practices (BMPs) during stabilization to minimize the potential for soil erosion and sediment runoff on the site. Overall, stabilization would improve the condition of the slopes and reduce the potential for further erosion.
Hydrology and Water Resources		X		Implementation of the Proposed Action is not anticipated to result in any significant impacts to surface water or groundwater. There are no surface waters located on the slopes and they are not located within a floodplain. The USAF would comply with the applicable regulations, permits, and plans to prevent oil products and hazardous substances from reaching waterways during stabilization activities. The USAF would implement BMPs during stabilization to minimize the impact to water resources in the area. Overall, stabilization would result in positive impacts to water resources by reducing risk of eroded soils being washed down stormwater sewer culverts.
Biological Resources and Wetlands		X		No significant impacts to biological resources or wetlands are anticipated as a result of implementing the Proposed Action. There are no threatened and endangered (T&E) species or critical habitat known to occur on the slopes. There are no wetlands on the slopes. Implementation of BMPs during stabilization activities would minimize the potential impacts to biological resources. Overall, positive impacts would be expected due to the removal of non-native plant species and replacement with native species.
Cultural Resources			X	No impacts to cultural resources are anticipated as a result of implementing the Proposed Action. There are no permanent structures on the slopes. The slopes consist mainly of fill material, so it is unlikely that archaeological resources are located within the non-native soils. An Installation-wide Draft Phase I Archaeological Survey was completed in March 2011 and determined that there is little to no potential for buried archaeological resources to be present at Fort MacArthur.
Air Quality		X		Air emissions from stabilization activities are anticipated to result in a less than significant, adverse impact to local and regional air quality. Implementation of BMPs during stabilization activities would minimize potential adverse impacts to air quality.
Greenhouse Gases		X		Greenhouse gas emissions from stabilization activities are anticipated to result in a less than significant, adverse impact to local and regional air quality. Implementation of BMPs during stabilization activities would minimize potential adverse impacts to greenhouse gases.
Visual Resources		X		The Proposed Action would not result in any significant impacts to visual resources. Minor, short-term negative impacts would be expected during stabilization activities, due to construction equipment on site and temporary removal of vegetation to complete stabilization activities however, these impacts would be temporary. The Proposed Action would result in long-term beneficial impacts to visual resources as the slopes are stabilized and re-vegetated.

Resource Area	Level of Impact: Significant	Level of Impact: Less than Significant	Level of Impact: No Impact	Summary of Potential Impacts and Measures to Minimize Impacts
Noise		X		Minor, short-term adverse impacts are expected to result during stabilization activities. Construction-related noise impacts would be temporary and would cease once slope stabilization was complete.
Socioeconomics and Environmental Justice			X	No impacts are anticipated to result from implementation of the Proposed Action. No environmental justice impacts are expected to occur.
Transportation and Circulation		X		Minor, short-term transportation impacts are anticipated during slope stabilization activities. Temporary road closures may be necessary during stabilization to allow construction equipment room to operate, while maintaining a safe perimeter around stabilization activities. However, these impacts are anticipated to be less than significant.
Utilities		X		Implementation of the Proposed Action is not expected to result in any adverse impacts to the utilities. Prior to commencing any ground-disturbing activities, any utility lines located along the slopes would be identified and properly marked in accordance with local regulations. Any stabilization activities that would affect or interrupt utility services would be coordinated with the applicable utility provider. Impacts would be temporary and are expected to be less than significant.
Hazardous and Toxic Substances		X		Minor, short-term impacts would result from the use of construction equipment during stabilization activities. All hazardous materials and waste would be handled in accordance with local, state, and federal regulations. Stabilization-related impacts would be minor and temporary in nature. No long-term impacts are anticipated.
Human Health and Safety		X		No significant adverse impacts to human health and safety would be expected. Implementation of BMPs during stabilization activities would minimize potential adverse impacts. All construction personnel would be properly trained and would comply with all applicable federal, state, and local health and safety regulations during all stabilization activities. Long-term, beneficial impacts are anticipated once stabilization is complete. Stabilization would significantly reduce and/or eliminate the risk of human injury or safety hazards from slope failures.

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACM	asbestos-containing material
af	acre-feet
AIRFA	American Indian Religious Freedom Act
AMEC	AMEC Geomatrix, Inc.
amsl	above mean sea level
AQMP	Air Quality Management Plan
ARPA	Archaeological Resources Protection Act
BGEPA	Bald and Gold Eagle Protection Act
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS	California's Ambient Air Quality Standards
CARB	California Air Resources Board
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CWA	Clean Water Act
cy	cubic yard
CZMA	Coastal Zone Management Act

dB	decibel
dBA	A-weighted decibel
DNL	day-night average sound level
DoD	Department of Defense
DPM	Diesel Particulate Matter
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
ft	feet
GHGs	Greenhouse Gases
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
LAAFB	Los Angeles Air Force Base
LBP	lead-based paint

mg/kg	milligrams per kilogram
MSE	Mechanically Stabilized Earth
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOA	Notice of Availability
NOI	Notice of Intent
NRHP	National Register of Historic Places
O_3	ozone
Pb	lead
PCB	polychlorinated biphenyl
pCi/L	picocuries per Liter
PIF	Partners-in-Flight
$PM_{2.5}$	particulate matter, very fine
PM_{10}	particulate matter, fine
POLA	Port of Los Angeles
PSD	Prevention of Significant Deterioration

ROI	Region of Influence
SAIA	Sikes Act Improvement Act
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
T&E	Threatened & Endangered
TACs	Toxic Air Contaminants
U.S.	United States
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
USC	United States Code

1.0 INTRODUCTION

This Environmental Assessment (EA) analyzes the potential environmental effects associated with upcoming slope stabilization projects at Fort MacArthur, California.

Fort MacArthur contains approximately 93 acres of federal land managed by the Los Angeles Air Force Base (LAAFB). The Fort is located in San Pedro, California, approximately 25 miles south of downtown Los Angeles (Figure 1-1). It is bordered by W. 23rd Street and W. Old Fort Road to the north, Stephen M. Wright Drive to the south, Pacific Avenue to the west, and Shoshonean Road to the east. The Fort is surrounded primarily by residential areas to the north, west, and south, with some scattered commercial development. The Port of Los Angeles (POLA) and Cabrillo Marina are on its eastern border. Fort MacArthur is used primarily to provide housing for United States Air Force (USAF) and other military personnel and contains roadways, parking lots, parks, playgrounds, and single and double story housing units and related structures. More than 70 acres of the Installation are covered by asphalt, concrete, or built structures. The remaining land is predominately landscaped with a few areas of exposed soil.

An east-facing bedrock bluff approximately 5,000 feet (ft) long, ranging from approximately 10 to 40 ft high, is located along the eastern border of the Fort. Before grading for Shoshonean Road occurred, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of fill material, which was likely located directly against eroded portions of the bluff (USAF 2009a).

Portions of the coastal bluff are known to have been marginally stable to unstable. Stability of the bluff is the subject of several geological and geotechnical investigations spanning the past three decades. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The USAF divided the bluff into three defined areas for a phased slope stabilization effort: Phase I/II, Phase III, and Phase IV Slope. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area. The Phase I/II area is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half of the bluff alignment). The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope area consists of the remaining slope, approximately 2,700 ft.

Figure 1-1. Regional Location Map

1.1 Purpose and Need for Action

The purpose of the Proposed Action is to stabilize the slopes located along the eastern boundary of Fort MacArthur. The stabilization is needed to ensure the safety of residents living in Fort MacArthur's housing areas and the general public that uses the sidewalk, roads, and parking areas at the base of the slopes. Additionally, slope stabilization is necessary to maintain the Installation's physical security requirements.

1.2 Regulatory Framework

Congress enacted the National Environmental Policy Act (NEPA) in 1969 with accompanying regulations requiring federal agencies to consider potential impacts before taking actions that may impact the environment. The NEPA process is not intended to fulfill the specific requirements of other environmental statutes and regulations. However, the process is designed to provide the decision maker with an overview of the major environmental resources that may be affected, the interrelationship of these components, and potential impacts to the natural and human environment. Hence, the NEPA process:

- Integrates other environmental processes;
- Summarizes technical information;
- Documents analyses and decisions;
- Interprets technical information for the decision-maker and public;
- Helps identify potential alternatives to the Proposed Action; and
- Assists the decision-maker in selecting a preferred action.

NEPA is intended to be incorporated in the early stages of the decision making process to ensure that planning and decisions reflect environmental values, avoid delays later in the process, and minimize potential impacts to the natural and human environment.

In addition to NEPA, this EA has been prepared in compliance with the following USAF regulations and guidance documents that provide the framework for environmental analyses:

- Air Force Instruction 32-7061, as promulgated in 32 Code of Federal Regulations (CFR) Part 989, *The Environmental Impacts Analysis Process*, is designed to provide policy, responsibilities, and procedures for integrating environmental considerations into Air Force planning and decision making. It establishes criteria for determining which review category a particular action falls into, and thus, what type of environmental document should be prepared. If the Proposed Action is not covered adequately in any existing EA or Environmental Impact Statement (EIS) and cannot be categorically excluded from NEPA analysis, then a separate NEPA analysis must be completed prior to the commitment of resources (personnel, funding, or equipment) to the Proposed Action;

- Air Force Instruction 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP), describes USAF responsibilities, policies, and procedures to notify relevant federal, state, and local agencies of the Proposed Action. The USAF identifies potential stakeholders, planning requirements, and resource areas of interest through the IICEP process and uses this information to assist in evaluating the potential environmental impacts associated with the Proposed Action.

- California Environmental Quality Act (CEQA) is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and avoid or mitigate those impacts, if feasible. As a federal agency, the USAF is not required to conduct a CEQA analysis; however, there are many similarities between CEQA and NEPA and as such, much of the information contained in this EA will closely reflect the provisions outlined in CEQA. The USAF has elected to adopt the agency review guidelines of CEQA and will follow the established agency review process using the California State Clearinghouse for distribution.

1.3 Use of this Environmental Assessment

This EA analyzes and documents the potential environmental effects associated with the Proposed Action and Alternative, relative to the No Action Alternative. The USAF will use this EA to determine if a Finding of No Significant Impact (FONSI) is appropriate or if a Notice of Intent (NOI) to prepare an EIS should be issued for the slope stabilization project at Fort MacArthur.

1.4 Public Participation Opportunities

In keeping with established USAF policy to provide a transparent and open decision-making process, this EA and draft decision document will be made available to applicable federal and local agencies and the general public for review and comment. Officials and representatives from these offices will be coordinated with throughout the EA preparation, as necessary. A Notice of Availability (NOA) will be published in *The Daily Breeze* and *Long Beach Press Telegram* newspapers and a copy of the EA will be made available to the general public on the Internet and at the following library:

San Pedro Regional Library
931 South Gaffey Street
San Pedro, California 90731

Comments must be postmarked within 30 days of the publishing date of the NOA to be considered during the NEPA process. Comments should be submitted to:

Ms. Elizabeth Farm, 61 CELS
Environmental Department Manager
Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245
Phone: (310) 653-5496
Fax: (310) 653-5502
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A final decision document in the form of a FONSI or a NOI to complete an EIS will be issued upon completion of the 30-day review period.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Two alternatives are considered in this EA: Alternative One (Proposed Action) and the No Action Alternative.

2.1 Alternative One (Proposed Action)

The bluff spanning Fort MacArthur's eastern boundary is divided into three phases: Phase I/II, Phase III, and the Phase IV Slope (Figure 2-1). The bluff is approximately 5,000 feet (ft) long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road occurred, the bluff is estimated to have been about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of fill material, which was likely located directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s (USAF 2009a). Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half).

The Proposed Action, which is the USAF's preferred alternative, includes the remaining slope stabilization efforts in the Phase III and Phase IV Slope areas. Completion of this work would be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope consists of the remaining area, approximately 2,700 ft.

There are many mitigation measures that are effective in stabilizing slopes. In general, these mitigation measures either reduce the forces tending to cause slope movement or increase the forces resisting movement (USAF 2009a). The USAF and its consultants identified the most effective remedial measures that can be economically constructed with the physical and property boundary constraints for each phase of the stabilization effort. Mitigation strategies were evaluated based on the following criteria: (1) reliability and effectiveness; (2) cost control; (3) site constraints compatibility; (4) constructability; (5) aesthetic appeal; and (6) low long-term maintenance (USAF 2009a).

Various mitigation approaches were identified and evaluated using the criteria previously listed. These mitigation approaches include slope grading, dewatering, earthwork, structural stabilization, and material strengthening. Consideration of the site conditions and constraints under the specified criteria resulted in the selection of the following three stabilization approaches:

- Soil nailing with a manicured shotcrete face;
- Constructing a Mechanically Stabilized Earth (MSE) wall where the toe of the wall is located at the property line; and
- Constructing a MSE wall where the toe of the wall is located 21 feet from the curb.

Figure 2-1. Alternative One (Proposed Action) Site Map

Of the three previously listed approaches, the USAF elected to proceed with slope stabilization using the soil nailing method, in accordance with the recommendations contained in the *Geologic and Geotechnical Investigation Report of Fort MacArthur Air Force Base – Phase III,* prepared by AMEC Geomatrix, Inc., and dated May 28, 2009 (USAF 2011). The AMEC Report generated a conceptual project plan based on site conditions present at the time the report was completed. Once a contractor is identified by the USAF to complete the slope stabilization project, it will be the Contractor's responsibility to develop a project design based on the conceptual design in the AMEC Report.

