

**FINAL  
ENVIRONMENTAL ASSESSMENT**

**JOINT TASK FORCE SIX  
PROPOSED LIGHTING PROJECT  
NACO, COCHISE COUNTY, ARIZONA**

**Prepared for :  
Joint Task Force Six  
Fort Bliss, Texas**



**Prepared by:  
U.S. Army Corps of Engineers  
Fort Worth District**

**April 5, 1999**

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## EXECUTIVE SUMMARY

As a result of the high rate of violent crime, the continual damage to our Nation's health and economy, and strains on vital relationships with international allies; the United States (U.S.) Congress developed the National Drug Control Strategy (NDCS) and incorporated the Department of Defense (DoD) into this new plan. The Secretary of Defense established Joint Task Force Six (JTF-6) to coordinate all DoD counter-drug support to Federal, State, and local law enforcement agencies' (LEAs) in an effort to curtail drug smuggling activities into the U.S. and protect national security. JTF-6 was assigned to assist LEAs who have drug interdiction responsibilities in the continental U.S. by providing general operational and engineering support. In addition, the assistance would provide all or part of the mission-essential training elements for the military unit involved.

A Programmatic Environmental Impact Statement (PEIS), prepared in 1994 for the Immigration and Naturalization Service (INS) and JTF-6, proposed projects that facilitate LEA missions to reduce illegal drug trafficking. The PEIS addresses the cumulative effects of past and reasonably foreseeable actions undertaken by JTF-6 for numerous LEAs in the four southwestern states (Texas, New Mexico, Arizona, and California). This Environmental Assessment (EA) tiers from the 1994 PEIS (U.S. Army 1994). Cooperating agencies involved with the Proposed Action include the U.S. Border Patrol (USBP), INS, and JTF-6.

The purpose of the Proposed Action is to minimize the influx of illegal contraband (i.e., drugs) from entering the U.S., and to reduce crime along the border area through the use of deterrent measures and by maximizing the effectiveness of the USBP. This EA addresses the potential impacts associated with a proposed lighting project along the U.S.-Mexico border in Cochise County, Arizona. The Proposed Action involves the installation of approximately 40 lighting poles placed approximately 60 feet north of the international border one mile west of the truck Port of Entry (POE) and one mile east of the POE at Naco, Arizona. A secondary usage of these poles may be for camera equipment at a later date.

In addition to the Proposed Action, there were three other alternatives considered as part of this environmental impact analysis: 1) No-Action Alternative; 2) Reduced Lighting Alternative; and 3) Use of Portable Lighting Systems. The Use of Portable Lighting Systems and the No-Action Alternative were carried throughout the analysis, and are reflected in the baseline environmental conditions of the area. Under the No-Action Alternative, there would be no reduction in the illegal drug trafficking and criminal activity. The Reduced Lighting Intensity Alternative was eliminated due to the lack of threatened or endangered species or their preferred habitat occurring in the proposed project area. Additionally, this alternative would not assist the USBP in the accomplishment of their mission.

Potential impacts of this proposed project were classified at one of three levels: significant, insignificant (or negligible), and no impact. Significant impacts (as defined in CEQ guidelines 40 CFR 1500-1508) are effects that are most substantial, and therefore should receive the greatest attention in decision-making process. Insignificant impacts would be those impacts that result in changes to the existing environment that could not be easily detected. No-impact actions would not alter the existing environment.

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There would be no significant areas of environmental concern associated with the Proposed Action. There could be some insignificant environmental issues associated with the proposed installation of the lighting poles (i.e., air geological resources, biological resources, cultural resources, and noise); however, these would be temporary in nature and easily mitigated through sound engineering practices. Under the Proposed Action, there would be a beneficial socioeconomic impact to the area in the form of a reduction in drug trafficking and related criminal activities. There would be no impact to land use, water resources, aesthetics, environmental justice, or solid/hazardous waste generation or management as part of the Proposed Action.

**FINDING OF NO SIGNIFICANT IMPACT  
JOINT TASK FORCE SIX  
PROPOSED LIGHTING PROJECT  
NACO, COCHISE COUNTY ARIZONA**

The Proposed Action would involve the installation of lighting poles approximately 60 feet north of the United States (U.S.)-Mexico border beginning one mile west of the truck Port of Entry (POE) and ending one mile east of the POE in Naco, Arizona. The primary use of these poles is for lighting; however a secondary use may be for camera equipment at a later date. The purpose of the Proposed Action is to assist in fulfilling the U.S. Border Patrol's (USBPs) mission to reduce illegal drug trafficking along the U.S.- Mexico border by maximizing the effectiveness of the USBP. Approximately 70 U.S. Military personnel will be utilized for pole installation.

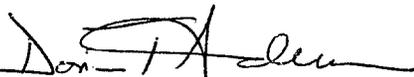
In addition to the Proposed Action, there were three other alternatives considered as part of this environmental assessment: 1) No-Action Alternative; 2) Reduced Lighting Intensity; and 3) Use of Portable Lighting Systems. The Use of Portable Lighting Systems and the No-Action Alternative were carried throughout the analysis, and were reflected in the baseline environmental conditions of the area. Under the No Action Alternative, there would be the continued socioeconomic concerns relating to the illegal drug trafficking and criminal activity. The Reduced Lighting Intensity alternative was eliminated from further consideration because it would not assist the USBP in the accomplishment of their mission, and offered the same if not greater, potential for environmental concerns as the Proposed Action.

A Programmatic Environmental Impact Statement (PEIS), prepared in 1994 for the Immigration and Naturalization Service (INS) and Joint Task Force Six (JTF-6), proposed activities which facilitate Law Enforcement Agencies' (LEAs) missions to reduce illegal drug activity along the southwestern border of the U.S. The PEIS addresses the cumulative effects of past and reasonably foreseeable projects undertaken by JTF-6 for numerous LEAs in the four southwestern states (Texas, New Mexico, Arizona, and California). This Environmental Assessment (EA) for the Proposed Action tiers from the 1994 PEIS (U.S. Army 1994). Cooperating agencies involved with the Proposed Action include the U.S. Border Patrol, INS, and JTF-6.

There would be no significant areas of environmental concern associated with the Proposed Action. There could be some insignificant environmental issues associated with the proposed construction and installation of the lighting poles (i.e., air, geological resources, biological resources, cultural resources, and noise); however, these would be temporary in nature and easily mitigated through sound engineering practices.

Under the Proposed Action, there would be a beneficial socioeconomic impact to the area in the form of a reduction in drug trafficking and related criminal activities. There would be no impact to land use, water resources, aesthetics or solid/hazardous waste generation or management as part of the Proposed Action.

Based on the results of the EA and the environmental design measures to be incorporated as part of the Proposed Action, it has been concluded that the Proposed Action will not have a significant adverse effect on the environment.



Dorian T. Anderson  
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Commander

5 April 99

Date

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- C Threatened and Endangered Species
- D Consultation Letters
- E Notice of Availability

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**LIST OF ACRONYMS AND ABBREVIATIONS**

ADA	Arizona Department of Agriculture
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
AGM	Arizona Groundwater Management
AMA	Active Management Area
ANHP	Arizona Natural Heritage Program
AR	Army Regulation
ASM	Arizona State Museum
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dB	Decibel
dba	A-weighted decibels
DoD	Department of Defense
EA	Environmental Assessment
e.g.	for example
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
F	Fahrenheit
FCAA	Federal Clean Air Act
FIFRA	Federal Insecticides, Fungicide and Rodenticide Act
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GPS	Global Positioning System
HC	Exhaust Hydrocarbons
HCHO	Aldehydes
HMTA	Hazardous Materials Transportation Act
IBWC	International Boundary and Water Commission
INS	Immigration and Naturalization Service
IO	Isolated Occurrence
JTF-6	Joint Task Force Six
LEA	Law Enforcement Agencies
Ldn	Day/Night Noise Level
MET	Meteorological
METL	Mission Essential Training Elements
Mph	Miles Per Hour
NAAQS	National Ambient Air Quality Standards

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**LIST OF ACRONYMS AND ABBREVIATIONS (cont.)**

NDCS	National Drug Control Strategy
NEPA	National Environmental Policy Act
NESL	Navajo Endangered Species List
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPL	Native Plant Law
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PEIS	Programmatic Environmental Impact Statement
PL	Public Law
PM <sub>10</sub>	Particulates
POE	Port of Entry
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
ROW	Right of Way
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
TSCA	Toxic Substances Control Act
U.S.	United States of America
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
USC	United States Code
USFWS	United States Fish and Wildlife Service
UTM	Universal Transverse Mercator
W	Watt
WSCA	Wildlife Species of Concern in Arizona

## 1.0 INTRODUCTION

### 1.1 PROJECT BACKGROUND

The United States (U.S.) is experiencing high levels of drug use and ensuing elevated levels of drug-related crime. Negative impacts of widespread drug use on society continue to affect the work force, educational and medical systems, general law and order, and traditional family values and structure. As a result of these high levels of drug-related crime, the continual damage to our Nation's health and economy, and strains on vital relationships with international allies; the U.S. Congress developed the National Drug Control Strategy (NDCS) and incorporated the Department of Defense (DoD) in the new strategy. The Secretary of Defense established Joint Task Force Six (JTF-6) in November 1989 to coordinate all DoD counterdrug support to Federal, State, and local law enforcement agencies (LEAs) in an effort to curtail drug smuggling activities into the U.S. and protect national security. As a Joint Service Agency, JTF-6 was assigned to assist LEAs that have drug interdiction responsibilities in the continental U.S. by providing general operational and engineering support. In addition, this assistance would provide opportunities for mission-essential training for the military unit involved.

This Environmental Assessment (EA) addresses potential impacts associated with a proposed lighting project covering approximately 2 miles on the U.S.-Mexico border in Cochise County, Arizona. This document is tiered from the Programmatic Environmental Impact Statement (PEIS) completed for a broad scope of JTF-6 activities along the U.S.-Mexico border (U.S. Army 1994). As specific measures are developed for exact locations, EA's have been prepared and tiered from the PEIS, to address site-specific environmental constraints, including cumulative impacts of past, present, and foreseeable actions. This EA was prepared by Ecological Communications Corporation under contract to the Fort Worth District Army Corps of Engineers (USACE).

### 1.2 LOCATION OF PROPOSED ACTION

The proposed project site is located along the U.S.-Mexico border in the vicinity of the City of Naco in Cochise County, Arizona. The Proposed Action is to install light poles along the international border for 1.0 mile west of the truck Port of Entry (POE) and 1.0 mile east of the POE in Naco, Arizona. The proposed lighting equipment and poles would be located within the 60-foot U.S.-Mexico border right-of-way and would be placed approximately 300 to 400 feet apart. Figure 1.0 shows the location of the Proposed Action.

### 1.3 PURPOSE AND NEED

The purpose of the Proposed Action and Alternatives is to decrease or eliminate the influx of illegal contraband (i.e., drugs, people, vehicles, etc.) from entering the U.S. and to reduce associated crime along the international border. The goal of the proposed project is to maximize the effectiveness of the U.S. Border Patrol (USBP) in their deterrent efforts. The Proposed Action involves the installation of pole-mounted lighting equipment along the international border for approximately



Figure 1.0  
Location of Proposed Action  
Naco, Arizona

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two miles. The majority of this area currently consists of cleared roadway or undeveloped land used for grazing pasture. Photographs of the site conditions are presented in Appendix A.

Overland smuggling poses a significant threat in these areas. Foot traffic from south to north across the border was evident in the general project area, as well as vehicle tracks over the driveable portions of the area. The installation of lights along these areas would assist in reducing the flow of illegal entry into the U.S. and aid in the apprehension of drug traffickers. The proposed poles would increase the effectiveness of the USBP agents in detecting initial movement north across the border, thereby, reducing illegal traffic into the southernmost neighborhoods of Naco, Arizona.