Soil nailing stabilization consists of placing and grouting steel reinforcement bars into holes drilled into the slope, creating a composite mass similar to a gravity wall. This process also results in higher than normal force and shear resistance along the potential slip surface. Soil nail walls typically require trimming of the existing slope with top down installation of the soil nails. Shotcrete facing may be applied post-construction to minimize erosion and improve surface stability (USAF 2009a).

The 2009 AMEC Report identified the following soil nailing advantages:

- It can effectively stabilize the subject slopes with minimal impact to the existing improvements at the top of the slope;
- It can be constructed entirely within the Fort MacArthur property boundary;
- No soil improvement is necessary at the base of the bluff because soil nailing does not require construction upon any of the problematic fill soils;
- It requires minimal export of diatomaceous earth materials;
- It is cost-effective relative to other alternative methods considered; and
- The shotcrete facing elements can be manicured to look similar to the natural bluff, thereby increasing the aesthetic appeal (USAF 2009a).

2.2 No Action Alternative

The No Action Alternative is required under the Council on Environmental Quality (CEQ) regulations implementing the NEPA, and serves as a baseline or benchmark to be used to compare with the Proposed Action and Alternatives. Under the No Action Alternative, the USAF would not conduct any slope stabilization activities. The slopes would continue to experience failures, resulting in potential safety and security risks.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This section describes conditions of, and possible impacts to, environmental resources potentially affected by the Proposed Action and alternatives. The description of existing conditions provides a baseline understanding of the resources from which any environmental changes that may result due to the implementation of an alternative can be identified and evaluated. Following the existing conditions, potential changes or impacts to the resources are described as environmental consequences. As stated in CEQ regulations, 40 CFR 1508.14, the "human environment potentially affected" is interpreted comprehensively to include the natural and physical resources and the relationship of people with those resources. The term "environment" as used in this EA encompasses all aspects of the physical, biological, social and cultural surroundings. In compliance with the NEPA and CEQ regulations, the description of the affected environment focuses only on those aspects potentially subject to impacts. Finally, cumulative impacts are addressed, as defined by CEQ regulations 40 CFR 1500-1508 as those impacts attributable to the proposed action combined with other past, present, or reasonably foreseeable future impacts regardless of the source.

3.2 Land Use

3.2.1 Affected Environment

Fort MacArthur contains approximately 93 acres of federal land managed by the LAAFB. The Fort is located in San Pedro, California, approximately 25 miles south of downtown Los Angeles.

The land encompassing Fort MacArthur has served as a military reservation since the mid-19th century. In 1914 the United States (U.S.) Army established the reservation as an Army Post naming it Fort MacArthur, after Lieutenant General Arthur MacArthur, Jr. At that time the Fort included three distinct geographic areas: the Lower Reservation, Middle Reservation, and Upper Reservation. Over time, as mission requirements changed, the Upper and Lower Reservations were transferred out of military ownership and redeveloped. The area that makes up Fort MacArthur today is what was once known as the Middle Reservation. The Middle Reservation was transferred from the U.S. Army to the USAF in 1979.

Although Fort MacArthur's functions as an Army Depot changed over the years, the USAF has consistently used the Installation primarily to provide housing for USAF and other military personnel. Fort MacArthur contains roadways, parking lots, parks, playgrounds, single and double story housing units, and related structures. More than 70 acres of the Installation are covered by asphalt, concrete, or structures. The remaining acreage is landscaped with a few areas of exposed soil.

The bluff spanning Fort MacArthur's eastern boundary is divided into three phases: Phase I/II, Phase III, and the Phase IV Slope. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road occurred, the bluff is

estimated to have been about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. The majority of the bluff is vegetated or bare soil.

Phase I/II of the bluff was stabilized in 2006-2008 and is approximately 800 ft long, located near the mid-point of the bluff alignment (northern portion of the southern half). Since Phase I/II stabilization is complete, it is not part of this EA. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope consists of the remaining northern area, approximately 2,700 ft. The bluff is bordered by Fort MacArthur along its entire western boundary. The Phase III area of the bluff is bordered by the Phase I/II area to the north, Shoshonean Road to the east, and Cabrillo Marine Aquarium to the south. Cabrillo Beach and a wetland area maintained by the Aquarium lie immediately east of Shoshonean Road. The Phase IV area is bordered by commercial property to its north, Via Cabrillo Marina to its east, and the Phase I/II section of the bluff to its south. The Cabrillo Marina and a Double Tree Hotel lie immediately east, across Via Cabrillo Marina.

In the early 20th Century, plans were approved to build several underground structures and tunnels at Fort MacArthur to support the mining of Los Angeles Harbor. Recommended facilities included a mining casement, torpedo storehouse, cable tank, loading room, connecting tramway, planting wharf, primary observing station, secondary observing station, mine search light, and storage magazine. Shortly after construction of the mining facilities began, the Army abandoned mining plans, and in 1920 transferred the underground facilities to the Coast Artillery. The Coast Artillery was prohibited from storing explosives within the facilities and it is probable that no explosives were ever housed there (USAF 2004).

When the Army transferred the Lower and Upper Reservations to the USAF, much of the underground facilities were destroyed or backfilled during redevelopment. In 2004 the USAF contracted a study to determine what underground facilities remain beneath Fort MacArthur (Middle Reservation) and their condition. The study confirmed the presence of an underground casemate (mine or torpedo control room), associated mine storage magazine, mine loading room, and tunnels within the bluff on the eastern boundary of Fort MacArthur (USAF 2004). A concrete ventilation shaft associated with the underground facilities is the only structure located aboveground on the bluff. Additional underground structures were identified, but are not within the project area. Many of the structures have collapsed and are inaccessible (USAF 2004).

3.2.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action would not impact land use of the project area or surrounding properties. The bluff already exists and improvements would not extend the boundaries of the bluff, result in any rezoning, or change the use of the land. Underground facilities located within the bluff are dilapidated and have not been used in decades. The Proposed Action may result in the trimming of bluff bedrock, which may reduce the size of the area located at the top of the bluff. This reduction could result in the need to relocate the Fort's

boundary fence and/or other infrastructure located within close proximity of the edge of the bluff. However, this loss of land would not create a significant impact to land use and the benefit of stabilizing the slope offsets the loss. Impacts to land owned by the adjacent Cabrillo Marine Aquarium or exhibits managed therein are not anticipated, however if during the stabilization design efforts, a need arises, coordination will be completed as required.

No Action Alternative

Under the No Action Alternative, the USAF would not take any action to stabilize the slopes. The No Action Alternative would not result in any changes to surrounding land uses; however, the slope would continue to fail over time and could impact users of adjacent properties. Potentially impacted adjacent users include local residents and visitors that use the sidewalk that parallels Via Cabrillo Marina and Shoshonean Road for recreational purposes such as biking, jogging, walking, and roller skating. Impacts to the parking area adjacent to the Cabrillo Beach Marine Aquarium would continue and likely worsen as a result of the No Action Alternative. Via Cabrillo Marina and Shoshonean Road could also be impacted in the event of a major slope failure in which fill material could fall onto the roadway. Additionally, land use within the Fort MacArthur fence-line could be negatively impacted if the slopes are not stabilized. Soil erosion is evident in many locations along the Phase III and Phase IV sections of the slope. Continued gradual soil erosion and/or slope failure due to a major weather event could result in the loss of land and/or structures located at the top of the slopes.

Cumulative Impacts

Implementation of the Proposed Action would not result in any changes to land use; therefore, no significant cumulative impacts related to incompatible land use are anticipated. The LAAFB maintains a Base General Plan that includes guidance for ongoing and future development at Fort MacArthur. Future land use at the Fort is not expected to change drastically in the foreseeable future. Some reconfiguration or renovations of existing facilities are anticipated over the next 10 years (USAF 2009b). Fort MacArthur works cooperatively with local government planning and zoning officials to ensure that land use remains compatible with the area surrounding the Fort.

Planning for the revitalization of the San Pedro Waterfront began in 2002, and the POLA continues the ongoing project that was expected to be completed in phases over a 30-year timeline. The San Pedro Waterfront Enhancements Project is a continuation of POLA's effort to improve existing pedestrian corridors along the waterfront, increase waterfront access from upland areas, create more open space, and improve vehicular safety. The project area begins at the intersection of Harbor Boulevard and Swinford Avenue and ends at the Fisherman's Pier near Cabrillo Beach (POLA 2005). Additionally, the Community Redevelopment Agency of Los Angeles's Pacific Corridor Redevelopment project for San Pedro was adopted in 2002 and is ongoing. The 693-acre project area is located north and northeast of Fort MacArthur, just north of West 22nd Street. The project focuses on revitalizing both commercial and residential areas and creating a community that is safe and physically attractive, capitalizing on its assets including strong community bonds, and natural attributes like the waterfront (CRALA 2007).

Based on the surrounding communities' current and future redevelopment plans, long-term beneficial cumulative impacts would result from the stabilization of the slopes. The Fort's slope stabilization project would support the continued revitalization of the San Pedro waterfront. Additionally, the Proposed Action would limit the risk of slope failure, which would prevent negative impacts to the adjacent properties located downhill of the slopes as well as to any revitalization improvements made along the waterfront.

3.3 Topography, Geology, and Soils

3.3.1 Affected Environment

Topography

Fort MacArthur is located on a sandstone bedrock bluff which is part of the Palos Verdes Hills overlooking the Los Angeles Harbor and Pacific Ocean. Fort MacArthur lies within the San Pedro U.S. Geological Survey 7.5' quadrangle. The Fort is approximately 40 to 70 ft above mean sea level (amsl) and generally slopes west to east, toward the Harbor. The bluff's topography ranges from approximately 10 to 40 ft amsl.

Geology

San Pedro is located in the Los Angeles Coastal Plain in the western portion of the Transverse Ranges Geomorphic Province. The Fort lies in the southernmost tip of the Palos Verdes Peninsula. The Los Angeles Basin is made of sediments that were deposited in the Miocene Epoch, 5 million to 23.5 million years ago. Fine particulate marine sediments were initially deposited, and then as sea levels decreased, coarser sediment eroded from the local mountain ranges, forming stratified alluvial fans on the Los Angeles Coastal Plain from the late Cretaceous Period to the Holocene Epoch. Soils in the region include Tertiary alluvium and Quaternary non-marine terrace deposits. The most recent deposits are composed of Holocene and recent coarse cobble gravels that were backfilled by the sea levels, and fine sands, silts, and clays deposited by river flows (USAF 2009a).

Soils

Fort MacArthur is located on an alluvial layer that overlays a granite base. Soils at the Fort consist of terrace deposits of sand, silt, and clay overlaying shale bedrock (USAF 2009b). Evidence of significant soil erosion was observed during site visits conducted by Vernadero staff in October 2010 and March 2011. The 2009 AMEC Report indicates that soil along the bluff is retreating at an annual rate of 3 to 4 inches and that approximately 10,000 cubic yards of end-dumped fill material is present along the base of the bluff (USAF 2009a).

3.3.2 Environmental Consequences

Alternative One

No impacts to topography or geology are anticipated to result from implementation of the Proposed Action. Short-term, minor adverse impacts to soils at the site would be expected

during construction activities. However Best Management Practices (BMPs), such as silt fencing, would be used to ensure impacts are minimal. A complete list of BMPs would be developed during the design phase of the project. The 2009 AMEC Report indicated that soil nailing would not require construction upon any of the problematic fill soil located at the base of the bluff, and requires minimal export of diatomaceous earth materials (USAF 2009a), which would further reduce impacts to the soil. Any end-dumped fill material excavated from the site during construction activities would be evaluated and properly disposed of in accordance with applicable laws and regulations (USAF 2009a). Long-term, beneficial impacts would be expected as a result of the Proposed Action. Once the slope is stabilized, soil erosion would be greatly minimized and/or eliminated. Slope stabilization would prevent total slope failure, which could result in major amounts of soil erosion.

No Action Alternative

Under the No Action Alternative, the USAF would not take any action to stabilize the slopes. The No Action Alternative would result in long-term adverse impacts to topography, geology, and soils on the Site and adjacent properties, as the slope would continue to fail over time, depositing fill material on the areas below the slope.

Cumulative Impacts

The implementation of the Proposed Action would result in beneficial cumulative impacts to the topography, geology, and soils. Stabilization of the slopes would minimize the amount of soil erosion over time. Additionally, in the event that a major natural event were to occur, the slope would be less likely to fail if it were properly stabilized.

3.4 Hydrology and Water Resources

3.4.1 Affected Environment

Floodplains

The designated frequency for floodplain identification used by the Federal Emergency Management Agency (FEMA) is the 100-year flood. The 100-year flood is more accurately referred to as the one percent annual exceedance probability flood, because it is a flood that has a one percent chance of being equaled or exceeded in any single year. The 100-year floodplain is an area where the level of flood water is expected to be equaled or exceeded every 100 years on average. A review of the FEMA Flood Insurance Rate Map of Los Angeles County, California (Flood Plain Panel Numbers 06037C2033F and 06037C2031F) indicates that the Property is not located within the 100-year floodplain (FEMA 2011).

Coastal Zone

The federal Coastal Zone Management Act (CZMA) of 1972 (Title 16 U.S.C, Sections 1451 *et seq.*) provides management of the nation's coastal resources and balances economic development with environmental conservation by preserving, protecting, developing, and, where

possible, restoring or enhancing the nation's coastal zone. The California Coastal Zone extends seaward 3 miles from the shore, and inland 3,000 ft from the high tide line. Fort MacArthur, including the project site, lies within the coastal zone. The California Coastal Commission must review all activities that affect the coastal zone for consistency with the CZMA.

Groundwater

Fort MacArthur and the community of San Pedro are underlain by the West Coast groundwater basin within the Dominguez Watershed. The West Coast Basin is comprised of four aquifers: Gage, Lynwood, Silverado, and Sunnyside. The West Coast Basin was significantly altered in the late 1800s and early 1900s due to groundwater pumping. In the 1920s, the basin dropped below sea level and the aquifers were impacted by saltwater intrusion. Today, the City of Los Angeles is entitled to 92,400 acre-feet (af) from all its groundwater basins, which provides approximately 15 percent of the total drinking water supply for the city. The West Coast Basin comprises approximately 2 percent of this total or 1,500 af. Remaining water supplies are provided by water imported from the Colorado River (USAF 2007).

A Geologic and Geotechnical Investigation Report for the Fort MacArthur Air Force Base – Phase III prepared by AMEC Geomatrix, Inc. found that groundwater was generally observed 9 to 15 feet below the ground surface along the base of the coastal bluff that is proposed to be protected by this project (USAF 2009a). Additionally, the groundwater conditions beneath and behind the slope were found to vary across the study-defined area with steeper gradients in the northern portions.

Surface Water

The community of San Pedro, including Fort MacArthur, is located within the Dominguez Watershed. Major water bodies within the watershed include the Dominguez Channel, Wilmington Drain, Torrance/Carson Channel, Cabrillo Beach Machado Lake, and Los Angeles and Long Beach Harbors. An estimated 62 percent of the land within the watershed is considered impervious. Stormwater runoff is collected through a series of underground storm drains which flow into the Dominguez Channel and eventually empty into Los Angeles Harbor (USAF 2007). The western edge of Fort MacArthur ranges from approximately 70 feet above mean sea level (msl) on the northern end to 40 feet above msl on the southern end. Natural drainage is to the south and east toward the Pacific Ocean. Table 3-1 summarizes the average rainfall for the project area. Note most rainfall occurs November through April.

No surface water features are located within the project area. The closest water feature is the POLA West Channel, which is an inlet of the Pacific Ocean, and is located east of the slope.

Table 3-1. Average Rainfall (inches) for San Pedro, California

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
3.60	3.22	2.79	0.73	0.26	0.08	0.04	0.13	0.23	0.48	1.24	1.99	14.79

Source: TWC, 2011

3.4.2 Environmental Consequences

Alternative One

No significant impacts are expected to occur as a result of the Proposed Action. No surface water features are located within the project area and groundwater would not be used during the slope stabilization. Minor adverse impacts to water resources may result from soil erosion and sediment runoff, particularly during construction. The implementation of BMPs and low impact development would significantly reduce the risk of indirect impacts to surrounding surface waters and groundwater. The Proposed Action does not involve any activities that would negatively impact coastal zone resources. A CZMA Negative Determination and a concurrence letter from the California Coastal Commission, dated September 12, 2011, are located at Appendix B. Additionally, the project area is located outside of the 100-year floodplain. Construction activities would comply with applicable local, state and federal regulations, in accordance with the Safe Drinking Water Act and Clean Water Act (CWA).

All slope stabilization activities would comply with the site-specific Stormwater Pollution Prevention Plan (SWPPP) to ensure activities do not adversely impact water resources. Implementation of the Proposed Action would follow the U.S. Environmental Protection Agency's (EPA) *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act (EISA)* (USEPA 2009). Low impact development practices would be evaluated and implemented when feasible to comply with EISA Section 438.

No Action Alternative

Under the No Action Alternative, the USAF would not complete slope stabilization activities. The slope would remain at risk for complete failure, which could result in substantial soil erosion impacting nearby surface water. Continued degradation of the slope could also negatively impact coastal resources located within California's coastal zone management area. The No Action Alternative would result in negative impacts to hydrology and water resources.

Cumulative Impacts

No significant cumulative impacts are anticipated to result from implementation of the Proposed Action. When considered with other development within the area, long-term, beneficial cumulative impacts would be expected.

3.5 Biological Resources

3.5.1 Affected Environment

The Sikes Act Improvement Act (SAIA, 16 USC 670 *et seq*., as amended) requires military installations to develop and maintain Integrated Natural Resources Management Plans (INRMPs) to ensure proper consideration and management of natural resources occurring on military land. In general, Fort MacArthur does not support much natural habitat. Due to the lack

of natural resources, the USAF requested that the Fort, as part of the Los Angeles Air Force Base, be exempt from completing an INRMP. The California Department of Fish and Game and United States Fish and Wildlife Service (USFWS) concurred with the Air Force's exemption request in 2007 and 2008, respectively.

There are limited biological resources located within the project site. Over the years, the slope has been highly disturbed. The slope is mostly covered by a combination of non-native grasses and scrub with some ornamental shrubs and palms scattered throughout. Some species noted during the October 2010 and March 2011 site visits include iceplant, oleander (*Nerium* sp.), pampas grass (*Cortaderia* sp.), California fan palm (*Washingtonia filfera*), and date palm (*Phoenix* sp.). The vegetation on the slope does not provide suitable habitat for many animal species. A domestic cat was observed on the slope during the October 2010 site visit and several unidentified songbirds were observed on the slope during the March 2011 site visit.

The Cabrillo Marine Aquarium maintains a small native plant garden adjacent to the southern end of the Phase III slope area. This collection of native plants includes species such as: California buckwheat (*Eriogonium fasciculatum*), California brittlebush (*Encelia californica*), California fuchshi (*Epilobium canum*), and California sagebrush (*Artemisia californica*). These native plants are known to attract Allen's hummingbirds (*Selasphorus sasin*) and blue butterflies.

The Department of Defense (DoD), in cooperation with Partners-in-Flight (PIF), prepared a strategic plan for the conservation and management of migratory and resident landbirds and their habitats on DoD lands (DoDPIF 2002). Initially, the focus on bird species of conservation concern was on species that breed in temperate North America and winter in the tropics (neotropical migrants) that were declining. Habitat loss, degradation, and fragmentation of the temperate breeding and tropical wintering grounds are likely the major reasons for these declines (Flather & Sauer 1996 and Sherry & Holmes 1996), as well as the loss of important stop-over habitat used during migration (Moore, Gauthreaux, Kerlinger, & Simons 1993). In response to declines in bird populations, Executive Order (EO) 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, was issued on 10 January 2001. This EO requires federal agencies to evaluate the effects of their actions and plans on migratory bird species of concern. Species of concern are those identified in:

1. *Migratory Nongame Birds of Management Concern in the United States* (USFWS 2008);
2. Priority species identified by established plans such as those prepared by PIF; and
3. Listed species in 50 CFR 17.11.

The focus on these species of concern was expanded to include all landbirds breeding in the continental United States (DoDPIF 2004) as well as some aquatic bird species. In addition to the strategic plan (DoDPIF 2002), lists of bird species of conservation concern were prepared by conservation region. The project site is located within Region 32 South (DoDPIF 2011). Table 3-2 includes the bird species of special concern that occur within Region 32.

Table 3-2. Bird Species of Special Concern Occurring in Conservation Region 32

Common Name (Scientific Name)	Common Name (Scientific Name)
Black-footed Albatross (*Pheobastria nigripes*)	Spotted Owl (*occidentalis* ssp.)
Black Turnstone (*Arenaria melanocephala)*	Black Swift (*Cypseloides niger*)
Elegant Tern (*Sterna elegans)*	White-headed Woodpecker (*Picoides albolarvatus*)
Ashy Storm-Petrel (*Oceanodroma homochroa)*	Lawrence's Goldfinch (*Spinus lawrencei*)
Prairie Falcon (*Falco mexicanus*)	Lewis's Woodpecker (*Melanerpes lewis*)
Peregrine Falcon (*Falco peregrines*)	Flammulated Owl (*Otus flammeolus*)
Swainson's Hawk (*Buteo swainsoni*)	Loggerhead Shrike (*Lanius ludovicianus*)
Black Rail (*Laterallus jamaicensis*)	Island Scrub-Jay (*Aphelocoma insularis*)
Mountain Plover (*Charadrius montanus*)	Tricolored Blackbird (*Agelaius tricolor)*
Black Oystercatcher (*Haematopus bachmani*)	Cactus Wren (*Campylorhynchus brunneicapillus*)
Whimbrel (*Numenius phaeopus*)	Leconte's Thrasher (*Toxostoma lecontei*)
Long-billed Curlew (*Numenius americanus*)	Burrowing Owl (*Athene cunicularia*)
Marbled Godwit (*Limosa fedoa*)	Common Yellowthroat (*sinuosa* ssp.)
Red Knot (*roselaari* ssp.)	Spotted Towhee (*clementae* ssp.)
Short-billed Dowitcher (*Limnodromus griseus*)	Black-chinned Sparrow
Gull-billed Tern (*Sterna nilotica*)	Song Sparrow (*graminea* ssp.)
Black Skimmer (*Rynchops niger*)	Song Sparrow (*maxillaries* ssp.)
Xantus's Murrelet (*Synthliboramphus hypoleucus)*	Song Sparrow (*pusillula* ssp.)
Cassin's Auklet (*Ptychoramphus aleuticus*)	Song Sparrow (*samuelis* ssp)
Yellow-billed Cuckoo (*Coccyzus americanus*)	

Source: DoDPIF, 2011

Special Status Species

The federal Endangered Species Act (ESA) protects federally listed animal and plant species and their critical habitats. The USFWS maintains a listing of species that are considered threatened, endangered, proposed, or candidates under the ESA. An endangered species is defined as any species in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species likely to become an endangered species in the foreseeable future. Candidate species are those that the USFWS has enough information on file to propose listing as threatened or endangered, but listing has been precluded by other agency priorities. The Bald and Golden Eagle Protection Act (BGEPA) provides federal protection to bald and golden eagles, including their parts, nests, or eggs.

The USFWS list of threatened and endangered species for Los Angeles County is extensive. Their online database allows project planners to input project-specific parameters to determine which species have the potential to occur in the project area. Table 3-3 contains a list of the federal and state listed threatened and endangered species generated by the USFWS database. Fort MacArthur records and personnel conclude that no federal or state threatened or

endangered species are known to occur at Fort MacArthur. The lack of suitable habitat makes it unlikely that any federally- or state-listed species would occur in the project area.

Table 3-3. Threatened and Endangered Species with Potential to Occur in Project Area

Common Name	Scientific Name	Federal Status	State Status
California least tern	*Sternula antillarum browni*	E	E
Coastal California gnatcatcher	*Polioptila californica californica*	T	SSC
Least Bell's vireo	*Vireo bellii pusillus*	E	E
Light-footed clapper rail	*Rallus longirostris levipes*	E	E
Southwestern willow flycatcher	*Empidonax traillii extimus*	E	E
Western snowy plover	*Charadrius nivosus nivosus*	T	NA
Pacific pocket mouse	*Perognathus longimembris pacificus*	E	NA
San Diego desert woodrat	*Neotoma lepida intermedia*	NA	SSC
California red-legged frog	*Rana draytonii*	T	NA
Coast horned lizard	*Phrynosoma coronatum*	NA	SSC
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	NA
Riverside fairy shrimp	*Streptocephalus woottoni*	E	NA
El Segundo blue butterfly	*Euphilotes battoides allyn*	E	NA
Palos Verdes Blue Butterfly	*Glaucopsyche lygdamus palosverdesensis*	E	NA
California Orcutt grass	*Orcuttia californica*	E	E
Lyon's pentachaeta	*Pentachaeta lyonii*	E	E
Saltmarsh bird's-beak	*Chloropyron maritimim* ssp. *maritimum*	E	E
Spreading navarretia	*Navarretia fossalis*	T	NA

Note: **E** - Endangered, **NA** - No status, **SSC** - Species of special concern, **T** - Threatened
Source: USFWS, 2011

Critical Habitat

Critical habitat is defined as a specific geographic area that is essential for the conservation of a federally threatened or endangered species and that may require special management and protection. Critical habitat may include areas that are currently not occupied by the species, but are necessary for its recovery. No designated critical habitat is located at Fort MacArthur.

Wetlands

The U.S. Congress enacted the CWA in 1972 to restore and maintain the chemical, physical, and biological integrity of the Nation's waters (33 United States Code [USC] 1251 et seq.). Section 404 of the CWA delegates jurisdictional authority over wetlands to the Corps of Engineers and the EPA. Waters of the U.S. protected by the CWA include rivers, streams, estuaries, as well as most ponds, lakes, and wetlands. The Corps of Engineers and the EPA jointly define wetlands as "areas that are inundated or saturated by surface or ground water at a

frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". No wetlands were observed at the project site during the October 2010 and March 2011 site visits. The USFWS National Wetlands Inventory online database does not identify any wetlands on the project site (Figure 3-1). An approximate 5-acre Estuarine/Marine wetland area is located east of the northern end of the Phase III project area, across Shoshonean Road. This salt marsh wetland is known as the Salinas de San Pedro wetland and is maintained by the Cabrillo Marine Aquarium, located just south of the wetland. The wetland is a known feeding habitat of the California Least Tern (USAF 2009b), which is not a federally listed species, but is a state-listed endangered species.