Information provided by the USBP, Naco Station, indicated 42 marijuana apprehensions from October 1, 1997 to September 30, 1998. The amount of marijuana seized in these apprehensions totaled to 16,297.93 lbs., with a value of \$13,038,344.00. No cocaine apprehensions are listed during this same time period. These numbers represent activities in the USBP area which encompasses the City of Naco and its immediate outlying areas. Alien apprehensions for this Section are as indicated: 1,205 in 1991; 1,844 in 1992; 2,295 in 1993; 2,518 in 1994; 4,477 in 1995; 11,425 in 1996; 13,821 in 1997; and 19,343 in 1998. According to USBP personnel, the areas to be covered under the Proposed Action are those areas having the highest movement of illegal drugs. Lights along the international border in these areas would reduce the ease with which illegal drugs are crossing into the U.S.

A secondary benefit of the Proposed Action, as well as a required goal for the DoD, is to provide training opportunities for U.S. military units. This training would include general operational and engineering support. This assistance would satisfy all or part of the units' mission-essential task list. Therefore, military units, through the JTF-6 program, could provide all the construction support for the proposed USBP project. Over the past several years, the USBP has been the primary beneficiary of JTF-6 support functions. However, any law enforcement agency involved in interdiction of illegal drugs may request assistance from JTF-6.

#### **1.4 ORGANIZATION OF THE DOCUMENT**

Chapter 1.0 of this EA contains the background and location of the Proposed Action, along with the purpose and need, and any regulations associated with the Proposed Action. Chapter 2.0 gives a detailed analysis of the Proposed Action and all reasonable alternatives, including those that were considered but eliminated from detailed analysis. Chapter 3.0 describes the baseline environment conditions against which the Proposed Action and alternatives are evaluated. These environmental conditions include information on soils, air quality, land use, hydrology, biological resources, noise, cultural resources, and the current socioeconomic conditions of the area. Chapter 4.0 describes the

environmental consequences of the Proposed Action and alternatives. Chapter 5.0 presents environmental design measures. Chapter 6.0 describes the public involvement for this project. Chapter 7.0 lists the preparers involved in the preparation of this document, and Chapter 8.0 presents references cited. Appendices included are: (A) Site Photographs, (B) Federal Air Pollutant Standards, (C) Threatened and Endangered Species, (D) Consultation Letters, and (E) Notice of Availability.

## **1.5 APPLICABLE ENVIRONMENTAL STATUTES AND REGULATIONS**

This EA was prepared pursuant to Section 102 of the National Environmental Policy Act of 1969 (NEPA), as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ) [40 Code of Federal Regulations (CFR) Parts 1500-1508]. This EA should provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) (40 CFR 1508.9). Additionally, this EA complies with Army Regulation (AR) 200-2, Environmental Effects of Army Actions (December 23, 1988). Brief summaries of the Federal and State laws, regulations, executive orders (EO), and other entitlements that may be applicable to the proposed project are provided in the following sections.

### **1.5.1 Environmental Policy**

NEPA (42 United States Code [USC] 4321 et seq.), as implemented by the regulations promulgated by the President's CEQ (40 CFR Parts 1500-1508), establishes national policy, sets goals, and provides the means to prevent or eliminate damage to the environment. The principal objectives of NEPA are to ensure the careful consideration of environmental aspects of proposed actions in Federal decision-making processes and to look at alternatives that may provide a more environmentally acceptable solution. Additionally, NEPA ensures that environmental information is made available to decision makers and the public before decisions are made and actions are taken.

### **1.5.2 Executive Order 11514, Protection and Enhancement of Environmental Quality**

EO 11514, Protection and Enhancement of Environmental Quality, as amended by EO 11991, sets the policy for directing the Federal government in providing leadership in protecting and enhancing the quality of the nation's environment.

### **1.5.3 Executive Order 12898, Environmental Justice**

The purpose of EO 12898 is to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from proposed Federal actions and policies on minority and low-income populations.

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#### **1.5.4 Clean Air Act**

The Clean Air Act (CAA) amendments of 1990 established Federal air quality standards. According to air quality information received from Environmental Protection Agency (EPA) Region 9, Cochise County is in attainment with established national and state air quality standards for all criteria pollutants.

#### **1.5.5 Clean Water Act**

The Clean Water Act (33 USC 1251 et seq., as amended) establishes Federal limits, through the National Pollutant Discharge Elimination System (NPDES), on the amounts of specific pollutants that may be discharged to surface waters in order to restore and maintain the chemical, physical, and biological integrity of the water. Section 404 of the Clean Water Act regulates the discharge of fill material into waters of the U.S. No NPDES permit would be required for the proposed project. Additionally, as the proposed project is not greater than five acres in size, a stormwater pollution prevention plan would not be required.

#### **1.5.6 Endangered Species Act**

The Endangered Species Act (16 USC 1531-1543) requires Federal agencies to determine the effects of their actions on endangered or threatened species of fish, wildlife, plants, and critical habitats, and to take steps to conserve and protect these species.

#### **1.5.7 Cultural Resources Regulations**

The National Historic Preservation Act of 1966 (16 USC 470 et seq., as amended) requires Federal agencies to determine the effect of their actions on cultural resources, and to take certain steps to ensure these resources are located, identified, evaluated, and protected. The Archaeological Resources Protection Act (16 USC 470a-11, as amended) protects archaeological resources on Federal lands. If archaeological resources are discovered that may be disturbed during site activities, the NHPA would require permits for excavating and removing the resources.

#### **1.5.8 Other Regulations**

Additional Federal, State, local regulations and EOs which may apply to the Proposed Action and alternatives are listed below:

- American Indian Religious Freedom Act of 1978
- Arizona Native Plant Law
- Arizona Air Quality Standards
- Bald Eagle Protection Act (Public Law 90-535)

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- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Public Law 96-510), as amended by the Superfund Amendments and Reauthorization Act (SARA) (Public Law 99-499), 1986
  - Federal Compliance with Pollution Control Standards
  - Federal Facilities Compliance Act
  - Fish and Wildlife Coordination Act, as amended, USC 661, et seq.
  - Hazardous Materials Transportation Act (HMTA), 1975
  - Migratory Bird Treaty Act
  - Resource Conservation and Recovery Act (RCRA) (Public Law 94-580), 1976
  - Safe Drinking Water Act (SDWA), 1974
  - Solid Waste Disposal Act, 1980
  - Toxic Substances Control Act (TSCA) (Public Law 94-469)
  - Watershed Protection and Flood Prevention Act, 16 USC 1101, et seq.
  - Wetlands Conservation Act (Public Law 101-23)

## 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and all reasonable alternatives, including the No-Action Alternative. The Proposed Action would involve the installation of approximately two miles of lighting poles along the U.S.-Mexico border, south of Naco, Arizona. Under the No-Action Alternative, there would be no lighting poles installed. The area would remain as it currently exists and USBP efforts to curtail illegal drug trafficking would remain unchanged. Other than the Use of Portable Lighting Systems Alternative, no other reasonable alternatives meeting JTF-6 or USBP requirements were identified or carried forward in this analysis.

### 2.1 PROPOSED ACTION

The primary purpose of the Proposed Action is to install approximately two miles (1.0 mile both east and west of the truck POE) of new pole-mounted lighting equipment along the U.S.-Mexico border, in the vicinity of Naco, Arizona. The installation of lighting would allow for the illumination of the immediate border area, thus maximizing the USBP's ability to identify illegal entries during the night time hours, which is the period of greatest activity. Pole-mounted lights can be an effective deterrent to illegal drug trafficking. The USBP has stated that use of such lighting along the border has proven very effective in California (U.S. Army 1997c). A secondary use of these poles could be the installation of camera equipment at a later date.

The proposed lighting poles would connect to the existing poles located within the city boundaries and extend approximately 1.0 mile both east and west of the truck POE. The proposed project site is shown in Figure 1.0. The eastern section measures approximately 5,500 feet in length and the western section measures approximately 5,280 feet. Approximately 20 proposed lighting pole sites would be located in each section of the project. In lieu of selecting exact pole locations, a 100 percent biological and cultural resource survey was conducted along a 20-meter wide corridor, within the 60-foot right-of-way (ROW) from the international border, for the entire length of the proposed project area. This area is indicated in Figure 1.0.

The proposed lighting poles would be placed within the 60 feet ROW, north of the international boundary and installation activities would occur within a 20-meter radius at each pole site. Actual ground disturbance during construction would be less than five acres. The proposed poles would be concrete construction, approximately 40 to 45 feet in height. The poles would be placed below ground in a hole 6 to 10 feet deep, 16-18 inches in diameter and set in concrete to provide the necessary support for this structure. Illumination would be provided by four to six 1000-watt (W) high-pressure sodium floodlights protected with armored backs and side light shields. These shields direct the light toward specific areas and will protect the privacy of nearby residences. Electricity would be extended from existing power poles adjacent to the POE. To provide a continuous power source, poles would be placed approximately 300 to 400 feet apart. Poles located near the truck POE would not necessarily contain a light fixture, but may be used solely as a connection for the electrical supply.

The existing unimproved roads, which lead to each proposed pole site, would be used for access during construction. Minor road improvements could be necessary in some areas for equipment access to a pole site. The road improvements in this area were considered in a JTF-6 EA prepared in April 1994, and the improvements were consequently completed. Any grading found to be necessary as a result of the Proposed Action would be maintenance only and not construction of a new road; nor would these impacts exceed those described and analyzed for the previous action. In the event that the Proposed Action goes beyond minimal grading a Record of Environmental Consideration would be developed.

If the Proposed Action is implemented on the basis of this EA and a FONSI is issued, the proposed lighting project may begin when a military engineering unit is available in 1999. The project would take approximately six to eight weeks to complete. U.S. military engineer battalion personnel would perform the proposed project installation and road repair. It is anticipated that approximately 50 to 70 military personnel would be required to complete the Proposed Action and would be housed in Naco or Sierra Vista, Arizona. Personnel completing the Proposed Action would be expected to work between 7:00 a.m. and 7:00 p.m., six days a week during the installation period.

Equipment to be used during pole installation and road improvements may include: integrated tool carriers, backhoes with augers or an auger truck, backhoes with breakers, flat bed trucks, graders, water trucks, cranes, and forklifts. Equipment and construction materials would be stored at a prefabrication yard in a previously disturbed area to be identified.

Existing roads would be utilized for transport of equipment and personnel. Existing turnouts would also be used by equipment during construction to eliminate unnecessary impacts to resources outside of the Proposed Action area. Through an environmental briefing, all personnel would be informed about the limits of the construction area and actions permitted within and outside of that area. Additionally, construction limits would be flagged to ensure that the proposed activities stay within the construction area boundaries.

## **2.2 NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, there would be no lighting poles installed. The area would remain as it currently exists and USBP efforts to curtail illegal drug trafficking would remain unchanged. Although no significant adverse impacts would occur if implemented, the No-Action Alternative would not support the USBP's efforts in effectively reducing drug smuggling and trafficking near Naco, Arizona. The associated violent crime would continue along the project area. Therefore, the No-Action Alternative may reduce the USBP's ability to fulfill their mission as described in Chapter 1.0.

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## **2.3 USE OF PORTABLE LIGHTING SYSTEMS**

Another alternative considered was the increased use of portable lights. The portable lighting unit utilized by the USBP in many border areas is a Model BC4000LL, which consists of a six kilowatt (KW) diesel generator which powers four 1000 watt lights on a fifteen foot mast. According to USBP personnel, the use of portable lighting systems has been marginally effective in the past. In comparison to the Proposed Action, a portable lighting system would require additional manpower. Additionally, the potential for vandalism would increase, therefore, this lighting system would not be as effective as a deterrent to drug trafficking activities. Power outages with a portable system would also be more frequent, and diesel generators required for this system would increase pollution in the project area. Although the portable lighting system was considered only marginally effective, it was carried through this document for further analysis.

## **2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS**

### **2.4.1 Reduced Lighting Intensity**

An alternative that would reduce the intensity of the lighting would have been considered in response to the potential to interfere with nocturnal movement of any Federally listed threatened or endangered species. However, through informal consultation with U.S. Fish and Wildlife Service (USFWS) representatives, it was determined that there were no such species located in the proposed project area. Therefore, this alternative was not further considered.