3.5.2 Environmental Consequences

Alternative One

The Proposed Action would have minor, short-term adverse impacts to biological resources. Slope stabilization activities would temporarily disturb the existing habitat. However, the slopes are already highly disturbed in many areas due to soil erosion and do not contain much native plant life, therefore these impacts are anticipated to be less than significant. LAAFB is in the process of implementing a plan to replace all exotic plant species with California native species (USAF 2009b). Long-term beneficial impacts of the Proposed Action would result in a much more stable, healthy natural habitat, consisting of many native plant species. Some native plants that may be planted on the slopes include California sagebrush, Golden yarrow (*Eriophyllum confertiflorum*), Sticky monkey flower (*Mimulus aurantiacus*), Baccharis (*Baccharis* sp), California buckwheat, San Diego marsh elder (*Iva hayesiana*), California brittlebush, and Common deerweed (*Lotus scoparius*).

Implementation of the Proposed Action would have no impact on federal or state-listed threatened and endangered species or wetlands. Limiting any excessive noise-generating activities during the months of April through August, which is the nesting season for the state-listed California Least Tern, would reduce the likelihood of any negative impacts to that species. Measures would be taken during Phase III stabilization activities to avoid any impacts to the California Native Plant Garden, located south of the Phase III area, and any species that may occur within the Garden (i.e. the blue butterfly).

No Action Alternative

Under the No Action Alternative, the USAF would not conduct any stabilization measures on the slope. The No Action Alternative would have direct and indirect adverse impacts on biological resources. Soil erosion would continue and would likely deplete most vegetation on the slopes, leaving bare, exposed soils. The soil erosion would likely negatively impact biological resources on properties adjacent to the bottom of the bluff as rain and wind carry eroded soils east of the bluff or into stormwater culverts that empty into the Harbor. Additionally, soil erosion would also impact resources located at the top of the bluff, such as the large mature trees.

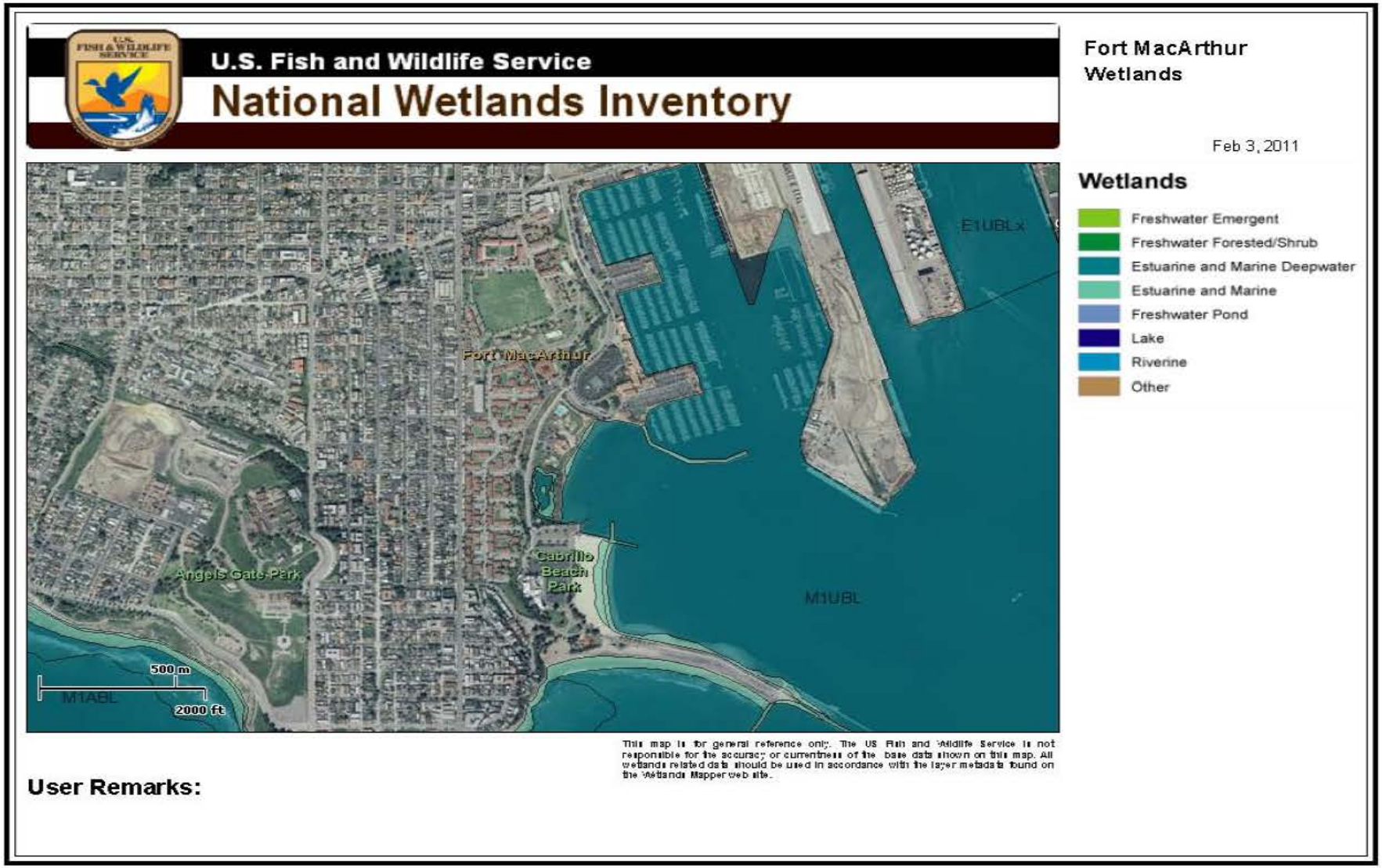

Figure 3-1. National Wetlands Inventory Map of Project Site

Cumulative Impacts

Implementation of the Proposed Action is not anticipated to result in any adverse cumulative impacts to biological resources or wetlands occurring on or near the proposed project site. Once the slope is properly stabilized, long-term beneficial impacts would be expected. Biological resources in the surrounding area would no longer be at great risk of damage due to slope failure and soil erosion.

3.6 Cultural Resources

3.6.1 Affected Environment

Cultural resources is a broad term that includes all aspects of human activities, including material remains of the past and the beliefs, traditions, rituals and cultures of the present. As mandated by law, all federal installations and personnel must participate in the preservation and stewardship needs of archaeological and cultural resources and must consider potential impacts to these resources prior to any installation undertaking. Resources include historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by EO 13007, to which access is provided under the American Indian Religious Freedom Act (AIRFA), significant paleontological items as described by 16 USC 431-433 (Antiquities Act of 1906) and collections as defined in 36 CFR 79, Curation of Federally Owned and Administrated Archaeological Collections.

A Historic District which is listed on the National Register of Historic Places (NRHP) is located on Fort MacArthur. The 500 Varas Square Historic District includes 27 historic buildings, Parade Grounds, and the Patton Quadrangle. Additionally, the Trona Building, which is also listed on the NRHP, is located on the Fort. Although, none of the NRHP-listed buildings or grounds are located on the bluff, the outer boundaries of the Historic District extend slightly outside the fence line and into a small portion of the bluff located in the Phase IV area. A Draft Phase I Archaeological Survey has been prepared for Fort MacArthur and found no NRHP-eligible archaeological sites at the Fort (USAF 2011b). A Draft Historic Property Eligibility Study was also completed for Fort MacArthur and did not identify any additional NRHP-eligible buildings at the Fort (USAF 2011a). The underground facilities located within the bluff were evaluated in a 2004 report conducted by Science Applications International Corporation. This report concluded that the underground facilities and the ventilation shaft located within the bluff lacked sufficient integrity to qualify for independent nomination to the NRHP or as contributing elements of the 500 Varas Square Historic District (USAF 2004).

3.6.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action would not result in any impacts to cultural resources at Fort MacArthur or the surrounding area. Although a small portion of the bluff falls within the

eastern boundaries of the Historic District, none of the structures or facilities listed as contributing sources are located on the bluff. Slope stabilization would help to preserve the integrity of the Historic District by limiting the risk of soil erosion and slope failure, which could negatively impact the Historic District either over time or in the event of a single natural event resulting in slope failure. Although the ventilation shaft and underground structures located in the bluff are more than 50 years old, they lack structural and cultural integrity and are not recommended for eligibility in the NRHP.

Should previously undiscovered archaeological materials be encountered during slope stabilization activities, work would cease and the LAAFB Cultural Resource Program Manager would be notified. The site would be protected until an evaluation is completed and any necessary coordination with the State Historic Preservation Office (SHPO) has taken place.

No Action Alternative

Under the No Action Alternative the USAF would not complete slope stabilization. The No Action Alternative would have no direct adverse impacts on cultural resources. However, the No Action Alternative could result in long-term negative impacts. Continued soil erosion and the risk of a major slope failure have the potential to impact structures and facilities located with the Historic District.

Cumulative Impacts

Implementation of the Proposed Action when combined with past, present, and anticipated future projects in the areas surrounding the proposed project sites would not be expected to result in any significant cumulative impacts to cultural resources.

3.7 Air Quality

3.7.1 Affected Environment

Fort MacArthur is located within the California South Coast Air Basin (SCAB), which includes all of Orange County and parts of Los Angeles, Riverside, and San Bernardino counties. Projects proposed within the SCAB that include any air emitting activity are evaluated on a case-by-case basis for compliance and conformity with state air quality plans. In addition, as a federal facility Fort MacArthur must also demonstrate conformance with federal conformity guidelines.

Responsibility for achieving California's Ambient Air Quality Standards (CAAQS), which are more stringent than federal standards for certain pollutants and averaging periods, is placed on the California Air Resources Board (CARB) and local air pollution control districts. State standards are to be achieved through district-level air quality management plans that are incorporated into the State Implementation Plan (SIP). In California, the EPA has delegated authority to prepare the SIP to CARB, which, in turn, has delegated that authority to individual air districts. The South Coast Air Quality Management District (SCAQMD) has jurisdiction over air quality issues in the SCAB and administers air quality regulations developed at the federal, state, and local levels.

The SCAB is designated as being in non-attainment of the National Ambient Air Quality Standards (NAAQS) for ozone, Particulate Matter $(PM)_{10}$ and $PM_{2.5}$, and in maintenance for Carbon Monoxide (CO) and Nitrogen Dioxide (NO_2). The severity of the non-attainment status has been classified as "extreme" for 8-hour ozone and "serious" for PM_{10}. The Basin is in attainment of the NAAQS for Sulfur Dioxide (SO_2) and Lead (Pb). The area also has been designated as being in non-attainment of the CAAQS for ozone, PM_{10}, $PM_{2.5,}$ $NO_{2,}$ and Pb. The area is in attainment of the CAAQS for CO, SO_2 and sulfates. Table 3-4 summarizes the attainment status for these pollutants.

Table 3-4. NAAQS and CAAQS Attainment Status – South Coast Air Basin (Los Angeles County)

Pollutant	NAAQS Status	CAAQS Status
Ozone (O_3)	Non-attainment (extreme)	Non-attainment (extreme)
Particulate Matter (PM_{10})	Non-attainment (serious)	Non-attainment
Particulate Matter ($PM_{2.5}$)	Non-attainment	Non-attainment
Carbon Monoxide (CO)	Maintenance[1]	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Non-attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Attainment	Non-attainment
Sulfates	Not applicable	Attainment

[1] As of September 27, 2010, all Carbon Monoxide areas were redesignated to maintenance areas
Source: CARB 2011

The "approved" emission inventory for the California SIP is presented in the 2007 Air Quality Management Plan (AQMP). The SIP/AQMP emission budget contains estimates of stationary source, area source, and mobile source emissions. Emissions from military-related sources are merely components of very large aggregate emission source categories in the SIP/AQMP emission budgets.

The federal and state laws and regulations also define a group of pollutants called Toxic Air Contaminants (TACs). These pollutants are regulated by the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) section of the Federal Clean Air Act (CAA), various state laws and regulations, state air toxics act (Assembly Bill [AB] 1807; AB 2588; and Senate Bill [SB] 1731 programs), and SCAQMD Regulations X and XIV. Exposure to these pollutants can cause or contribute to cancer, birth defects, genetic damage, and other adverse health effects. The source and effects of hazardous air pollutants are generally local, rather than regional. Evaluation is based on case studies, not standards for ambient concentration. Examples of air toxics include benzene, asbestos, carbon tetrachloride, ammonia, hydrogen sulfide, hydrogen cyanide, and methane. The SCAB is not classified under CAAQS for any TACs (CARB 2011).

3.7.2 Environmental Consequences

Alternative One

Section 176(c) of the CAA requires that federal agencies ensure their actions are consistent with the Act and applicable state air quality management plans. The General Conformity Rule, promulgated by the EPA at 40 CFR Part 51, calls for a formal conformity analysis for federal actions occurring in non-attainment areas or in certain designated maintenance areas when the total direct and indirect emissions of non-attainment pollutants or their precursors exceed specified thresholds.

Under the NEPA, project proponents must conduct a level of potential air quality impact review appropriate to the action. The SCAQMD has developed emission thresholds that can be used as a screening tool to estimate whether project emissions will significantly impact air quality. Thresholds have been developed for construction and operational emissions by pollutant. Emissions greater than the thresholds identified are considered to be significant and typically warrant further air quality analysis, NEPA analysis and/or mitigation requirements.

Emissions and emission sources evaluated for this EA include construction equipment operation to determine the likelihood of a significant air quality impact resulting from implementation of the Proposed Action.

Construction Equipment Emissions

Three stabilization alternatives were indentified in the *Geologic and Geotechnical Investigation Report of the Fort MacArthur Air Force Base – Phase III, San Pedro, California* (AMEC 2009). The alternatives included a soil nail wall and two variants of a MSE wall. Estimates provided in AMEC 2009 suggest a construction schedule of approximately 6-9 months depending on stabilization alternative selected with a range of 9,000 to 174,000 cubic yards (cy) of soil import/export. For purposes of this assessment, project duration of 180 days (9 months at 20 working days per month) with 5 acres of site grading and 174,000 cy of soil import/export are used to determine potential construction equipment necessary to construct the stabilization wall. This equipment includes a bore/drill rig, cement mixer, crane, two excavators, two graders, two off-highway tractors, two off-highway trucks, two tractors/loaders and other general construction equipment.

Emission screening was performed using SCAQMD (*offroad_ef07-25*) emission factors for heavy construction equipment. Calculations were based on emission factors promulgated by SCAQMD for SCAB Fleet Average Emission Factors (diesel) using 2011 composite equipment factors. Excavation, site grading and construction activities include: cutting, filling, scraping, drilling, dirt hauling and concrete/riprap installation. A combined daily emission estimate (pounds/day) was developed using SCAQMD factors applied to 8 hours of continuous operation for all of the above-identified heavy equipment. Table 3-5 presents the results of the screening analysis.

Table 3-5. Maximum Estimated Construction-related Emissions (Pounds/Day)

Source	ROG	CO	NO_x	SO_x	PM
Construction	15.76	57.67	133.30	0.15	6.45

ROG – Reactive Organic Gas

Toxic Air Pollutants

Construction and operating equipment also emits TACs. Unlike criteria pollutants, TACs do not have an established emission-based significance threshold. The primary air toxic substance evaluated for potential health risks from construction and operation is particulate emissions from diesel-fueled engine exhaust. The regulated pollutant surrogate for this air toxic substance is commonly referred to as Diesel Particulate Matter (DPM). Because DPM is recognized in SCAQMD as needing an evaluation for health risks and it is the most common prevalent TAC emitted from construction activities, DPM emissions are indicators of health risk assessment requirements.

Due to the very limited nature of heavy construction activity associated with the Proposed Action, only short-term, negligible increases in DPM are anticipated. No activities involving the use of solvents or other TACs are anticipated.

General Conformity Determination

The General Conformity Rule recognizes, as an exemption to its provisions, that a proposed action involving only *de minimis* air emissions (Table 3-6) need not be accompanied by a full conformity determination.

Table 3-6. *De Minimis* Threshold Values (Pounds/Day)

Source	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x	CO	Pb
Construction	100	75	150	55	150	550	3

Source: SCAQMD 2009

When estimated construction equipment emissions found in Table 3-5 are compared to *de minimis* threshold values shown on Table 3-6, the Proposed Action is found not to result in emissions greater than established *de minimis* values. In accordance with the General Conformity Rule (40 CFR§§51.850-860 and 40 CFR§§93.150-160), it is therefore concluded that air emissions associated with the Proposed Action are in conformity with the SIP and Air Quality Management Plans for federal non-attainment pollutants and a Record of Non-Applicability has been prepared (Appendix A). Only very minor direct and indirect impacts to air quality are anticipated as a result of implementing the Proposed Action.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct any slope stabilization activities. There would not be any construction activity that would produce air emissions and therefore this alternative would have no impact to local or regional air quality.

Cumulative Impacts

California has established one of the most aggressive air quality resource protection programs in the country. The SCAB is one of the most heavily regulated air basins and is subject to federal, state, and local air quality management programs.

The very minimal amount of short-term construction equipment-related emissions associated with the Proposed Action, when combined with anticipated emissions related to current and future development within the region, is not expected to produce any significant impacts to local or regional air quality. Anticipated cumulative impacts associated with the Proposed Action would be less than significant.

3.8 Greenhouse Gases

3.8.1 Affected Environment

Activities such as fossil fuel combustion, deforestation, and other changes in land use are resulting in the accumulation of trace greenhouse gases (GHGs) in our atmosphere. GHGs include carbon dioxide ($CO_{2)}$, methane (CH_4), nitrous oxide (N_2O), and several hydrocarbons and chlorofluorocarbons. There are no GHG-emitting operations occurring on the slope.

In December 2009, pursuant to the Supreme Court's 2007 decision in Massachusetts v. EPA that GHGs are an air pollutant under the CAA, the EPA determined that GHGs do indeed contribute to air pollution that endangers public health and welfare (NACAA 2010). In May 2010, the EPA issued a final rule that establishes thresholds for GHG emission that define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain PSD and Title V permits. These permit requirements came into effect on January 2, 2011 and apply initially to industrial facilities that are undertaking permitting actions "anyway" for other regulated pollutants and during the application, renewal, or revision process for facilities that currently maintain a Title V permit (USEPA 2010). The installation of slope stabilization measures is not subject to these new permitting requirements.

3.8.2 Environmental Consequences

Alternative One

The primary contribution of GHG associated with the Alternative One would be emitted by machinery and vehicles used during slope stabilization activities. These emissions would be

temporary and cease when construction is complete. BMPs that would be implemented to minimize air pollutants would also minimize the emission of GHGs.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct any slope stabilization activities. Therefore, no impacts related to GHG production would occur.

Cumulative Impacts

The minimal amount of short-term construction equipment-related GHG emissions associated with the Proposed Action, when combined with anticipated GHG emissions related to current and future development within the region, is not expected to produce any significant impacts to local or regional GHG totals. Anticipated cumulative impacts associated with the Proposed Action would be less than significant.

3.9 Visual Resources

3.9.1 Affected Environment

Fort MacArthur is a well-maintained military Installation. The Historic District of the Fort consists of preserved historic homes and buildings and manicured Parade Grounds. Although views from the Fort to the east include unobstructed views of the Los Angeles Harbor and Cabrillo Beach, the bluff is in a state of disrepair which detracts from the visual quality of the installation as well as the view. Soil erosion has stripped away much of the vegetation along the bluff, leaving areas of bare soil; up-rooted trees and shrubs; and small rock slides. Although, views of Fort MacArthur from the base of the bluff are obstructed due to the height of the bluff, the views do not adequately reflect the manicured appearance of the rest of the Fort. Additionally, views from the Fort overlooking the bluff and surrounding area are impacted by the eroded slope.

3.9.2 Environmental Consequences

Alternative One

Minor, short-term impacts are expected as a result of the Proposed Action. During slope stabilization activities, construction vehicles and equipment will be on site, causing temporary adverse impacts to the area's viewshed. However, these impacts would cease after stabilization is complete and are expected to be less than significant. Long-term beneficial impacts are expected upon completion of the project. Although the soil nailing method would result in a visually dissimilar appearance than the Phase I/II areas, the shotcrete facing elements of the soil nailing design may be manicured to resemble the natural bluff. Additionally, the bluff will be re-vegetated with native plants and will be properly landscaped to avoid areas of erosion and bare soils. The Proposed Action would improve the aesthetics of the bluff area, resulting in more attractive views from both on and off Fort MacArthur.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct any stabilization activities on the slope. The slope would likely continue to experience failures, resulting in minor adverse impacts to visual resources due to the exposed and eroded slope and resulting soil piles at the base of the slope. This impact may be lessened over time as vegetation naturally spreads to cover bare soil areas. However, continued soil erosion would make it very difficult for natural vegetation to survive, especially in the event of a significant natural event, causing major slope failure.

Cumulative Impacts

Implementation of the Proposed Action is anticipated to result in long-term, beneficial cumulative impacts to visual resources. Slope stabilization would benefit the future development of the San Pedro Waterfront area, making the area more appealing to tourists and area residents. These beneficial impacts support the surrounding communities' ongoing revitalization and redevelopment plans.

3.10 Noise

3.10.1 Affected Environment

By definition, noise is unwanted sound; when sound interrupts daily activities such as sleeping or conversation, it becomes noise. The degree to which noise is considered disruptive is dependent on the way it is perceived by the people living or working in the affected area. Human response to noise depends on various factors, including the distance between the noise source and receptor, the sensitivity of the noise receptor, and the time of day.

Noise is physically characterized by its level, frequency, and duration and is measured in decibels (dB). The human ear is capable of hearing a large range of noise levels. Common noise sources and noise levels are included in Table 3-7. The range of human hearing is represented by a decibel scale of the lowest audible level less than 20 dB and the threshold of pain of approximately 140 dB. Since the human ear is not equally sensitive to all frequencies within the noise spectrum, measurements are more heavily weighted within frequencies of maximum human sensitivity. A-weighted decibels (dBA) are the most commonly weighted sound filter used to measure perceived loudness versus actual sound intensity. The unit of measurement used to describe environmental and transportation noise is known as day-night average sound level (DNL). DNL is a time-weighted average of sound energy over a 24-hour period. Receptor sensitivity to noise is greater at night. To reflect this sensitivity, nighttime measurements are weighted by adding 10 dB to actual measurements between the hours of 2200 and 0700. Most people are exposed to sound levels of 45 to 85 dBA or higher on a daily basis (MANG 2005).

The only noises generated on the bluff are natural sounds including songbirds that may use the bluff, wind rustling the vegetation, and occasional soil and rock movement. The primary source of noise at the project site is the operation of motor vehicles to/from surrounding businesses on

adjacent properties and pedestrian traffic. Vehicle type and speed influence noise levels generated by vehicular traffic.

Table 3-7. Common Noise Sources and Noise Levels

Noise Source (at given distance)	Noise Level (dB)	Typical Reaction
Civil Defense Siren (100 ft)	130	Pain
Jackhammer (50 ft)	120	Maximum Vocal Effort
Pile Driver (50 ft)	110	Maximum Vocal Effort
Ambulance Siren (100 ft)	100	Very Annoying/Discomfort
Motorcycle or Power Lawnmower (25 ft)	90	Very Annoying/Discomfort
Garbage Disposal or Alarm Clock (3 ft)	80	Intrusive
Vacuum Cleaner (3 ft)	70	Intrusive
Normal Conversation or Dishwasher (5 ft)	60	Intrusive/Normal Speech
Light Traffic (100 ft)	50	Normal Speech
Bird Calls (Distant)	40	Quiet
Soft Whisper (5 ft)	30	Quiet
Human Breathing	0	Just Audible

Source: TriServices Community and Environmental Noise Primer; **ft**-Feet; **dB**-Decibel

3.10.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action is not anticipated to result in significant impacts to the noise environment. Short-term impacts are expected to result from slope construction activities. The zone of relatively high construction noise levels typically extends to distances of 400 to 800 ft from the construction site. Overall, locations more than 1,000 ft from construction sites seldom experience significant levels of construction noise. Sensitive receptors are areas more susceptible to be negatively impacted by noise, and include schools, hospitals, daycares, and residential areas. The distance between the source and the receptor is relevant when analyzing noise impacts. In general, the more distance between the two, the less noise impacts. The Site is located far enough away from sensitive receptors that no significant impact is anticipated.

Increased truck and equipment traffic during construction and the associated noise would have a minor, temporary, adverse impact. Construction equipment can generate noise levels of 80-90 dBA at a distance of 50 ft. If numerous pieces of equipment are operating simultaneously, relatively high noise levels can carry several hundred feet. Potential construction-related noise impacts would be minor in context and intensity and temporary, terminating at the end of construction. Construction would occur during daylight hours which would reduce annoyance experienced by receptors, including users of nearby recreational areas, the Aquarium, and hotel guests. Properly maintained construction vehicles and equipment would also minimize the potential for adverse noise impacts. Excess noise generation will be avoided in the Phase III

project area from April to August, which is the state-listed California Least Tern's nesting season (USAF 2009b).

No Action Alternative

Under the No Action Alternative, the USAF would not stabilize the slope area. The No Action Alternative would not result in any noise impacts.

Cumulative Impacts

The implementation of the Proposed Action is not anticipated to produce any cumulative impacts to the noise environment.

3.11 Socioeconomics

3.11.1 Affected Environment

The term socioeconomics typically describes the basic attributes and resources associated with the human environment, with particular emphasis on population, housing, employment, and personal income. Indicators of these conditions for the greater project area are discussed in this section.

For this project, the Region of Influence (ROI) for socioeconomics is considered to be the Community of San Pedro.

San Pedro had 80,777 residents in 2010 – reflecting an increase of slightly more than 1 percent from the 2000 census figures. Table 3-8 provides actual and estimated U.S. Census data for San Pedro.