### 3.0 AFFECTED ENVIRONMENT

The affected environment is the baseline against which potential impacts caused by the Proposed Action and alternatives are assessed. This chapter focuses on those resources specific to the proposed project area that have the potential to be affected by activities brought on by pole installation, minor road improvements, operation and maintenance of the system, and changes in USBP activities resulting from the construction activities. Resources that would most likely be affected (e.g., air, soil, cultural, biological resources, and noise) by the Proposed Action or alternatives are described in more detail than those not likely to be affected (e.g., water, socioeconomic, and aesthetics).

#### 3.1 AIR RESOURCES

Air resources describe the existing concentrations of various pollutants and the climatic and meteorological conditions that influence the quality of the air. Precipitation, wind direction, wind speed, and atmospheric stability are factors that determine the extent of pollutant dispersion.

##### 3.1.1 Climate and Meteorology

Climate in the vicinity of Naco, Arizona is characterized by mostly sunny days with hot summers and mild winters. The average summer temperature is 81° Fahrenheit (F) and winter temperatures average 44° F at the lower temperatures in the upper teens to highs in the 60's and 70's. Winds for most of the year generally blow from the south and east. Precipitation in the summer is due to moisture from the south; and winter precipitation is due to low pressure systems from the west. The average yearly rainfall is approximately 15 inches. Maximum rainfall occurs in the summer monsoon season (July, August, and September). During the winter months, snow accumulations range from 0 to approximately 6 inches. The average relative humidity ranges from 50 percent in the mornings to 33 percent in the afternoon (U.S. Army 1994).

##### 3.1.2 Air Quality

Cochise County, Arizona is in EPA Region 9 and is currently in attainment with established National and State air quality standards for all pollutants (Appendix B) (U.S. EPA 1996). According to EPA's Breathing Easier 1996 publication, Region 9 has shown a substantial improvement in air quality over the last 10 years. Despite an increase in automobile travel of almost 50 percent over the past decade, air pollutant levels have decreased overall by about one-third. This decrease can be seen in both a reduction in the number of days in which the air pollutant levels exceeded national air quality standards and a reduction in the actual air pollutant concentration levels for six major pollutants.

The following characterization of the baseline atmospheric environment is based on the ambient air quality and applicable rules, regulations, and standards for the Naco area. Arizona standards are

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identical to the National Ambient Air Quality Standards (NAAQS) published by the EPA as directed by the CAA.

Air quality in both the eastern and western sections of the proposed project area is typically very good. Prevailing meteorological conditions are not conducive to the concentration of pollutant emissions. Daily winds tend to disperse adverse air emissions. The major source of gaseous criteria pollutants is from urban activities in Naco, while particulate matter (PM<sub>10</sub>) is produced by a combination of windblown dust and uncontrolled burning and heavy industry conducted in Mexico near the U.S.-Mexico border. Heavy industry near the Naco area includes a cement plant located approximately one mile southeast of Naco and secondary plants located near the Mexican town of Cananea, approximately 30 miles southwest of Naco (U.S. Army 1994).

The Arizona Department of Environmental Quality (ADEQ), Monitoring Section is responsible for monitoring air quality in the area and currently has one PM<sub>10</sub> station and two MET (meteorological) stations located in Douglas, Arizona. The closest air monitoring station monitoring for the remaining priority pollutants is located in Tucson, Arizona (U.S. Army 1997b). Like the Tucson area, the Naco area is not expected to violate any of the gaseous standards.

### **3.2 LAND USE**

The proposed project area consists mainly of undeveloped land or border access roads. The proposed project area is located along the U.S.-Mexico border, near residential areas adjacent to the POE and near the city limits for Naco, Arizona. The majority of the proposed pole sites will be located along an existing fence line, approximately 60 feet from the U.S.-Mexico international border. This area consists of either undeveloped land adjacent to the dirt access roads or land used for livestock.

Access to those areas located adjacent to the city limits of Naco would be provided by public roads. Access to all pole sites is provided by unimproved dirt or gravel roads. The undeveloped proposed project areas are utilized primarily by the USBP agents and local landowners.

### **3.3 GEOLOGICAL RESOURCES**

Geological resources include physical surface and subsurface features of the earth such as topography, geology, soils, and the seismic nature of the area. These features are discussed in the following sections.

#### **3.3.1 Geology**

Southwest Arizona lies within the Basin and Range Physiographic Province and is characterized by intensely deformed and intruded strata within numerous relatively elevated and depressed fault blocks. The Basin and Range Province is subdivided into two physiographic sub-provinces, the

Mexican Highlands and the Sonoran Desert. The proposed project site lies within the Mexican Highland sub-province (U.S. Army 1995).

The project area is located in the Upper San Pedro Basin. The basin consists of the northwest-trending San Pedro River Valley and the surrounding mountains. Elevations range along the valley floor from 4,200 feet above mean sea level at the International Boundary to 3,300 feet above mean sea level at "the Narrows", which forms the basin's northern boundary. The mountains bordering the basin range from 5,000 to nearly 10,000 feet in elevation. The nearest mountains, and immediately north of the project area, are the Mule Mountains. The highest point in the general area is Huachuca Peak, with an elevation of 8,406 feet. Elevations in the proposed project area range from 4,200 to 4,800 feet above mean sea level.

### **3.3.2 Soils**

The main soil association in the proposed project area is the Tubac-Sonoita Grabe Association. Information on these soils was obtained from the Natural Resource Conservation Service (NRCS) in Tucson Arizona (NRCS, 1974). This association consists of well-drained soils on valley plains and wide floodplains in the Santa Cruz, Sulphur Springs, and San Simon valleys. The soils formed in mixed old and recent alluvium derived mostly from igneous rocks. Tubac and the similar Continental soils make up about 50 percent of the association. Sonoita soils are approximately 20 percent, and Grabe soils are 20 percent with minor soils making up approximately 10 percent.

Good yields of cotton, grain sorghum, alfalfa, small grain and vegetables are produced when the soils of this association are irrigated. The native vegetation is mostly grass in the higher elevations and desert shrubs and cacti at the lower elevations. Principal grasses are gramas, plains lovegrass, tobosa and annuals. Shrubs are mesquite, whitethorn, catclaw, burroweed, wolfberry, and cacti. Paloverde and ironwood occur at lower elevations. Under good management, these soils have fair to good potential for the production of livestock forage. Many areas are in poor condition from overgrazing due to their easy accessibility.

Factors limiting the potential of these areas for development of homesites and other community uses are slow permeability and clayey subsoils in the Tubac and Continental soils and the possibility of flooding of Grabe soils. Sonoita soils are well suited for community uses.

## **3.4 WATER RESOURCES**

The following sections describe the surface and groundwater sources, water quality and quantity, and surface and subsurface water movement. The hydrological cycle results in the transport of water into various media such as the air, the ground surface, and subsurface. Natural and human-induced factors determine the quality of water resources.

### 3.4.1 Groundwater

The proposed project area is located in the upper San Pedro Basin as designated by the Arizona Department of Water Resources (ADWR). Groundwater is found in two major units in this basin: 1) the streambed alluvium that forms the San Pedro River's channel and floodplain, and 2) the alluvial basin-fill sediments that fill the valley. The streambed alluvium is more permeable than the basin-fill, but the alluvium's limited areal extent only makes it an important local aquifer in the central valley along the San Pedro River's floodplain. The alluvial basin-fill sediments, consisting of the younger basin-fill, older basin-fill, and basal conglomerate, form the basin's principal aquifer. Consolidated bedrock found in the surrounding mountains yields only small amounts of water from localized aquifers.

According to the ADWR, the hydrologic characteristics of the regional aquifer vary widely with the degree of compaction and the extent of fine-grained layers in the basin-fill. The younger and older basin-fill units are generally fair-to-good aquifers and provide the bulk of water pumped from the regional aquifer. Well yields of 100 to 2,800 gallons per minute have been reported from the basin-fill aquifer. The basal conglomerate unit generally is tightly-cemented, but where weakly-cemented or fractured by faults, well yields of several hundred gallons per minute have been reported (ADWR 1998).

Groundwater in the basin-fill is found in both unconfined (water table) and confined (artesian) conditions. Depth to water in unconfined areas of the basin-fill in 1978 ranged from 50 to 570 feet below land surface. Water levels are generally stable in the basin except in the Fort Huachuca-Sierra Vista area where groundwater pumpage has created a large cone of depression. Depth to groundwater in the artesian aquifer is encountered around 500 to 1,000 feet below land surface (ADWR 1998).

Groundwater movement in the basin is from the higher elevations in the mountains towards the valley and then northwest along the riverbed. Groundwater moves readily between the younger and older basin-fill units and between the streambed alluvium as the younger basin-fill unit. In the confined areas, water from the artesian aquifers may leak upwards into the water-table aquifer. According to information from the ADWR, the total amount of groundwater in storage in the Upper San Pedro basin is estimated to be approximately 59 million acre-feet (ADWR 1998).

Mountain-front recharge is the main source of recharge for the regional aquifer and streambed infiltration is the main source of recharge for the streambed alluvium in the San Pedro River floodplain. Groundwater recharge estimates are 29,000 acre-feet per year from streambed infiltration and mountain-front recharge, and 900 acre-feet per year from underflow into the basin from Mexico (ADWR 1998).

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### **3.4.2 Surface Water**

The San Pedro River is the basin's major surface water drainage. The San Pedro River enters the basin at the International Boundary near Palominas, Arizona, and flows northwest for approximately 62 miles before leaving the basin north of Benson at "the Narrows." The San Pedro River is mostly ephemeral and only flows in response to local rainfall. The river does have a perennial stretch of about 18 miles between Hereford and a point just south of Fairbank. The perennial reach, near Charleston, is created by bedrock that forces groundwater to the surface. The proposed project area is located approximately 5 miles southeast from the San Pedro River. Within the proposed project area there are several minor unnamed wash and drainage ways. Larger washes located within the proposed project area include small arms of the Greenbush draw in both the eastern and western sections. This wash basin is located within the western section of the proposed project area.

### **3.4.3 Water Quality**

The quality of groundwater in the Upper San Pedro basin has been classified by the ADWR as suitable for most uses. Irrigation is the major water user in the basin with approximately 12,700 acres of land irrigated in the basin. Known groundwater-quality problems existing in the Upper San Pedro River basin include nitrate contamination of groundwater near St. David and sulfate contamination in the Bisbee-Naco area. In St. David, groundwater is contaminated with nitrates, lead, and sulfates, potentially due to the operation of a nearby explosive and chemical manufacturing firm. The area around the Apache Powder Company is not designated as a Federal Superfund site. Site investigation and remedial action have begun under the supervision of the USEPA, ADWR, and ADEQ. This site is located approximately 45 miles southwest of the proposed project area.

In the Bisbee-Naco area, the infiltration of leachate from a tailings pond near Warren, northeast of Naco, Arizona, appears to be contributing sulfate to the groundwater. This site is located approximately 10 miles from the proposed project area. There is no known groundwater contamination within or adjacent to the proposed project area (ADWR 1998).

## **3.5 BIOLOGICAL RESOURCES**

Biological resources include native plants and animals in the region around the proposed project site. The proposed project area supports a plant community defined as semidesert grassland, a perennial grass-scrub community that is usually located between desert scrub and higher elevation plant communities (Brown 1982). This habitat type is found in southeastern Arizona, southwestern New Mexico, and northern Mexico between elevations of 4,000 and 8,000 feet and receives an annual rainfall between 11 and 17 inches per year.

### **3.5.1 Vegetation**

The principal biotic community that dominates the majority of the proposed project area is considered as semidesert grassland. This community is dominated by grama grass – scrub series, black grama (*Bouteloua eripoda*) – velvet mesquite (*Prosopis velutina*) association on the rolling hills and ridges that characterize the study area. Other common grasses associated with this series include Rockroth gramma (*Bouteloua rothrockii*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Arizona cottontop (*Digitaria californica*), and sprucetop grama (*Bouteloua chondrosioides*).