A little less than 23 percent of the community population has a 4-year degree (L.A. Times 2010). Three-quarters of the San Pedro population older than 18 have a high school diploma, at minimum. About a third of the population is in its prime earning years, between the ages of 35 and 59. In the year 2000, there were 30,745 housing units with a 95 percent non-vacancy rate. A little more than half were rented out, with the remainder owner-occupied (Wilson and Company 2009).

Single-parents are heads of about 17.5 percent of the community families, on par with Los Angeles and the rest of the country, but the percentage of divorced and widowed males and females are among the nation's highest. With Fort MacArthur within the community's boundaries, it's not surprising that at 11 percent, the amount of population that are military veterans is high for both the city, county and country (L.A. Times 2010).

The 2008 median income for San Pedro was estimated to be $57,508, close to the average for the City of Los Angeles and the rest of the United States. On the poverty scale, San Pedro ranked 90th within Los Angeles County with only 22.8 percent of households earning $20,000 or less annually. San Pedro's smaller, more affluent neighbor, Rancho Palos Verdes, had only 2.7 percent of its households earning that amount or less (Wilson and Company 2009). Despite the

community's relative affluence and strong military presence, local residents are not immune to crime. For the last six months of 2010, the crime rate was 139.1 per 10,000 people, which was higher than neighboring Harbor City, Ranchos Palos Verdes and Lomita (L.A. Times 2010).

Table 3-8. Census Data for San Pedro, California

	San Pedro 2000	San Pedro 2010	Percent Change
Population	79,886	80,777	+1.1%
Median Household Income	$35,910	NA	NA
One Race	74,961	75,570	+0.8%
Two or More Races	4,925	5,207	+5.7%
White	50,883	50,217	-1.3%
African American	5,256	5,300	+0.8%
Latino or Hispanic	32,603	37,334	+14.5%
Asian	3,856	4,448	+15.4%
American Indian or Alaska Native	817	870	+6.5%
Hawaiian Pacific Islander	319	395	+23.8%

Source: U.S. Census Bureau; **NA**-Not Available

Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, ensures fair treatment and meaningful involvement of all people regardless of race, color, national origin or income, with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

3.11.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action would not result in any significant socioeconomic impacts. Slope stabilization activities would most likely be completed by civilian workforces from outside the local community, resulting in minor beneficial short term impacts from the temporary increase in local economic activity in the ROI. No increased demand for housing or community resources associated with construction is anticipated, nor are substantial numbers of new hires of local residents in the immediate vicinity likely, even on a short-term basis.

There would be no disproportionate adverse environmental or health effects on low income or minority populations as a result of implementing the Proposed Action. No environmental justice impacts are anticipated.

No Action Alternative

Under the No Action Alternative, the USAF would not stabilize the slope area. The No Action Alternative would not result in any socioeconomics or environmental justice impacts.

Cumulative Impacts

Implementation of the Proposed Action, when considered with the growth of the surrounding community, is not anticipated to result in any significant cumulative impacts. Since the Proposed Action would not directly impact population, demographics, employment, housing, and the demand on community services, no adverse cumulative socioeconomic impacts are anticipated.

3.12 Transportation and Circulation

3.12.1 Affected Environment

Transportation and circulation at the project site consists of streets and sidewalks maintained by the City of Los Angeles. Transportation to and from the bluff would not include the use of any roadways maintained by Fort MacArthur. There is pedestrian access to the bluff from the Fort, through a Fort-maintained turnstile located along the eastern fence line. Access to the bluff would be from Via Cabrillo Marina and Shoshonean Road. Via Cabrillo Marina runs north-south along the eastern boundary of the Phase IV area of the slope. It connects with West 22nd street at the northern terminus of the road. West 22nd Street runs east-west north of Fort MacArthur. Via Cabrillo Marina ends just south of the Double Tree Hotel, at the entrance to the Marina. Via Cabrillo Marina is a divided 4-lane road, with pedestrian sidewalks along either side of the road. Shoshonean Road intersects with Via Cabrillo Marina just before its end. Shoshonean Road continues north-south along the eastern boundary of the Phase III area of the slope. Shoshonean Road is a two-lane road with pedestrian sidewalks on either side. It connects with Oliver Vickery Circle Way, south of the slope and southwest of the Cabrillo Beach Park. Oliver Vickery Circle Way runs east-west and connects with Stephen M. White Drive running northwest along the southern side of Fort MacArthur. Stephen M. White Drive intersects with South Pacific Avenue, which runs along the entire western boundary of Fort MacArthur.

Specific traffic studies were not conducted in connection with the slope stabilization project. However, during site visits it was noted that neither Shoshonean Road nor Via Cabrillo Marina were heavily traveled roadways. These roadways are not main arteries serving the surrounding communities and do not offer entrance into Fort MacArthur via vehicles. Traffic on these roads is limited to traffic going to and from the businesses located along these roads, which includes the Cabrillo Marina, Double Tree Hotel, Cabrillo Beach Park, and Cabrillo Marine Aquarium. Traffic includes personal motor vehicles, delivery and service trucks associated with the businesses, and buses visiting the Aquarium. There are adequate pedestrian sidewalks along both roadways.

3.12.2 Environmental Consequences

Alternative One

Minor short-term impacts to transportation and circulation would be anticipated as a result of implementing the Proposed Action. During slope stabilization activities, construction vehicles and equipment would need to be transported to the site. While on site, it may also be necessary for the contractor to close traffic lanes to safely operate construction equipment. The contractor would coordinate with the City of Los Angeles and or the California Department of Transportation to ensure that lane closures comply with applicable City and State transportation guidelines and regulations. Via Cabrillo Marina and Shoshonean Road are not heavily traveled roadways and are not major thru-ways. Traffic on these roadways is limited to vehicles traveling to/from the businesses located along the streets, including the Cabrillo Marina, Double Tree Hotel, Cabrillo Beach Park, and Cabrillo Marine Aquarium. Lane closures would be temporary and are not expected to create any major traffic delays.

No Action Alternative

Under the No Action Alternative, the USAF would not stabilize the slope area. The No Action Alternative could result in adverse impacts to transportation and circulation if slope failures continue to occur and deposit soils onto the sidewalk, altering pedestrian traffic, or onto Via Cabrillo Way and Shoshonean Road, which would disrupt vehicular traffic.

Cumulative Impacts

No significant cumulative impacts are anticipated to occur as a result of implementing the Proposed Action. Considering the ongoing redevelopment and revitalization projects in the area, any cumulative impacts would be expected to be beneficial, by greatly reducing the risk of a slope failure impacting the surrounding sidewalks and roadways.

3.13 Utilities

3.13.1 Affected Environment

Potable water, irrigation water, and fire suppression water at Fort MacArthur are provided by Los Angeles Department of Water and Power. Potable water is not available on the bluff, however, irrigation sprinklers are located within areas of the bluff (USAF 2010). The Fort receives natural gas service from Sempra Energy, however, no gas lines are known to occur on the bluff (USAF 2010). Electricity is provided by Southern California Edison. All transformers on Fort MacArthur are free of polychlorinated biphenyls (PCBs) (USAF 2009b). The location of underground utilities is not known throughout most of the bluff. It is assumed that most utilities lines would be located within right-of-ways along the streets. Solid waste at Fort MacArthur is collected and disposed of in accordance with the Integrated Solid Waste Management Plan, as required by Air Force Instruction 32-7042.

3.13.2 Environmental Consequences

Alternative One

No significant impacts to utilities are anticipated as a result of implementing the Proposed Action. Prior to any ground disturbing activities, a utility study will be conducted to identify utility locations. If any relocation of lines or disruption to any utility service is necessary, the contractor will coordinate with the appropriate utility provider and/or City departments to ensure that activities are conducted in accordance with applicable regulations and policies. Implementation of the Proposed Action will not result in an increased demand on any local utilities. All solid waste generated on site during construction activities will be disposed of by the contractor in accordance with applicable local, state, and federal regulations.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct slope stabilization activities. Adverse impacts to utilities would only be expected if a large scale slope failure occurred and knocked down light posts along the sidewalk or restricted access to underground electric, sewer, or water lines.

Cumulative Impacts

Implementation of the Proposed Action is not anticipated to result in any cumulative impacts. The project is not expected to alter any existing utilities, unless minor relocation is necessary during slope stabilization, and the project would not result in an increased demand for any area utilities. Therefore, even when combined with current and future development activities in the area, the Proposed Action would not contribute to any cumulative impacts.

3.14 Hazardous and Toxic Substances

3.14.1 Affected Environment

Hazardous materials are used and stored at Fort MacArthur. Typical hazardous materials used on the Fort include paints and petroleum products used for building and vehicle maintenance, and miscellaneous cleaning products. Hazardous materials are stored at the Material Issue Center in the Civil Engineering Facility, located up gradient and west of the Phase IV slope area. This facility also contains two aboveground diesel fuel storage tanks. There is no evidence of contamination at this facility or any activities that would affect the subject property (USAF 2010). Additionally, hazardous wastes are generated on the Fort through maintenance activities and biohazardous wastes are generated by the Fort's medical clinic and pharmacy. All hazardous waste on the Fort is stored and disposed of in accordance with applicable local, state, and federal regulations.

There is no record or evidence that the bluff is or has been used to store, transport, or dispose of any hazardous materials, hazardous waste, or toxic substances. There is no record that the underground facilities located in the bluff were ever used for their intended purpose and were

not believed to have ever stored any hazardous or toxic materials or any military munitions or explosives. Due to the age of the underground facilities, it is possible that some of the structural material may contain Asbestos Containing Material (ACM) or Lead-based Paint (LBP), however, no surveys have been conducted and there is no evidence that either substance exists in these facilities.

There are no records indicating current or past use of pesticides on the bluff. However, pesticides and herbicides are routinely applied throughout Fort MacArthur, in accordance with the LAAFB Pest Management Program. All pesticide application is conducted by an outside contractor that stores and mixes products offsite and only applies substances that appear on the DoD standardized approval list for pesticides (USAF 2010).

An Environmental Baseline Survey (EBS) was conducted on the Phase IV section of the bluff in August 2010. The EBS report indicated that the potential for elevated arsenic levels on the site was a risk. The EBS references a geotechnical survey conducted on the site which identified soil samples containing arsenic concentration levels of 9.9 and 1.5 milligrams per kilogram (mg/kg) (USAF 2010). These levels were higher than the California Environmental Protection Agency (Cal-EPA), California Human Health Screening Level (0.07 mg/kg). However, this screening level represents worst-case exposure assumptions and typical California background levels can be one to two orders of magnitude above screening level. The Cal-EPA's Department of Toxic Substances Control has established a regional upper bound background concentration level of 12 mg/kg (DTSC, undated) that would be applicable to the San Pedro area. Additionally, the EBS report indicated that soil emitting potential hydrocarbon odors was detected in the central portion of the Phase IV slope area. However, no specific source of the odors was identified (USAF 2010).

Fort MacArthur is located in an area that is designated as a Zone 2 radon area by the U.S. Environmental Protection Agency. This zone averages indoor radon screening levels between 2 and 4 picoCuries per liter (pCi/L). The EBS report included a GeoCheck® report indicating average radon levels for the Fort MacArthur area were 0.711 pCi/L at ground floor level and 0.933 pCi/L at basement level.

3.14.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action would not have any significant impacts to hazardous and toxic substances. No hazardous or toxic substances would be used, stored, or disposed of on the bluff, with exception of materials that may be on site during construction activities. Construction equipment, machinery, and vehicles may contain hazardous substances including, but not limited to petroleum, oil, and lubricants; batteries; and/or antifreeze. However, proper operation and maintenance of this equipment would reduce the risk of any releases to the environment. If a spill or release occurs during construction activities, the contractor would notify the appropriate LAAFB Environmental personnel, and the Installation's Spill Prevention, Control,

and Countermeasure Plan would be implemented. Any contaminated soils would be handled and disposed of in accordance with applicable local, state, and federal regulations.

Additionally, any hazardous waste generated by the contractor during construction activities would also be disposed of in accordance with applicable local, state, and federal regulations. Records and site reconnaissance indicate that no hazardous materials or waste activities occurring on Fort MacArthur would likely impact the project area. If any underground facilities are demolished or backfilled as part of stabilization activities, an assessment would be necessary to determine if ACM or LBP are present (USAF 2010). Any ACM or LBP found would be handled and disposed of in accordance with applicable local, state, and federal regulations.

Due to the findings within the EBS report, the potential for elevated levels of arsenic and/or petroleum hydrocarbon contamination may be present on the project site. The LAAFB Environmental Department plans to perform an Installation Restoration Program sampling project in 2012. If contamination is identified on the site, remediation efforts would be implemented and any contaminated soils would be properly disposed of off-site.

All pesticides used on Fort MacArthur are approved by the DoD and are applied in accordance with the LAAFB Pest Management Program. Additionally, no structures are being constructed on the slopes as part of the Proposed Action, therefore radon would not present any risk.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct slope stabilization activities. Therefore, the No Action Alternative would have no impacts related to hazardous and toxic substances.

Cumulative Impacts

Implementation of the Proposed Action would not result in any cumulative impacts to hazardous and toxic substances.