Shrubby species found in this community include squawbush (*Rhus trilobata*), desert broom (*Baccharis sarathroides*), and snakeweed (*Gutierrezia sarothrae*). Agaves (*Agave parryi*) were also observed primarily along the existing access road and proposed project site. Small stands of ocotillo (*Fouquieria splendens*) were observed in several areas, along with small stands of scattered evergreen oaks, including Emory oak (*Quercus emoryi*) and Mexican blue oak (*Quercus oblongifolia*).

Vegetation at the proposed project site was sparse in many places and nonexistent in others. Specific vegetation observed in both the eastern and western portions of the proposed project area included agave, fairy duster (*Calliandra eriophylla*), mesquite (*Prosopis juliflora*), desert broom, catclaw acacia (*Acacia greggii*), white or scrub oak (*Quercus spp.*), prickly pear (*Opuntia spp.*), yucca (*Yucca elata*, *Y. baccata*), paloverde (*Cercidium floridum*), beargrass (*Nolina microcarpa*), croton (*Croton corymbulosus*), and Johnsongrass (*Sorghum halpense*). Vegetation throughout the proposed project area has been previously disturbed through grazing, previous use, and the development of access roads.

### **3.5.2 Wildlife**

Common reptiles that could be found within the general project area include the Sonora Salamander (*Ambystoma stebbinsi*), Couch's Spadefoot (*Scaphiopus couchi*), western spadefoot (*S. hammondi*), Tarahumara frog (*Rana tarahumarae*), Colorado River toad (*Bufo alvarius*), Great Plains toad (*B. cognatus*), red-spotted toad (*B. punctatus*), Sonoran green toad (*B. retiformis*), canyon treefrog (*Hyla arenicolor*), mud turtle (*Kinosternon arizonense*), Sonoran mud turtle (*K. sonoriense*), Tucson banded gecko (*Coleonyx bogerti*), zebra-tailed lizard (*Callisaurus draconoides*), southwestern greater earless lizard (*Cophosaurus texanus*), Sonoran collared lizard (*Crotaphytus nebrius*), leopard lizard (*Gambelia wislizenii*), regal horned lizard (*Phrynosoma solare*), Clark's spiny lizard (*Sceloporus clarki*), desert spiny lizard (*S. magister*), common tree lizard (*Urosaurus ornatus*), Arizona alligator lizard (*Gerrhonotus kingi*), Gila monster (*Heloderma suspectum*), giant spotted whiptail (*Cnemidophorus burti*), Sonoran spotted whiptail (*C. sonorae*), western whiptail (*C. tigris*), desert-grassland whiptail (*C. uniparens*), glossy snake (*Arizona elegans noctivaga*), western hook-nosed snake (*Gyalopion canum*), night snake (*Hypsiglena torquata*), common kingsnake (*Lampropeltis getulus*), Sonora mountain kingsnake (*L. pyromelana*), Sonora whipsnake (*Masticophis bilineatus*), coachwhip (*M. flagellum*), long-nosed snake (*Rhinocheilus lecontei*), Big

Bend patch-nosed snake (*Salvadora deserticola*), ground snake (*Sonora semiannulata*), Mexican black-headed snake (*Tantilla antriceps*), Mexican garter snake (*Thamnophis eques*), checkered garter snake (*T. marcianus*), Lyre snake (*Trimorphodon biscutatus*), Arizona coral snake (*Micruroides euryxanthus*), western diamondback rattlesnake (*Crotalus atrox*), banded rock rattlesnake (*C. lepidus*), and the black-tailed rattlesnake (*C. molossus*) (Bebler and King, 1979).

Common mammals found in the general project area include the white-tailed deer (*Odocoileus virginianus coussii*), coyote (*Canis latrans*), javelina (*Dicotyles tajacu*), ringtail (*Bassariscus astutus*), coati (*Nasua nasua*), striped skunk (*Mephitis mephitis*), hooded skunk (*M. macroura*), jaguar (*Felis onca*), mountain lion (*F. concolor*), bobcat (*F. rufus*), pronghorn (*Antilocapra americana*), desert shrew (*Notiosorex crawfordi*), long-tongued bat (*Choeronycteris mexicana*), Yuma myotis (*Myotis yumanensis*), cave myotis (*M. velifer*), California myotis (*M. californicus*), western pipistrelle (*Pipistrellus hesperus*), Southern yellow bat (*Lasiurus ega*), spotted bat (*Euderma maculatum*), pallid bat (*Antrozous pallidus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), desert cottontail (*Sylvilagus audubonii*), eastern cottontail (*S. floridanus*), black-tailed jack rabbit (*Lepus californicus*), white-sided jackrabbit (*L. callotis*), spotted ground squirrel (*Spermophilus spilosoma*), rock squirrel (*S. variegatus*), Arizona gray squirrel (*Sciurus arizonensis*), southern pocket gopher (*Thomomys umbrinus*), Botta's pocket gopher (*T. bottae*), Bailey's pocket mouse (*Perognathus baileyi*), desert pocket mouse (*P. penicillatus*), banner-tailed kangaroo rat (*Dipodomys spectabilis*), Merriam's kangaroo rat (*D. merriami*), western harvest mouse (*Reithrodontomys megalotis*), cactus mouse (*Peromyscus eremicus*), brush mouse (*P. boylii*), southern grasshopper mouse (*Onychomys torridus*), and the white-throated woodrat (*Neotoma albigula*) (Whitaker, 1980).

Common birds species in the general project area include the turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), red-winged blackbird (*Agelaius phoeniceus*), mourning dove (*Zenaida macroura*), white-winged dove (*Z. asiatica*), Inca dove (*Columbina inca*), common ground dove (*C. passerina*), scaled quail (*Callipepla squamata*), Gambel's quail (*C. gambelii*), Harris' Hawk (*Parabuteo unicinctus*), crested caracara (*Caracara plancus*), greater roadrunner (*Geococcyx californianus*), ferruginous pygmy-owl (*Glaucidium brasilianum*), common poorwill (*Phalaenoptilus nuttallii*), ash-throated flycatcher (*Myiarchus cinerascens*), brown-crested flycatcher (*M. tyrannulus*), verdin (*Auriparus flaviceps*), cactus wren (*Campylorhynchus brunneicapillus*), rock wren (*Salpinctes obsoletus*), canyon wren (*Catherpes mexicanus*), curve-billed thrasher (*Toxostoma curvirostre*), pyrrhuloxia (*Cardinalis sinuatus*), varied bunting (*Passerina versicolor*), Botteri's sparrow (*Aimophila botterii*), Cassin's sparrow (*A. cassinii*), black-throated sparrow (*Amphispiza bilineata*), and the bronzed cowbird (*Molothrus aeneus*) (Bull and Farrand, 1996).

### 3.5.3 Aquatic

Aquatic habitat is limited to small drainages or wash depressions located within the proposed project area as described in Section 3.4.2. No permanent surface water resources capable of

supporting fish species were present at the proposed project location. No permanent surface water resources were located within the 20-meter wide corridor surveyed along the proposed project site. Therefore, no amphibians or fish were observed during the November 1998 site visit.

### 3.5.4 Threatened and Endangered Species

Many Federally- and State-listed threatened and endangered species of plants, fish, and wildlife could occur in Cochise County. A list of these species as provided by the ANHP and the USFWS can be found in Table 3-1. No evidence of the Federally- or State-listed species threatened or endangered species were observed during the November site visit. Additional information on these species can be found in Appendix C.

**Table 3-1 List of Threatened, Endangered, or Species of Concern**

COMMON NAME	SCIENTIFIC NAME	ESA	Critical Habitat	USFWS	WSCA	NPL	NESL
Jaguar	<i>Panthera Onca</i>	LE					
Jaguarundi	<i>Felis yagouaroundi tolteca</i>	LE					
Mexican Gray Wolf	<i>Canis lupis baileyi</i>	LE					
Ocelot	<i>Felis pardlis</i>	LE					
Chiricahua Leopard Frog	<i>Rana chiricahuensis</i>	C		S	WC		
Lowland Leopard Frog	<i>R. Yavapaiensis</i>	SC		S	WC		
Baird's Sparrow	<i>Ammodramus bairdii</i>	SC		S	WC		
Ferruginous Hawk	<i>Buteo regalis</i>	C		S			Y
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	LE	Y	S	WC		Y
Northern Aplomado Falcon	<i>F. femoralis septentrionalis</i>	LE					
Bald Eagle	<i>Haliaeetus leucocephalus</i>	LE					
Whooping Crane	<i>Grus Americana</i>	LE		S	WC		
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	LE					
California Condor	<i>Gymnops californaimus</i>	LE		S			
Loggerhead Shrike	<i>Lanium ludovicianus</i>	C					
Mountain Plover	<i>Charadruis montanus</i>	C		S	WC		
Southwestern Willow Flycatcher	<i>Empidonax trailliiextimus</i>	LE					
Yaqui Chub	<i>Gila purpurea</i>	LE			WC		
Beautiful Shiner	<i>Cyprinella formosa</i>	LT		S	WC		

Yaqui Topminnow	<i>Poeciliopsis occidentalis sonoriensis</i>	LE	S	WC		
Yaqui Catfish	<i>Ictalurus pricei</i>	LT				
Lesser Long-Nosed Bat	<i>Leptonycteris curasoae yerbabuena</i>	LE	S	WC		
California Leaf-Nosed Bat	<i>Macrotus californicus</i>	C				
Mexican Long-Tongued Bat	<i>Choeronycteris mexicana</i>	C				
Southwestern Cave Bat	<i>Myotis velifer brevis</i>	C				
Arizona Shrew	<i>Sorex arizonae</i>	SE	S	WC		
Chiricahua Western Harvest Mouse	<i>Reithrodontomys megalotis arizonensis</i>	C				
Huachuca Golden-Aster	<i>Heterotheca rutteri</i>					
Needle-Spined Pineapple Cactus	<i>Coryphantha Robbinsorum</i>	LT	S		HS	
Bartram's Stonecrop	<i>Graptopetalum bartrami</i>	C				
Huachuca Water Umbel	<i>Lilaeopsis scaffneriana var recurva</i>	LE	S		HS	
Canelo Hills Ladies'-Tresses	<i>Spiranthes delitescens</i>	LE	S		HS	
Sonoran Desert Tortoise	<i>Gopherus agassizii</i>	SC	S	WC		
Canyon Spotted Whiptail Lizard	<i>Cnemidophorus burti</i>					
Massasauga	<i>Sistrurus catenatus</i>	LT	S	WC		
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	C				
Sonoran Tiger Salamander	<i>Ambystoma tigrinum stebbinsi</i>	LE	S			
Mexican Garter Snake	<i>Thamnophis eques megalops</i>	SC	S	WC		

C Species of Concern  
 ESA Endangered Species Act (1973 as amended).  
 LE Listed Endangered: imminent jeopardy of extinction  
 NESL Navajo Endangered Species List (1997).  
 NPL Arizona Native Plant Law, Arizona Department of Agriculture. HS – Highly safeguarded, no collection allowed. SR – Salvage restricted, collection only with permit.  
 S Sensitive: those taxa occurring on National Forests in Arizona which are considered sensitive by the Regional Forester.  
 SC Species of Concern. The terms “Species of Concern” or “Species at Risk” should be considered as terms-of-art that describe the entire realm of taxa whose conservation status may be of concern to the USFWS, but neither term has official status.  
 USFWS U.S. Fish and Wildlife Service  
 WSCA/WC Wildlife of Species Concern in Arizona. Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Arizona Game and Fish Department’s listing of Wildlife of Special Concern in Arizona October 1996 Draft.  
 Critical Habitat Y critical habitat has been designated.

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Several Federally-listed fauna species were reported as having the potential to occur in Cochise County. The following information briefly describes the preferred habitat of these species.