3.15 Human Health and Safety

3.15.1 Affected Environment

The condition of the Phase III and Phase IV sections of the slope pose multiple human health and safety risks. Documented landslides have occurred along the bluff in the 1940s, 1966, 2005, and 2006. It is believed that other landslides have likely occurred in the past, but may not have been documented (USAF 2009a). There is no documentation of any injuries associated with documented landslides, however, landslides did damage fences and roadways.

Current slope conditions present a risk to pedestrians and motorists that use the sidewalks and roadways at the base of the bluff. Continued soil erosion and potential slope failure would result in landslides and the potential for trees to become uprooted and fall to the base of the bluff. Landslides and fallen trees could injure or kill individuals caught in their path. Additionally, these

events cause safety hazards along the sidewalks and roadways that could lead to further incidents or injuries. Additionally, slope failure that results in damage to Fort MacArthur's fence line would result in negative impacts to the Fort's security.

3.15.2 Environmental Consequences

Alternative One

Implementation of the Proposed Action would result in long-term beneficial impacts to health and human safety. The risk of soil erosion and slope failure would be greatly reduced and/or eliminated, resulting in less risk of incident or injury. The Proposed Action would also stabilize the slope so that the Fort's fence would be secure and the Fort's security would not be impacted.

Additionally, personnel onsite during construction activities would comply with all applicable safety and occupational health regulations. Workers at all levels would receive training specific to the operation and maintenance specific to their duties and would be knowledgeable of emergency response procedures.

No Action Alternative

Under the No Action Alternative, the USAF would not conduct slope stabilization activities. Adverse impacts to health and human safety would result from the No Action Alternative. If slope stabilization is not completed, there is a greater risk of a major slope failure. A slope failure could result in significant rock or mud slides, or could cause trees to fall. Slope failures could result in the injury, or unlikely event of death, of pedestrians or motorists that use the sidewalks and roadways at the base of the bluff. A major slope failure could also put individuals at the top of the bluff at risk. Although there are not many structures located close to the bluff's edge, a significant slope failure could potentially threaten structural integrity or could pose a risk to activities occurring near the Fort's fence line.

Cumulative Impacts

Implementation of the Proposed Action would result in long-term, beneficial cumulative impacts to health and human safety. Redevelopment and revitalization projects in the surrounding area plan to attract more people to live in the area and visit the area. An increase in the number of people living or visiting the San Pedro area would likely increase the pedestrian and vehicular traffic along Via Cabrillo Way and Shoshonean Road. Slope stabilization would ensure continued safety in this area.

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4.0 FINDINGS AND CONCLUSIONS

This EA is intended to be a concise public document that provides sufficient evidence and analysis for determining whether to prepare a FONSI or an EIS. NEPA requires agencies of the Federal Government conduct this type of environmental impact analysis in order to evaluate major federal actions. These include projects financed, assisted, conducted, regulated, or approved by a federal agency that have the potential to affect human health or the environment. In order to determine whether an impact is considered significant as it relates to NEPA, both the context and intensity of potential impacts are considered in addition to their cumulative contribution to existing local and regional resource conditions and trends.

The context of an impact relates to the setting in which the impact takes place and the anticipated severity of the impact in terms of the type, quality, and sensitivity of the resource involved; the location of the proposed project; the duration of the effect (short- or long-term) and other considerations of context. For example, an increase in traffic on a local roadway connecting two buildings would likely affect traffic just in the local area, and the context of the impact would be the local street system. On the other hand, closure of an interstate highway could have impacts on local, regional, and even national circulation. In this case, the context of the impact would need to be assessed on a local, regional, and national level. Context also takes into account the existing condition of the resource.

The intensity of an impact is related to the magnitude of the change over the existing conditions. Based on the previous example, increasing traffic on a local roadway by five trucks a day may be a very low-intensity impact if current trips average 100 trucks per day, but would be a high-intensity impact if current trips averaged one truck per day.

A summary of the potential impacts and measures to minimize adverse impacts is provided in Table 4-1. Adverse impacts associated with implementing the Proposed Action would be local in context with the exception of air quality and transportation, which although regional in context, would still only constitute a minor adverse impact due to very low levels of anticipated emissions and increased traffic. Likewise, the intensity of potential adverse impacts is anticipated to be less than significant for all resources evaluated. Stabilization activities could result in minor erosion; surface and stormwater runoff; and minor impacts to water resources during construction. Additionally, minor impacts to the noise environment and minor impacts from the generation of solid wastes would result during construction. Implementation of the Proposed Action would also have direct, beneficial impacts to biological resources; topography, geology, and soils; visual resources; and health and human safety.

Cumulative impact is the effect on the environment that results from the incremental result of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

The adverse impacts anticipated from implementation of the Proposed Action are temporary in nature, and would cease once stabilization activities are completed. These less than significant impacts, when combined with impacts associated with ongoing growth and development in the vicinity of project would not result in any adverse cumulative impacts. Given the minor intensity of these impacts, the Proposed Action is not anticipated to result in a significant adverse cumulative impact, even when taken in conjunction with the existing adjacent land uses and growth of the communities surrounding the proposed sites. Numerous cumulative beneficial impacts would be expected as a result of implementing the Proposed Action. Slope stabilization would provide long-term benefits to biological resources; topography, geology, and soils; visual resources; and health and human safety.

Based on the analysis contained herein, it is the conclusion of this EA that neither the Proposed Action nor the No Action Alternative would constitute a major federal action with significant impact on human health or the environment. This EA recommends a FONSI should be issued to complete the NEPA documentation process.

Table 4-1. Summary of Potential Impacts and Measures to Minimize Impacts for the Proposed Action

Resource Area	Level of Impact: Significant	Level of Impact: Less than Significant	Level of Impact: No Impact	Summary of Potential Impacts and Measures to Minimize Impacts
Land use		X		There would be no significant impacts to land use as a result of implementing the Proposed Action. Stabilization would improve the current condition of the slopes.
Topography, Geology, and Soils		X		No significant impacts are anticipated as a result of implementing the Proposed Action. Minor, short-term negative impacts to soils may occur during stabilization activities. The USAF would obtain applicable permits and implement best management practices (BMPs) during stabilization to minimize the potential for soil erosion and sediment runoff on the site. Overall, stabilization would improve the condition of the slopes and reduce the potential for further erosion.
Hydrology and Water Resources		X		Implementation of the Proposed Action is not anticipated to result in any significant impacts to surface water or groundwater. There are no surface waters located on the slopes and they are not located within a floodplain. The USAF would comply with the applicable regulations, permits, and plans to prevent oil products and hazardous substances from reaching waterways during stabilization activities. The USAF would implement BMPs during stabilization to minimize the impact to water resources in the area. Overall, stabilization would result in positive impacts to water resources by reducing risk of eroded soils being washed down stormwater sewer culverts.
Biological Resources and Wetlands		X		No significant impacts to biological resources or wetlands are anticipated as a result of implementing the Proposed Action. There are no threatened and endangered (T&E) species or critical habitat known to occur on the slopes. There are no wetlands on the slopes. Implementation of BMPs during stabilization activities would minimize the potential impacts to biological resources. Overall, positive impacts would be expected due to the removal of non-native plant species and replacement with native species.

Resource Area	Level of Impact: Significant	Level of Impact: Less than Significant	Level of Impact: No Impact	Summary of Potential Impacts and Measures to Minimize Impacts
Cultural Resources			X	No impacts to cultural resources are anticipated as a result of implementing the Proposed Action. There are no permanent structures on the slopes. The slopes consist mainly of fill material, so it is unlikely that archaeological resources are located within the non-native soils. An Installation-wide Draft Phase I Archaeological Survey was completed in March 2011 and determined that there is little to no potential for buried archaeological resources to be present at Fort MacArthur.
Air Quality		X		Air emissions from stabilization activities are anticipated to result in a less than significant, adverse impact to local and regional air quality. Implementation of BMPs during stabilization activities would minimize potential adverse impacts to air quality.
Greenhouse Gases		X		Greenhouse gas emissions from stabilization activities are anticipated to result in a less than significant, adverse impact to local and regional air quality. Implementation of BMPs during stabilization activities would minimize potential adverse impacts to greenhouse gases.
Visual Resources		X		The Proposed Action would not result in any significant impacts to visual resources. Minor, short-term negative impacts would be expected during stabilization activities, due to construction equipment on site and temporary removal of vegetation to complete stabilization activities however, these impacts would be temporary. The Proposed Action would result in long-term beneficial impacts to visual resources as the slopes are stabilized and re-vegetated.
Noise		X		Minor, short-term adverse impacts are expected to result during stabilization activities. Construction-related noise impacts would be temporary and would cease once slope stabilization was complete.
Socioeconomics and Environmental Justice			X	No impacts are anticipated to result from implementation of the Proposed Action. No environmental justice impacts are expected to occur.
Transportation and Circulation		X		Minor, short-term transportation impacts are anticipated during slope stabilization activities. Temporary road closures may be necessary during stabilization to allow construction equipment room to operate, while maintaining a safe perimeter around stabilization activities. However, these impacts are anticipated to be less than significant.
Utilities		X		Implementation of the Proposed Action is not expected to result in any adverse impacts to the utilities. Prior to commencing any ground-disturbing activities, any utility lines located along the slopes would be identified and properly marked in accordance with local regulations. Any stabilization activities that would affect or interrupt utility services would be coordinated with the applicable utility provider. Impacts would be temporary and are expected to be less than significant.
Hazardous and Toxic Substances		X		Minor, short-term impacts would result from the use of construction equipment during stabilization activities. All hazardous materials and waste would be handled in accordance with local, state, and federal regulations. Stabilization-related impacts would be minor and temporary in nature. No long-term impacts are anticipated.

Resource Area	Level of Impact: Significant	Level of Impact: Less than Significant	Level of Impact: No Impact	Summary of Potential Impacts and Measures to Minimize Impacts
Human Health and Safety		X		No significant adverse impacts to human health and safety would be expected. Implementation of BMPs during stabilization activities would minimize potential adverse impacts. All construction personnel would be properly trained and would comply with all applicable federal, state, and local health and safety regulations during all stabilization activities. Long-term, beneficial impacts are anticipated once stabilization is complete. Stabilization would significantly reduce and/or eliminate the risk of human injury or safety hazards from slope failures.

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1400 Tenth Street
Sacramento, California 95812-3044

Carlsbad Fish and Wildlife Office
610 Hidden Valley Road
Carlsbad, California 92011

City of Los Angeles, San Pedro Office
San Pedro Municipal Building
638 S. Beacon Street, Room 552
San Pedro, California 90731

Port of Los Angeles
Pacific Place
222 West Sixth Street, 11th Floor
San Pedro, California 90731

City of Los Angeles Planning Commission
200 North Spring Street
Los Angeles, California 90012-2601

Regional Water Quality Control Board
Los Angeles Region
Surface Water Division
320 W. Fourth Street, Suite 200
Los Angeles, California 90013

San Pedro Regional Library
931 South Gaffey Street
San Pedro, California 90731

State Historic Preservation Officer
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1416 9th Street, Room 1442-7
Sacramento, California 95814

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John S. Gibson, Jr., City of Los Angeles, San Pedro Office

Chuck Knief, LAAFB

David Mathewson, Port of Los Angeles

Yong Park, LAAFB, Environmental Department, Contractor

William Roschen, City of Los Angeles Planning Commission

Fernando Sanchez, LAAFB

Debbie J. Smith, Regional Water Quality Control Board, Los Angeles Region

Ivar Sohn, LAAFB, Environmental Department, Contractor

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APPENDIX A. RECORD OF NON-APPLICABILITY

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RECORD OF NON-APPLICABILITY

Project Name: Slope Stabilization Project at Fort MacArthur, San Pedro, California
Point of Contact: Elizabeth Farm, LAAFB Environmental Department Manager, Contractor
Phone/E-mail: (310) 653-5496 / Elizabeth.Farm.Ctr@LosAngeles.af.mil

Project Description: The Proposed Action, which is the USAF's preferred alternative, includes the remaining slope stabilization efforts in the Phase III and Phase IV Slope areas. Completion of this work would be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV Slope consists of the remaining area, approximately 2,700 ft.

The purpose of the Proposed Action is to stabilize the slopes located along the eastern boundary of Fort MacArthur. The stabilization is needed to ensure the safety of residents living in Fort MacArthur's housing areas and the general public that uses the sidewalk, roads, and parking areas at the base of the slopes. Additionally, slope stabilization is necessary to maintain the Installation's physical security requirements.

Conformity Determination:

General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of Title 40 of the Code of Federal Regulations Part 93, Subpart B. The requirements of this rule are not applicable to the Proposed Action or the alternatives because:

> Air emissions associated with the action are in conformity with the applicable State Implementation Plans and Air Quality Management Plans for federal non-attainment pollutants. The criteria emissions would be below both State and Federal conformity *de minimis* thresholds for applicable nonattainment emissions.