- The Jaguar in Arizona ranges widely throughout a variety of habitats from the Sonoran Desert to the conifer forests. The cat prefers brush, forested areas, swamps, and arid mountainous scrub. The most recent records of a jaguar in the U.S. are from the New Mexico/Arizona border area and in south-central Arizona, both in 1996. Unconfirmed sightings and tracks continue to be reported.
- The Jaguaundi can be found in semi-arid thorny forests, deciduous forests, humid pre-montaine forests, upland dry savannahs, swampy grasslands, riparian areas, and dense brush. Unconfirmed reports of individuals in the southern portion of the State continue to be received. No specimens have been collected in Arizona.
- The Mexican Gray Wolf prefers a chaparral, woodland, or forested habitat, but has been known to cross desert areas. Unconfirmed reports of individuals in the southern part of the State continue to be received; however, the majority of the individuals are believed to reside in Mexico.
- The Ocelot prefers a habitat of humid tropical and sub-tropical forests, savannahs, and semi-arid thornscrub. Unconfirmed reports of individuals in the southern part of the State of have been received.
- The Sonoran Tiger Salamander's habitat varies from arid sagebrush plains to mountain forests, where the ground is easily burrowed. They are seen mostly at night following heavy rains and they live beneath debris near water or in mammal burrows. Known habitat for this species occurs in stock tanks and impounded cienegas in San Rafael Valley, and the Huachuca Mountains.
- The Bald Eagle prefers large trees or cliffs near water with abundant prey, which are not present in the proposed project area.
- The Mexican Spotted Owl nests in older forests of mixed conifer or ponderosa pine-gambel oak type, in canyons. Sites with cool microclimates appear to be of importance or are preferred.
- The Northern Aplomado Falcon formerly nested in the southwestern U.S. and occurs only as an accidental. Good habitat for this species contains low ground cover and mesquite or yucca for nesting platforms. There have been no recent confirmed reports of this species in Arizona.
- The American Peregrine Falcon prefers open country, especially along rivers, also near lakes and along coasts and in cities.
- The Whooping Crane prefers freshwater bogs and winters on coastal prairies.
- The Southwestern Willow Flycatcher prefers cottonwood/willows and tamarisk vegetation communities along rivers and streams. Critical habitat for this species exists on portions of the 100-year floodplain on the San Pedro and Verde Rivers, Wet Beaver and West Clear Creeks, including Tavasci Marsh and Ister Flat, the Colorado River, the Little Colorado River, and the west, east and south forks of the Little Colorado River.
- The Yaqui Topminnow is found in small streams, springs, and cienegas vegetated shallows and has historically existed in the Santa Cruz River near Tucson.

- The Yaqui Chub is found in perennial and intermittent small to moderate streams with boulders and cliffs.
- The Lesser Long-Nosed Bat prefers the habitat offered by caves and mines where the mountains rise from the desert. This species day roosts in caves and abandoned tunnels and forages at night on nectar, pollen, and fruit of paniculate agaves and columnar cacti.

Likewise, there are three Federally-listed plant species for Cochise County. The Needle-Spined pineapple cactus prefers is found in semi-desert grassland communities. The Huachuca water umbel is typically located in cinegas, perennial low gradient streams or wetlands. This species can also be found adjacent to Sonora, Mexico. The Canelo Hills ladies-tresses are found in finely grained, highly organic, saturated soils of cienegas. Potential habitat for this species may occur in Sonora, Mexico, but no populations have been found. Although the potential exists for finding suitable habitat for the Federally-listed plant species within some portion of the project area, these three particular species are not likely to exist in the previously disturbed areas proposed for pole locations.

There are 17 Federally-listed species of concern for Cochise County. Most of these species, with the exception of the mountain plover, prefer floodplain terraces, pools, springs or streams, rivers or stock tanks. No permanent surface water resources exist within or adjacent to the proposed project location. The mountain plover typically prefers a sandy soil habitat and has historically been sighted in this area as a migratory species.

### 3.6 NOISE

The proposed project area is located away from noise sensitive sites such as schools, churches, hospitals, etc. The ambient noise environment within the general area is typical of rural areas with projected noise levels ranging from about 35 to 55 average-weighted decibels (dBA) day/night noise level (Ldn). These levels may be substantially higher when the wind blows (U.S. Army 1995). Current noise in this area is generated by USBP vehicles patrolling the border and vehicles passing through the POE.

### 3.7 CULTURAL RESOURCES

Historic and archaeological resources are nonrenewable resources whose values may be easily diminished by physical disturbances. These resources are those items, places, or events considered important to a culture or community for reasons of history, tradition, religion, or science.

Aztlan Archaeology, Inc. (AAI) conducted a cultural resources inventory involving archival investigations (Class I overview) and a pedestrian survey (Class III survey) of the proposed project area on November 23, 1998. As the exact location of each individual pole has not been selected, a 100 percent coverage of the 20-meter wide corridor for the entire proposed project area was surveyed.

Prior to conducting the fieldwork, survey and site records at the Arizona State Museum (ASM) were reviewed for pertinent information, along with National Register of Historic Places listings, and AAI in-house records. Historic General Land Office (GLO) maps were also obtained from the Bureau of Land Management (BLM) Public Room in Phoenix, Arizona. This information indicated that two prior archaeological surveys have been conducted within a mile of the proposed project area. A third survey was conducted in 1991, however, no information was available in the survey files at the ASM, although the sites found during the recent field survey were recorded at the ASM.

#### ASM Survey No. 1976-005

On September 20, 1976, the Cultural Resources Management Section of the ASM conducted a 10-acre survey for the Naco Sewer Commission in portions of Section 18. No sites were recorded by this project.

#### ASM Survey No. 1978-010

John S. Collins & Associates contracted the Cultural Resources Management Section of the ASM to survey 313 acres and a 2.6 mile-long right-of-way in parts of Sections 11, 12, 13, and 14, and the N ½ S ½ of Section 18. The fieldwork took place on March 20-22, 1978. Although one site was recorded during the survey, it is not located within a mile of the current project area.

#### Unrecorded Survey

Geo-Marine, Inc., performed surveying and monitoring of the Douglas-Naco Arizona sector of the international border for the USACE between August and November, 1991. The survey consisted of a 48.5 mile-long ROW along the international border. Six of the 41 sites recorded or evaluated by Geo-Marine are located within a mile of the current project area.

The four historic GLO maps, dated May 1899, May 1901, April 1909, and June 1917, did not provide any relevant historical information. The ASM site files indicated that 10 archaeological sites have been previously recorded in or within a 1-mile radius of the proposed project area. One of the sites is also listed on the National Register of Historic Places.

Additionally, two cultural resources in the Naco area are currently listed on the National Register of Historic Places. (NRHP), one prehistoric and one historic. The prehistoric resource is the Naco-Mammoth Kill Site and the historic resource is the Naco Border Station also known as the Naco Customs House located at the Naco POE.

### **3.8 AESTHETIC RESOURCES**

Aesthetic resources consist of the natural and manmade landscape features that appear indigenous to the area and give a particular environment its visual characteristics. The current visual characteristics of the general project area is mostly of open space and low rolling hills covered by

native grasses and vegetation. A trailer park is located on the west side of the POE, and isolated dwellings are located on the Mexican side in this direction. Cattle pens with adjacent grazing areas, with a few isolated dwellings were located on the east side of the POE. Most of the aesthetic resources in the general area have been degraded due to existing development, border fencing, and large amounts of trash and debris scattered along both sides of the border. Background vistas outside of the city consist of distant views of the surrounding mountains.

### 3.9 SOLID AND HAZARDOUS WASTE

According to Naco USBP representatives, there is no known or suspected toxic and/or hazardous material contamination within the proposed project area. Additionally, there are no known historic land uses within the project area (such as industrial uses) that might have resulted in toxic or hazardous material contamination of the underlying soil and/or groundwater resources. However, due to the evidence of illegal and uncontrolled dumping of trash in immediate vicinity, it is possible that potentially hazardous wastes may have been dumped.

### 3.10 SOCIOECONOMIC DATA

According to the Arizona Department of Economic Security and the U.S. Census Bureau, the 1996 statistics indicated the population of Cochise County, Arizona was 110,062. Making up this number, approximately 79,724 persons were listed as white; 5,078 as black; 790 as American Indian, Eskimo, or Aleut; 2,247 as Asian or Pacific Islander; and the remaining persons were listed as other races.

The 1992 Economic Census for Cochise County lists approximately 5,173 firms in Cochise County. Of these firms, approximately 1,008 are listed as minority-owned firms and 1,991 are listed as women-owned firms.

In 1994, the civilian labor force for Cochise County totaled 41,770, and the county unemployment rate was 9.8 percent. Within the county, the leading employment sectors include agriculture, cattle, manufacturing, retail trade, government, and services. Approximately 48 percent of the total land in Cochise County is dedicated to farming (U.S. Census Bureau, 1996). The estimated annual median household income for Cochise County is listed as ranging from \$24,181 to \$28,500.

The town of Naco, Arizona is located on the International Border separating the U.S. and Mexico. Approximately 700 people reside in the City of Naco and most of the population of Naco is engaged in agriculture, cattle, or small retail businesses. Trade has been developed between Naco, Arizona and Naco, Sonora, Mexico and includes such commodities as copper, firewood, charcoal, turquoise, and electric goods (U.S. Army 1994). With regard to socioeconomics, both cities benefit from sharing occupational/economic activities.

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#### 4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

Based on discussions with USBP personnel, Federal and State agencies, and local authorities, as well as comparisons with similar USBP activities, several environmental factors potentially associated with the Proposed Action have been identified. An environmental consequence or impact is defined as a modification in the existing environment brought about by mission and support activities. Impacts can be beneficial or adverse, a primary result of an action (direct) or a secondary result (indirect), and can be permanent or long-lasting (long-term) or of short duration (short-term). Impacts can vary in degree from a slightly noticeable change to a total change in the environment.

Short-term impacts would occur along the border during and immediately after the construction of the proposed lighting project. For this project, short-term impacts are defined as those tied to the first two years following project implementation, whereas long-term impacts are those lasting more than two years.

Impact significant criteria are presented for each affected resource. These criteria are based on existing regulatory standards, scientific and environmental knowledge, and/or best professional judgment. Potential impacts for this project were classified at one of three levels: significant, insignificant (or negligible), and no impact. Significant impacts (as defined in CEQ guidelines 40 CFR 1500-1508) are effects that are most substantial, and therefore should receive the greatest attention in decision-making process. Insignificant impacts would be those impacts that result in changes to the existing environment that could not be easily detected. No-impact actions would not alter the existing environment. In the following discussions, impacts are considered adverse unless identified as beneficial.

Potential environmental consequences to each resource section include the following subcategories:

- Impacts. The level and duration of impacts that would occur as a result of the Proposed Action and the No-Action Alternative.
- Mitigation. Mitigation measures that could be applied to avoid or further reduce adverse impacts. Mitigation is discussed in Chapter 5.0.

Cumulative impacts and irreversible and irretrievable commitment of resources are discussed in separate sections following the discussions of each specific resource. Cumulative impacts are those which result from the incremental impacts of an action added to other past, present, and reasonably foreseeable actions, regardless of who is responsible for such actions. Irreversible and irretrievable impacts are permanent reductions or losses of resources that, once lost, cannot be regained.

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This section of the EA will discuss only those environmental factors that would be impacted by the Proposed Action or the No-Action Alternative. Table 4-1 presents a comparison of the potential impacts by each area of concern.

**Table 4-1 Comparison of Potential Impacts**

Area of Impact		Proposed Action	Use of Portable Lighting Alternative	No Action
Air Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Land Use	ST:	No Impact	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Geological Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Water Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	No Impact	No Impact
Cultural Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	No Impact	No Impact
Biological Resources	ST:	Insignificant	Insignificant	Insignificant
	LT:	No Impact	Insignificant	Insignificant
Noise Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Aesthetic Resources	ST:	Insignificant	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Solid/Hazardous Waste	ST:	No Impact	Insignificant	No Impact
	LT:	No Impact	Insignificant	No Impact
Socioeconomic	ST:	Beneficial	Beneficial	Insignificant
	LT:	Beneficial	Beneficial	Insignificant

ST = Short-term Impact.  
 LT = Long-term Impact.  
 Beneficial = Impact would be favorable, producing an overall benefit.  
 Insignificant = Perceptible, but not significant impacts.  
 Significant = Potential impact which requires concern.

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## 4.1 AIR RESOURCES

### 4.1.1 Proposed Action

Under the Proposed Action, exhaust pollutants would be created from on-site heavy equipment used for pole placement and vehicles bringing workers and building materials to the site. A truck-mounted gasoline-powered auger would be used during installation and an excavator would be used to install the poles. Additional equipment which could be used at the project site includes: a portable generator for welding activities; a crane for pole placement; a compressor for hand-operated tools; high-reach trucks for mounting lights, forklifts for moving materials, ready-mix trucks for hauling and pouring concrete, and trucks to deliver construction materials. It is assumed that as many as four pieces of heavy equipment could be used simultaneously during the construction phase. These pieces are typically moved on-site and remain for the duration of construction.

It was assumed that a 400 square feet of area (20 feet x 20 feet) would be disturbed at each pole location. This resulted in approximately 16000 square feet or 0.4 acres of disturbed surface area (400 feet<sup>2</sup> x 40 pole sites). Approximately 50 to 70 people would be required to install the poles and light equipment. In the air quality calculations, it was assumed that 60 people would commute to and from the project site for an average period of 45 days.

Such increases or impacts on ambient air quality during the construction/installation phase would be expected to be short-term and insignificant, and can be reduced further through the use of standard dust control techniques, including roadway watering and using chemical dust suppressants. Although some fugitive dust will be associated with road use, it would not be significantly greater than amounts currently produced. There would be no emissions associated with operation of the lights, and no longer-term impacts would be expected to occur.

The Proposed Action would not require any permitting action and would not create any air emissions that would jeopardize the Federal attainment status of the Air Quality Region, or cause an exceedance in the allowable Prevention of Significant Deterioration (PSD) increment for the region. Additionally, any emissions created by the Proposed Action would not be within conformance of the SIP.

### 4.1.2 No-Action Alternative

Under the No-Action Alternative, baseline conditions would not change; therefore, no impact is expected from this alternative.

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### **4.1.3 Use of Portable Lighting Systems Alternative**

Under this alternative, the use of the generators necessary to run the portable lighting systems will cause low amounts of air emissions. It will be necessary for these generators to run for approximately 12 hours each day, depending on the season. There will be both short-term and long-term insignificant air impacts from the operations of this alternative.

## **4.2 LAND USE**

### **4.2.1 Proposed Action**

No impacts on land use would be expected from project-related activities, considering the ongoing disturbance caused by the illegal entry of drugs, people, vehicles, and associated criminal and violent activity. Installation of light and power poles would require the surface disturbance of approximately 400 square feet at each pole location. With the exception of the physical pole locations, other areas disturbed by construction activities would be insignificant, and would return to their original state over time. Project lighting would illuminate a large area that would otherwise be dark; however, less disturbance of the area is anticipated after the lighting system is installed because drug trafficking activity would be under direct surveillance of the USBP.

Under the Proposed Action, the overall land use of the project areas adjacent to each pole site would not change. The proposed operation of the floodlights would not have impacts to grazing and pastureland in the general project area. Additionally, there would be a beneficial effect as a result of an expected decrease of property damage in the City of Naco, Arizona and surrounding areas.

### **4.2.2 No-Action Alternative**

Under the No-Action Alternative, baseline conditions would not change. The areas would continue to be used for the illegal entry of drugs, people, vehicles, and associated criminal and violent activity.

### **4.2.3 Use of Portable Lighting Systems Alternative**

No impacts on land use would be expected from the use of portable lighting systems, considering the ongoing disturbance caused by the illegal entry of drugs, people, vehicles, and associated criminal and violent activity. Nor would the operation of the portable light systems have an impact to grazing and pastureland in the general project area. However, the portable lighting systems would illuminate a smaller area than permanent lighting systems on higher poles and may not be as effective a deterrent as permanent light poles.

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## **4.3 GEOLOGICAL RESOURCES**

### **4.3.1 Proposed Action**

It is not likely that geologic hazards such as seismic events, landslides, subsidence, or increased flooding would be impacted from either the installation of the light and power poles or the operation of the floodlights in the general project area. Likewise, installation and operation of the lights would not be likely to cause a geologic hazard in the general project area.

The probability of any soil contamination from on-site fuel systems could result from any spills as a result of these activities would be reduced with the use of secondary containment. Additionally, no permanent sanitary facilities are planned for the project site, and any waste material generated during construction will be disposed of at an approved waste disposal site.

### **4.3.2 No-Action Alternative**

No impacts to topography or physiography would be expected from the No-Action Alternative.

### **4.3.3 Use of Portable Lighting Systems Alternative**

It is not likely that geologic hazards such as seismic events, landslides, subsidence, or increased flooding would be impacted from the use of portable lighting systems. Likewise, the use of these systems would not be likely to cause a geologic hazard in the general project area.

The portable lighting systems rely on generators as a power source. Because of the fuels and lubricants associated with the generators, these systems could increase the potential for soil contamination due to maintenance concerns or vandalism. Additionally, unlike the Proposed Action, there is no secondary containment with these systems.

## **4.4 WATER RESOURCES**

### **4.4.1 Proposed Action**

The surficial aquifer is recharged from precipitation at the proposed project site and the surrounding areas. The Proposed Action would not be expected to increase the amount of paved areas within the general area; therefore, no impact to the surficial aquifer recharge area would be expected. No water usage would be expected for the operation of the Proposed Action, and only minimal water usage would be expected during the construction phase of the proposed project.

No deterioration of natural drainages, disruption of drainage patterns, or degradation of existing surface water quality is expected from project implementation. Additionally, the nearest surface water resource is the San Pedro River, which is located approximately 5 miles southeast of the

proposed project site. If required, a stormwater pollution prevention plan would be developed and implemented prior to construction. Although several minor canyons and wash areas are located in the outlying areas of the proposed project area, all the pole locations were selected to allow for minimal disturbance and to provide greater light coverage. None of the pole locations will be located within a canyon or wash area or adjacent to a surface water pond. Additionally, there are no waters of the U.S. located within the project area; thus, a Section 404 permit for dredging or filling would not be required as a result of the Proposed Action.

#### **4.4.2 No-Action Alternative**

No change in baseline conditions would be expected from the No-Action Alternative.

#### **4.4.3 Use of Portable Lighting Systems Alternative**

The use of portable lighting systems would not be expected to impact the surficial aquifer recharge area, area natural drainages, or existing surface water resources in the project area. Although several minor canyons and wash areas are located in the proposed project area, the portable units would be placed in selected sites which would allow for minimal disturbance and to provide greater light coverage. However, some environmental concerns could result from leakage of generator fuels or oils to the ground surface. During periods of rainfall, water runoff could carry the leaked substances into nearby drainage ways.

### **4.5 BIOLOGICAL RESOURCES**

#### **4.5.1 Proposed Action**

A site visit was conducted on November 23, 1998 of the proposed project site by a Biologist from Ecological Communications Corporation and a Naco District USBP Agent. A 100-percent pedestrian survey of a 20-meter wide corridor was conducted along the 60-foot line from the International Boundary. This survey was conducted in an effort to survey and inventory biological resources at the proposed project area, and evaluate the potential effects of the Proposed Action on these resources. Prior to the site reconnaissance survey, all available project-related literature was reviewed and information from the Arizona Natural Heritage Program (ANHP) and the USFWS was obtained regarding Federally and State-listed threatened and endangered species or special species of concern. Wildlife species noted during the November site visit included a domestic dog (*Canidae*), several species of dove, sparrows and ravens, and domestic cattle. No other species were noted at that time.

##### **4.5.2.1 Vegetation**

Construction and installation for the proposed poles would disturb approximately 0.4 acres (20-foot by 20-foot disturbance zone for each of the 40 sites) of land. Most of the adjacent areas to each

pole site have been previously disturbed either through grazing or road placement. Additionally, exact pole placement may be selected at any position within the entire 20-meter wide corridor, depending on best placement for avoiding sensitive vegetation with the project area. Therefore, a minimal amount of vegetation would be disturbed throughout the project area.

Insignificant impacts to native plant species protected by the Arizona Native Plant Law may occur during the proposed pole placement. However, avoidance of areas in which these protected species occur would be implemented wherever possible in the siting of the poles. Coordination with the Arizona Department of Agriculture has been conducted to facilitate relocation of protected specimens, where necessary, with implementation of the Proposed Action.

Due to the high degree of previous disturbance of the proposed project sites and the regional abundance of the Arizona native plant species, the impact from pole placement would not be significant. The existing access roads adjacent to the project area supports little vegetation; therefore, only short-term, insignificant impacts to vegetation would be expected in this area.

The long-term effect of night-time lighting on plant communities is a relatively new area of biological research. Evidence does exist that shows lights emitting energy over the 300 to 800 nonometer spectral range are effective in influencing the photosynthesis and photoresponses of plants. However, the amount of energy produced by the lights selected for this project would not be anticipated to be enough to produce any measurable effects on the plant communities present in the proposed project area (U.S. Army 1997c).

#### 4.5.2.2 Wetlands and Floodplains

There are no wetlands or floodplains located on the Proposed Action site or within the immediate surrounding area of the project site. These resources would not be impacted by the Proposed Action.

#### 4.5.2.3 Fish and Wildlife

The Proposed Action would have no impact on fish species because the proposed construction activities would not take place in or near flowing or standing water. The only wildlife species which could be impacted from the Proposed Action would be small mammal, reptiles, and bird species. These impacts to such resources, such as foraging grass habitat and ground nesting habitat, would be insignificant due to the low amount of actual area disturbed by the Proposed Action. No long-term impacts to either small mammal, reptiles, and bird populations would be expected. Larger terrestrial wildlife movements in the proposed construction areas should not be affected due to the short duration of time for pole installation at each site. Additionally, pole installation activities would be conducted only during daylight hours. No construction activities would be conducted during the early morning hours or night time hours when wildlife species are most active. Therefore, impacts on wildlife species are expected to be short-term and minimal.

The long-term effect of an increased photoperiod on mobile wildlife species would be expected to be insignificant. Given the vast open area within the proposed project area, animals can easily relocate to adjacent unaffected areas. The lighting proposed within the general project area would not be constant. The position of the proposed light poles will allow for some dark areas to still exist. In addition, the "internal clocks" of many species maintain the species' daily rhythms regardless of the extended presence of daylight or nighttime conditions (U.S. Army 1997c).

#### 4.5.2.4 Threatened and Endangered Species

Under the Endangered Species Act, formal consultation with the USFWS is required for any action that may affect Federally-listed species. Additionally, Federal agencies are required to ensure that any action authorized, funded, or carried out by such agencies would not be likely to jeopardize the continued existence of any threatened or endangered species. A copy of the consultation letters with the USFWS and Arizona Fish and Game Department is presented in Appendix D.

During the November 1998 survey of the proposed pole sites, there were no protected species or evidence of their potential habitat observed. Additional coordination with the USFWS indicated that none the listed species are particularly sensitive to light; therefore, no long-term effect of an increased photoperiod on the wildlife species is expected to result in a potentially significant impact. Those species sensitive to light during typically dark hours would most likely avoid the area, and traverse by an alternative route.

Only a minimal amount of agave and columnar cacti were observed within the proposed project area during the November 1998 survey. This vegetation is not expected to be susceptible to constant lighting. The expected amount of light in the proposed project area, in turn should not cause an impact on the lesser long-nosed bat, whose food source is the agave and columnar cacti. Therefore, the amount of energy produced by project lighting is not anticipated to produce any measurable effects on either the protected plant or animal communities present in the proposed project area (Personal Communication with USFWS, 1998).

Based on the information provided in Section 3.5.4 for both flora and fauna species, their preferred habitats, and lack of evidence that these species occur within the project area, it would be unlikely that any Federally-listed threatened or endangered species would be found within the proposed project area, except on a transient basis. Additionally, all sensitive vegetation would be avoided during the selection of individual pole locations. Therefore, the Proposed Action would have no affect on Federally-listed threatened and endangered species.

#### **4.5.2 No-Action Alternative**

Baseline conditions would not change under the No-Action Alternative; therefore, no impacts would be expected on biological resources.