Supporting Documentation:

( ) Attached
(X) Appear in the NEPA Document
( ) Other – Not necessary

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Date: 2012.01.31 16:31:22 -08'00'

FRANK W. SIMCOX
Colonel, USAF
Commander, 61st Air Base Group

Date

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APPENDIX B. COASTAL ZONE MANAGEMENT ACT NEGATIVE DETERMINATION

FORMAT PAGE

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885

September 12, 2011

A. Dave Espili, USAF
Deputy Commander
61st Civil Engineer and Logistics Squadron
Department of the Air Force
Headquarters 61st Air Base Group (AFSPC)
Los Angeles Air Force Base, CA
Attn: E. Farm, 61 CELS/CEAN
483 N. Aviation Blvd.
El Segundo, CA 90245

Re: **ND-036-11** Air Force, Negative Determination, Slope Stabilization and Revegetation, Phase III and Northeast Slope Phase, Fort MacArthur, San Pedro, City and County of Los Angeles

Dear Deputy Commander Espili:

On September 16, 2010, the Coastal Commission staff concurred with the Air Force's negative determination for the first two phases of the stabilization and revegetation of an existing slope at Fort MacArthur in San Pedro (ND-043-10). The Air Force has submitted a negative determination for Phases III and IV, to cover the completion of the stabilization/revegetation project. All four phases together form the eastern boundary of Fort MacArthur, adjacent to (and west of) Shoshonean Rd. Phase III is the 1,500 ft. long southern portion of the alignment, and Phase IV, or the Northeast Slope Phase, is the northern portion of the alignment. (Phases I and II were the middle portion of the alignment, in between the currently proposed phases.) All phases are needed to address historic landslide-prone slopes, which were exacerbated by grading for Shoshonean Rd., with studies back to the 1940s that have documented the slope instability. The stabilization is intended to benefit both the general public, as well as the Air Force installation.

The work would consist of: (1) Soil nailing with a manicured shotcrete face; (2) Constructing a Mechanically Stabilized Earth (MSE) wall where the toe of the wall is located at the property line; and (3) Constructing a MSE wall where the toe of the wall is located 21 feet from the curb.

The Air Force will implement Best Management Practices (BMPs), including silt fencing, and long-term impacts to soil stability and water quality will be beneficial, as the project will reduce erosion. The bluff will be re-vegetated with drought tolerant, native plants, and the project would improve the aesthetics of the bluff area in the long term.

As we noted in our earlier concurrence with Phases I and II, the project would improve public views and geologic stability, and reduce erosion. The project would not adversely affect public access, visual resources, environmentally sensitive habitat, cultural resources, wetlands, or recreational traffic.

Under the federal consistency regulations (Section 930.35), a negative determination can be submitted for an activity "which is the same as or similar to activities for which consistency determinations have been prepared in the past." This project is similar to the above-referenced negative determination with which we previously concurred (ND-043-10). We therefore **concur** with your negative determination made pursuant to 15 CFR Section 930.35 of the NOAA implementing regulations. Please contact Mark Delaplaine of the Commission staff at (415) 904-5289 if you have any questions.

Sincerely,

CHARLES LESTER
Executive Director

cc: Long Beach District Office

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

Mr. Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Dear Mr. Delaplaine:

In accordance with the Federal Coastal Zone Management Act (CZMA) of 1972 as amended, Section 307c(1), the United States Air Force (USAF), Los Angeles Air Force Base (LAAFB) has determined that the proposed slope stabilization project will not affect the coastal zone and therefore, does not require a consistency determination.

The bluff spanning Fort MacArthur's eastern boundary is divided into three phases: Phase I/II, Phase III, and the Northeast Slope Phase (Enclosure 1). The bluff is approximately 5,000 feet (ft) long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006 and 2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half).

The Proposed Action, which is the USAF's preferred alternative, includes the remaining slope stabilization efforts in the Phase III and Northeast Slope Phase Slope areas. Completion of this work would be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Northeast Slope Phase consists of the remaining area, approximately 2,700 ft.

There are many mitigation measures that are effective in stabilizing slopes. In general, these mitigation measures either reduce the forces tending to cause slope movement or increase the forces resisting movement. The USAF and its consultants identified the most effective remedial measures that can be economically constructed with the physical and property boundary constraints for each phase of the stabilization effort. Mitigation strategies were evaluated based on the following criteria: (1) reliability and effectiveness; (2) cost control; (3) site constraints compatibility; (4) constructability; (5) aesthetic appeal; and (6) low long-term maintenance.

Various mitigation approaches were identified and evaluated using the criteria previously listed. These mitigation approaches include slope grading, dewatering, earthwork, structural stabilization, and material strengthening. Consideration of the site conditions and constraints under the specified criteria resulted in the selection of the following three stabilization approaches:

- Soil nailing with a manicured shotcrete face;
- Constructing a mechanically stabilized earth (MSE) wall where the toe of the wall is located at the property line; and
- Constructing a MSE wall where the toe of the wall is located 21 feet from the curb.

The USAF has determined that the proposed action, as described above, would occur within the coastal zone. As defined in Section 304 of the Act, the term "coastal zone" does not include "lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal government." The

project area is within the boundaries of Fort MacArthur wholly owned and operated by the USAF, and therefore is excluded from the coastal zone.

However, the USAF recognizes that actions within the coastal zone may affect land or water uses or natural resources along the coast and therefore are subject to the provisions of the CZMA. Consequently, an analysis of the impacts of the proposed action on the coastal zone was conducted in an Environmental Assessment. Slope stabilization would have short-term, minor impacts to aesthetics (visual quality); natural resources; air quality; noise environment; traffic and circulation; hazardous and toxic substances; and human health and safety during construction activities. However, these impacts would be temporary and cease upon completion of the project. All impacts are considered to be less than significant. Additionally, the project would provide long-term, beneficial impacts to land use; biological resources; aesthetics; topography, geology, and soils; and human health and safety.

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

A. Dave Espili, USAF
Deputy Commander, 61st Civil Engineer and Logistics Squadron

Enclosure

APPENDIX C. INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING (IICEP)

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

1 February 2011

Debbie J. Smith
Regional Water Quality Control Board
Los Angeles Region
Surface Water Division
320 W. Fourth Street, Suite 200
Los Angeles, California 90013

RE: Environmental Assessment – Early Coordination Notification for a Slope Stabilization Project at Fort MacArthur

Dear Ms. Smith,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to analyze the potential environmental effects of a slope stabilization project at Fort MacArthur, San Pedro County, California. A regional location map and site map are attached.

The Proposed Action, which is the USAF's preferred alternative, involves conducting a phased slope stabilization project along the bluff spanning Fort MacArthur's eastern boundary. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The bluff is divided into three phases: Phase I/II, Phase III, and the Phase IV. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half). The remaining slope stabilization effort would be completed in phases which will be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV consists of the remaining area, approximately 2,700 ft.

During the course of this EA, detailed investigations will be undertaken to identify potential environmental impacts related to the improvements being considered. These impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during this EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed by this study. Please provide comments relative to specific issues or areas of concern your office may have, based on your expertise or regulatory jurisdiction. Provide any technical information, mitigation, or permitting requirements that may be necessary for project implementation. Any preliminary data your office can provide will be evaluated and incorporated into the EA.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron
61 CELS Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

for Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

1 February 2011

John S. Gibson, Jr.
City of Los Angeles, San Pedro Office
San Pedro Municipal Building
638 S. Beacon Street, Room 552
San Pedro, California 90731

RE: Environmental Assessment – Early Coordination Notification for a Slope Stabilization Project at Fort MacArthur

Dear Mr. Gibson,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to analyze the potential environmental effects of a slope stabilization project at Fort MacArthur, San Pedro County, California. A regional location map and site map are attached.

The Proposed Action, which is the USAF's preferred alternative, involves conducting a phased slope stabilization project along the bluff spanning Fort MacArthur's eastern boundary. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The bluff is divided into three phases: Phase I/II, Phase III, and the Phase IV. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half). The remaining slope stabilization effort would be completed in phases which will be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV consists of the remaining area, approximately 2,700 ft.

During the course of this EA, detailed investigations will be undertaken to identify potential environmental impacts related to the improvements being considered. These impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during this EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed by this study. Please provide comments relative to specific issues or areas of concern your office may have, based on your expertise or regulatory jurisdiction. Provide any technical information, mitigation, or permitting requirements that may be necessary for project implementation. Any preliminary data your office can provide will be evaluated and incorporated into the EA.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron
61 CELS Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

for Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

1 February 2011

William Roschen
President
City of Los Angeles Planning Commission
200 North Spring Street
Los Angeles, California 90012-2601

RE: Environmental Assessment – Early Coordination Notification for a Slope Stabilization Project at Fort MacArthur

Dear Mr. Roschen,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to analyze the potential environmental effects of a slope stabilization project at Fort MacArthur, San Pedro County, California. A regional location map and site map are attached.

The Proposed Action, which is the USAF's preferred alternative, involves conducting a phased slope stabilization project along the bluff spanning Fort MacArthur's eastern boundary. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The bluff is divided into three phases: Phase I/II, Phase III, and the Phase IV. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half). The remaining slope stabilization effort would be completed in phases which will be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV consists of the remaining area, approximately 2,700 ft.

During the course of this EA, detailed investigations will be undertaken to identify potential environmental impacts related to the improvements being considered. These impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during this EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed by this study. Please provide comments relative to specific issues or areas of concern your office may have, based on your expertise or regulatory jurisdiction. Provide any technical information, mitigation, or permitting requirements that may be necessary for project implementation. Any preliminary data your office can provide will be evaluated and incorporated into the EA.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron
61 CELS Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

for A. Dave Eckl

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

1 February 2011

Ken Corey
Division Chief, Los Angeles and Orange County
Carlsbad Fish and Wildlife Office
610 Hidden Valley Road
Carlsbad, California 92011

RE: Environmental Assessment – Early Coordination Notification for a Slope Stabilization Project at Fort MacArthur

Dear Mr. Corey,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to analyze the potential environmental effects of a slope stabilization project at Fort MacArthur, San Pedro County, California. A regional location map and site map are attached.

The Proposed Action, which is the USAF's preferred alternative, involves conducting a phased slope stabilization project along the bluff spanning Fort MacArthur's eastern boundary. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The bluff is divided into three phases: Phase I/II, Phase III, and the Phase IV. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half). The remaining slope stabilization effort would be completed in phases which will be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV consists of the remaining area, approximately 2,700 ft.

During the course of this EA, detailed investigations will be undertaken to identify potential environmental impacts related to the improvements being considered. These impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during this EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed by this study. Please provide a current list of federally threatened,

endangered, and candidate species, as well as information on any nearby areas designated as critical habitat. Any preliminary data your office can provide will be evaluated and incorporated into the EA.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron
61 CELS Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

for Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 61st AIR BASE GROUP (AFSPC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA

1 February 2011

Mr. David Mathewson
Director of Planning and Economic Development
Port of Los Angeles
Pacific Place
222 West Sixth Street, 11th Floor
San Pedro, California 90731

RE: Environmental Assessment – Early Coordination Notification for a Slope Stabilization Project at Fort MacArthur

Dear Mr. Mathewson,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to analyze the potential environmental effects of a slope stabilization project at Fort MacArthur, San Pedro County, California. A regional location map and site map are attached.

The Proposed Action, which is the USAF's preferred alternative, involves conducting a phased slope stabilization project along the bluff spanning Fort MacArthur's eastern boundary. The bluff is approximately 5,000 ft long, ranging from approximately 10 to 40 ft high. Before grading for Shoshonean Road, the bluff is estimated to have been typically about 60 ft high over most of its length. Grading for Shoshonean Road involved placement of approximately 20 ft of artificial fill, which was likely placed directly against eroded portions of the bluff. Portions of the coastal bluff are known to have been marginally stable to unstable. Studies of the project area have documented historical landslides and slope failures dating back to the 1940s.

The bluff is divided into three phases: Phase I/II, Phase III, and the Phase IV. Phases I and II of the bluff are adjoining and were stabilized concurrently in 2006-2008. Phases I and II are collectively referred to as the Phase I/II area, which is approximately 800 ft long and located near the mid-point of the bluff alignment (northern portion of the southern half). The remaining slope stabilization effort would be completed in phases which will be prioritized based on risk of slope failure. The Phase III area is approximately 1,500 ft long and consists of the remaining portion of the southern half of the bluff alignment. The Phase IV consists of the remaining area, approximately 2,700 ft.

During the course of this EA, detailed investigations will be undertaken to identify potential environmental impacts related to the improvements being considered. These impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during this EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed by this study. Please provide comments relative to specific issues or areas of concern your office may have, based on your expertise or regulatory jurisdiction. Provide any technical information, mitigation, or permitting requirements that may be necessary for project implementation. Of particular interest are any concerns or requirements associated with the Cabrillo Beach Recreational Complex including the public beach area, Youth Waterfront Sports Center, Cabrillo Marina, Cabrillo Marine Aquarium, and the Doubletree Hotel. Any preliminary data your office can provide will be evaluated and incorporated into the EA.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron
61 CELS Los Angeles Air Force Base
483 North Aviation Boulevard
El Segundo, California 90245

Please feel free to contact Ms. Elizabeth Farm, Environmental Department Lead at (310) 653-5496 or by e-mail at elizabeth.farm.ctr@losangeles.af.mil should you have any questions or concerns. We look forward to working cooperatively with you to make this important project successful for all parties involved.

Sincerely,

for A. Dane Eckert

Christoff Gaub, LtCol, USAF
Commander, 61st Civil Engineer and Logistics Squadron