### **4.5.3 Use of Portable Lighting Systems Alternative**

Impacts to area vegetation would be similar to those of the Proposed Action. Individual sites would be selected to minimize vegetation impacts and maximize illumination. However, environmental concerns could arise from leakage of generator fuels or lubricants due to poor maintenance, normal wear and tear, or vandalism. Additionally, long-term impacts could include the impact of generator noise on wildlife species. The highest period of movement for most wildlife species occurs during night time or low daylight hours, which is consistent with the hours of continuous generator operation required for this system.

## **4.6 NOISE**

### **4.6.2 Proposed Action**

Noise naturally dissipates by atmospheric attenuation as it travels through the air. Some other factors that can effect the amount of attenuation are ground surface, foliage, topography, and humidity. For each doubling of distance from the source, the noise level can be expected to decrease by approximately 6 decibels (dB). This method is a very conservative estimate of noise levels. A significant impact would be an increase in the ambient noise levels to a level of physical discomfort, or 120 A-weighted decibels (dBA).

Temporary construction noise impacts vary markedly because the noise intensity of construction equipment ranges widely as a function of the equipment and its level of activity. Short-term construction noise impacts tend to occur in discrete phases dominated initially by large earthmoving sources and later by hand-operated tools for finish construction. The noise produced by an assemblage of heavy equipment involved in urban, commercial, and industrial development typically ranges up to about 89 dBA at 50 feet from the source (U.S. Army 1995).

Over most of the proposed project area, receptors are located well beyond these distances. Only insignificant noise impacts are expected from the construction phase of the proposed project and no noise impacts are expected during the operation phase of the project. Additionally, given the heavy traffic noise resulting from the urban road and highway system in and around Naco, Arizona, the noise expected from the proposed construction activities would be short in duration (less than 30 to 60 days), and would be expected to be insignificant to existing noise levels.

### **4.6.2 No-Action Alternative**

No change in baseline conditions would be expected under the No-Action Alternative.

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### **4.6.3 Use of Portable Lighting Systems Alternative**

As previously mentioned, long-term impacts to noise would include the impact of generator noise on wildlife species. The highest period of movement for most wildlife species occurs during night time or low daylight hours, which is consistent with the hours of continuous generator operation required for this system

## **4.7 CULTURAL RESOURCES**

### **4.7.1 Proposed Action**

As the exact location for each lighting pole has not been selected, AAI conducted a Class III archaeological survey (100% coverage) of a 20 meter-wide corridor for the entire proposed project area. No problems occurred during the survey and ground visibility was sufficient to allow good observation of the present ground surface.

During the survey, it was found that only two of ten previously recorded sites within a one-mile radius are located within the proposed project area. These sites are AZ FF:9:13 and AZFF:9:23. Both sites have been determined to be eligible for the NRHP. Site AZ FF:9:13 is a historic artifact scatter and rock alignment located to the north of the proposed project area. The site may possibly include a corral that is situated with the project corridor. Site AZ FF:9:23 is the old Naco Dump, first established in 1900 and continues to be used today to some extent. The dump is located in the eastern section of the proposed project area. Current field examination of the site reveals that the historic scatter has some depth, but does not appear to be substantial.

During all construction activities in the immediate vicinity of the two sites, a qualified archaeologist will flag all known sites prior to installation activities. This procedure will redirect the placement of light poles and installation activities away from sensitive areas such as the corral.

### **4.7.2 No-Action Alternative**

No change in baseline conditions would be expected under the No-Action Alternative.

### **4.7.3 Use of Portable Lighting Systems Alternative**

The placement of the portable lighting systems would be in areas previously disturbed, and is therefore, not likely to impact any cultural resources in the proposed project area.

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## **4.8 SOLID AND HAZARDOUS WASTES**

### **4.8.1 Proposed Action**

An accidental release or spill could occur as a result of fuels, oils, lubricants, and other hazardous or regulated materials brought on site for the proposed construction activities. A spill could result in potentially adverse impacts to on-site soils, and threaten the health of the local population, as well as wildlife and vegetation. However, the amounts of fuel and other lubricants and oils would be limited, and the equipment would be located on site to quickly limit any contamination. A spill prevention and response plan would be developed and implemented as part of the Proposed Action.

Because of the random nature of illegal dumping along the border areas, it is difficult to determine the location and quantity of hazardous waste that may be present within the general project area. If hazardous materials or wastes are present, there would be a potential for exposure during construction activities. Construction personnel would be informed about the potential to encounter hazardous wastes that may be present on the site from dumping and the appropriate procedures to use if suspected hazardous contamination is encountered. Under the Proposed Action, it is assumed that worker-safety risks will be reduced through the implementation of standard safe practices, such as wearing hard hats, steel-toed boots, gloves, ear protection, face masks, safety vests, and other equipment, where appropriate and/or prescribed by State and/or Federal worker health and safety laws and regulations.

During installation activities, fuels, oils, lubricants, and other hazardous materials will be used. A Spill Response Prevention Plan will be in-place prior to construction, and all personnel will be briefed in the implementation and responsibilities of the plan.

### **4.8.2 No-Action Alternative**

No change in baseline conditions would be expected under the No-Action Alternative.

### **4.8.3 Use of Portable Lighting Systems Alternative**

There could be an increased potential for accidental release or spills as a result of fuels, oils, lubricants used in the generators for the portable lighting systems. Such a spill could result in potentially adverse impacts to on-site soils, and threaten the health of the local population, as well as wildlife and vegetation. Additionally, there is no use of secondary containment for these systems.

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## **4.9 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE**

### **4.9.1 Socioeconomics of Proposed Action**

The proposed lighting project would provide direct and indirect economic benefits to area companies and employees as a result of construction activities, and through economic multiplier effects. The beneficial impacts on the socioeconomic resources in the Region of Influence (ROI) such as population, employment, income, and business sales would be insignificant. The construction would be performed by military personnel transferred in for this project, and it would not be likely that additional hiring would occur within the local area. Additionally, the construction of the Proposed Action would not induce permanent in- or out-migration to the ROI. Therefore, overall area population would not be impacted.

Direct expenditures of the lighting project would have a minimal impact on employment, income, and sales within the ROI. Although most labor and some materials would be brought into the local area, some expenditures are expected to occur within the ROI. Short-term increase in local revenues for commercial establishments, trade centers, and retail sales will result from the purchase of supplies and equipment rental. Any potential impacts from the construction activities would easily be absorbed into the broader economy of the ROI.

The socioeconomic benefits resulting from the operation of the proposed lighting project would also be beneficial to the ROI. By decreasing drug trafficking and smuggling, the Proposed Action would contribute to the reduction of socioeconomic impacts and burdens that currently exist on local law enforcement and the medical community.

### **4.9.2 Environmental Justice of Proposed Action**

EO 12898 of 11 February 1994 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," provided that each U.S. Federal agency shall identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its program, policies, and activities on minority and low income populations in the U.S. The proposed construction sites are located in areas with similar characteristics of the broader ROI. Although some housing is located near the proposed pole sites, the area of lighting illumination would be directed away from the residences and toward the U.S.-Mexico border. As a result of this increased lighting, it would be expected that drug trafficking and associated violent crime would be reduced.

Additionally, installation or operation of the Proposed Action would not restrict the flow of legal visitation, trade, or immigration. Therefore, there would be no expected disproportionately high and adverse impacts on minority or low-income populations. Under the definition of EO 12898, there would be no adverse environmental justice impacts.

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#### **4.9.2 No-Action Alternative**

Under the No-Action Alternative, the region would continue to experience immeasurable impacts to law enforcement agencies, medical institutions, and other socioeconomic organizations in the community as a result of continued drug trafficking, smuggling, and associated crime. There would be no impact to environmental justice or the socioeconomic resources in the ROI resulting from the No-Action Alternative.

#### **4.9.3 Use of Portable Lighting Systems Alternative**

Under this Alternative, the impacts would be similar to those of the Proposed Action. However, with these units, there may be an increase in vandalism due to the lower height of the light fixtures. Additionally, there will be an increase in maintenance costs to ensure the units are properly working. Due to these concerns, the portable lighting systems are considered to be less effective than permanent lighting structures.

#### **4.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Irreversible and irretrievable commitments of resources would include: a small amount of soil lost through wind and water erosion, a minor loss of small animal habitat due to pole placement, materials, energy and manpower expended during construction of the project, and higher level of noise generated from the construction activities.

#### **4.11 CUMULATIVE IMPACTS**

The assessment of cumulative impacts is addressed in NEPA by its reference to interrelations of all components of the natural environment. The CEQ defined cumulative impact as the incremental impact of multiple present and future actions with individually minor but collectively significant effects. Cumulative impacts can be concisely defined as the total effect of multiple land uses and developments, including their interrelationships, on the environment (Bain *et al.* 1986).

In order to evaluate cumulative effects of the past and present JTF-6 actions, EA's from previous and current operations in the region, and the PEIS developed for all JTF-6 activities along the U.S.-Mexico border were evaluated. An analysis of each component of the affected environment was completed from the existing EA's in order to identify which actions would have cumulative impacts as a result of the past and proposed operations. This analysis revealed that land use, air quality, threatened and endangered species, and socioeconomic resources of past and proposed action areas would not be subjected to cumulative impacts due to the temporary nature of construction activities. Water and biological resources (i.e., vegetation and wildlife habitat) would be slightly affected cumulatively from past and proposed border construction actions. A positive cumulative impact has been realized by the additional cultural resource baseline data that has been gathered during the production of the various environmental documents, such as this environmental assessment.

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The primary cumulative effect of the past and proposed action is the permanent loss of vegetation and associated wildlife habitat. As identified in the PEIS, the overall loss of vegetation falls below the projected level for the five year period, and accounts for less than 0.01 percent of the total land area along the entire U.S. – Mexico international border. Installation of lighting in the proposed project area may result in only an insignificant loss of vegetation and wildlife habitat since the total area of disturbance is relatively small and the area will re-vegetate following project implementation.

If a FONSI is developed and implemented, the Proposed Action would result in the loss of approximately 0.4 acres of degraded/disturbed vegetation. In the past, soil losses have been minimized through the implementation of erosion control measures including waterbars, gabions, reseeding, compaction, and slope control. Although the amount of soils saved is not quantifiable, JTF-6 operations have reduced existing erosion problems at numerous locations.

Air emissions have been produced by vehicles, aircraft, and heavy equipment. However, these have not resulted in significant cumulative impacts due to the short duration of the activities, the dispersion capabilities of the region, and the remote locations of most of the operations. Construction and maintenance activities have had cumulative positive impacts on socioeconomic resources within the border areas and the Nation, through reductions in illegal drug smuggling activities. Future impacts are anticipated to occur at a level consistent with past activities and not result in significant adverse effects (U.S. Army 1994).

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## 5.0 ENVIRONMENTAL DESIGN MEASURES

This chapter describes environmental design measures that would be implemented as part of the Proposed Action to reduce or eliminate impacts from pole installation. Due to the limited nature of the Proposed Action, construction impacts are expected to be slight; therefore, mitigation measures are only described for those resources with potential for impacts.

### 5.1 WATER RESOURCES

Standard construction procedures would be implemented to minimize the potential for erosion and sedimentation during construction. All work would cease during heavy rains and would not resume until conditions are suitable for the movement of equipment and material. As a result of the pole installation techniques, significant impacts on soils in the proposed construction area would not be expected. Additionally, mitigation measures, such as a Stormwater Pollution Prevention Plan, for stormwater runoff from construction activities will not be required for this project as the total area of disturbance is less than 5 acres.

### 5.2 AIR QUALITY

Mitigation measures would include dust suppression methods to minimize airborne particulate matter that would be created during construction activities and installation of the poles. Additionally, all construction equipment and vehicles would be required to be kept in good operating condition to minimize exhaust emissions. Standard construction practices would be used to control fugitive dust during the construction phases of the Proposed Action.

### 5.3 BIOLOGICAL RESOURCES

Impacts to existing vegetation during construction activities would be minimized through avoidance. Additional mitigation measures will include best management practices during construction to minimize or prevent erosion and soil loss.

### 5.4 NOISE

During the construction phase, noise impacts are anticipated at local human receptors. As required by Occupational Safety and Health Administration (OSHA), earplugs will be worn by employees working in environments with continuous noise levels of 8 hours per day above 90 dBA. Because of the increased noise sensitivity during quiet hours, time limits on on-site construction activities are warranted for grading and the use of heavy equipment. On-site activities should be restricted to daylight hours on Monday through Saturday, except in emergency situations, and only maintenance to equipment permitted on Sundays. Additionally, all construction equipment should possess properly working mufflers and be kept in a proper state of tune to reduce backfires. Implementation of these measures will reduce the noise impact to an insignificant level.

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## 5.5 CULTURAL RESOURCES

Both historical properties located within the proposed construction corridor would be flagged by a qualified archaeologist and strictly avoided during construction activities. If archaeologists identify additional sites during flagging, then equipment operators will be notified, and these areas also would be avoided. The Arizona State Historic Preservation Officer (AZ SHPO) would also be notified of any additional sites located during flagging and/or construction. Appropriate site selection for pole placement can ensure avoidance of sensitive areas adjacent to Greenbush Draw or its tributaries so that subsequent construction activities would not impact areas of high potential for buried cultural deposits.

## 5.6 SOLID AND HAZARDOUS WASTES

With proper handling, storage, and/or disposal of hazardous and/or regulated materials there would be no significant adverse impacts to onsite workers and neighboring flora and fauna. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents would be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein.

The refueling of machinery would be completed following accepted guidelines, and all vehicles would have drip pans during storage to contain minor spills and drips. Although it would be unlikely for a major spill to occur, any spill of five gallons or more would be contained immediately within an earthen dike, and the application an absorbent (e.g., granular, pillow, sock, etc) would be used to absorb and contain the spill. Any major spill of a hazardous or regulated substance would be reported immediately to JTF-6 environmental personnel who would notify appropriate Federal and State agencies.

Additionally, all personnel would be briefed as to the correct procedures for preventing and responding to a spill. A Spill Prevention Plan would be in place prior to the start of construction, and all personnel shall be briefed on the implementation and responsibilities of this plan. Adoption and full implementation of the construction measures described above will reduce adverse hazardous/regulated substances impacts to insignificant levels.

All waste oil and solvents would be recycled if practicable. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported, and disposed of in accordance with all Federal, State, and local regulations, including proper waste manifesting procedures.

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## 6.0 PUBLIC INVOLVEMENT

This chapter discusses consultation and coordination that occurred in the preparation of this document. This includes contacts made during development of the Proposed Action, elimination of alternatives, and writing of the EA. Formal and informal coordination has been conducted with the following agencies:

- U. S. Army Corps of Engineers (Fort Worth District),
- Joint Task Force Six (JTF-6),
- Immigration and Naturalization Service (INS; USBP),
- State Historic Preservation Office (SHPO),
- U.S. Fish and Wildlife Service (USFWS),
- Arizona Department of Agriculture (ADA), and
- International Boundary and Water Commission (IBWC).

The Draft EA was made available for public review. The Notice of Availability (NOA) is included in Appendix E.

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**7.0 LIST OF PREPARERS**

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**APPENDICES**

**APPENDIX A**

**Site Photographs**

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Figure A-1 Beginning of eastern section. Note Truck POE in background. Photo taken facing west.



Figure A-2 Beginning of eastern section, facing east.



Figure A-3 Representative photo of eastern section, approximately one-mile from Truck POE. Photo taken facing east.



Figure A-4 Corral area located in eastern section. Photo taken facing east.

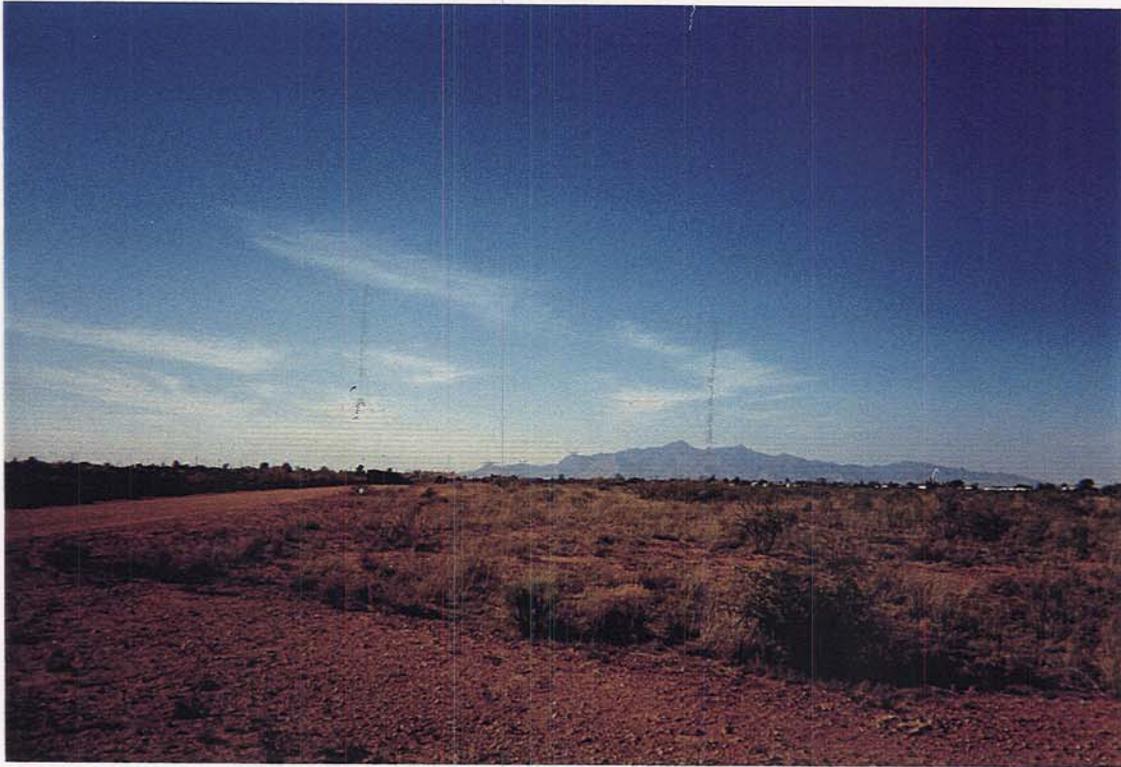


Figure A-5 End of eastern section. Note border fence in background. Photo taken facing west.



Figure A-6 Beginning of western section, facing west.



Figure A-7 Representative photo of Greenbush Draw arm in western section. Photo taken facing north.



Figure A-8 Representative photo of western section, approximately one-half mile from beginning. Photo taken facing west.

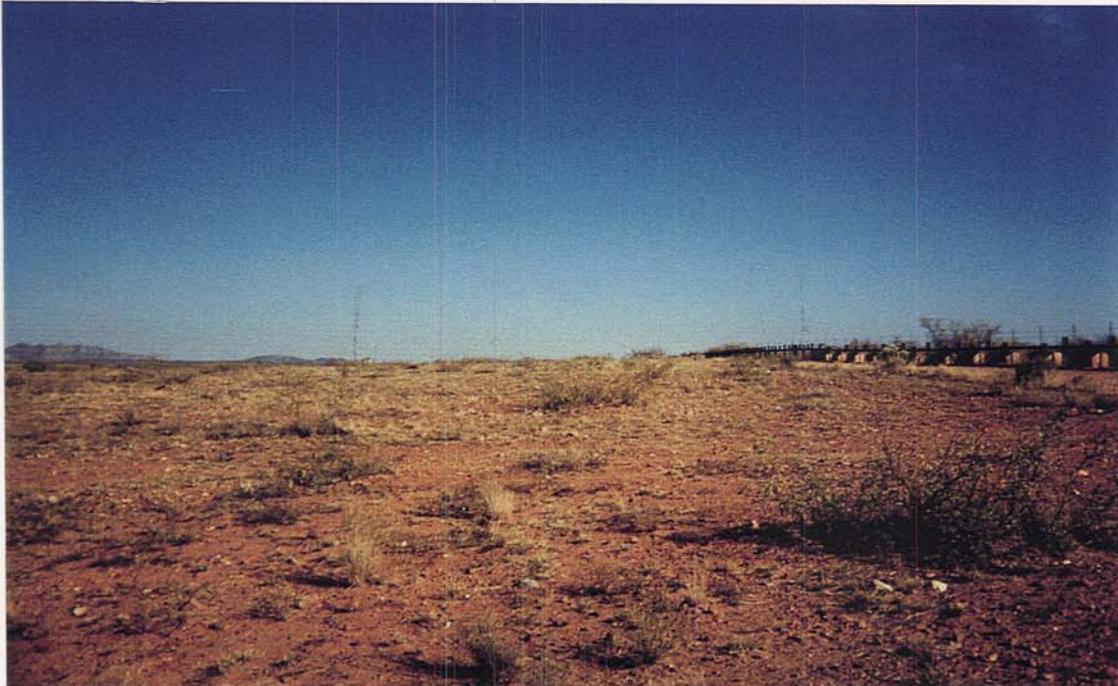


Figure A-9. End of western section. Note border fence on left side of photo. Photo taken facing east.

**APPENDIX B**

**Federal and State Air Pollutant Standards**

## National Ambient Air Quality Standards\*

Air Pollutant	Type of Average	National Standards*	
		Primary <sup>(1)</sup> ( $\mu\text{g}/\text{m}^3$ )	Secondary <sup>(2)</sup> ( $\mu\text{g}/\text{m}^3$ )
Carbon Monoxide (CO)	1-hr	40,000	---
	8-hr	10,000	---
Inhalable Particulate Matter (PM <sub>10</sub> )	24-hr	150	---
	AAM <sup>(3)</sup>	50	---
Lead (Pb)	Calendar Quarter	1.5	---
	3-months		
Nitrogen Dioxide (NO <sub>2</sub> )	AAM <sup>(3)</sup>	100	100
Ozone (O <sub>3</sub> )	1-hr	235	235
Sulfur Dioxide (SO <sub>2</sub> )	30-min	---	---
	3-hr	---	1,300
	24-hr	365	---
	AAM <sup>(3)</sup>	80	---
Total Suspended Particulate Matter (TSP)	1-hr	---	---
	3-hr	---	---
Hydrogen Sulfide (H <sub>2</sub> S)	30-min	---	---
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	1-hr	---	---
	24-hr	---	---
Inorganic Fluoride Compounds (as HF)	3-hr	---	---
	12-hr	---	---
	24-hr	---	---
	7-day	---	---
	30-day	---	---
Beryllium	24-hr	---	---
Other Hazardous and Odorous Pollutants	30-min	---	---
	AAM <sup>(3)</sup>	---	---

<sup>1</sup> National Primary Standards establish the level of air quality necessary to protect the public health from any known or anticipated adverse effects of a pollutant, allowing a margin of safety to protect sensitive members of the population.

<sup>2</sup> National Secondary Standards establish the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property, and adverse impact on the environment.

<sup>3</sup> Annual Arithmetic Mean.

<sup>4</sup> If it affects a residential area, business, or commercial property.

<sup>5</sup> If it affects only a property used for other than residential, recreational, business, or commercial purpose.

\* Adapted from 40 CFR 50.

**APPENDIX C**

**Threatened and Endangered Species Information**



## Southwest Region Species Lists

Help

## Cochise County, Arizona Species List

\* Click on a species common name to view the species details sheet.

Common Name	Scientific Name	Status
<a href="#">Canelo Hills ladies' tresses</a>	<i>Spiranthes delitescens</i>	Endangered
<a href="#">Gila topminnow</a>	<i>Poeciliopsis occidentalis</i>	Endangered
<a href="#">Yaqui catfish</a>	<i>Ictalurus pricei</i>	Threatened
<a href="#">Beautiful shiner</a>	<i>Cyprinella formosa</i>	Threatened
<a href="#">American peregrine falcon</a>	<i>Falco peregrinus anatum</i>	Endangered
<a href="#">Jaguar</a>	<i>Panthera onca</i>	Endangered
<a href="#">Huachuca water umbel</a>	<i>Lilaeopsis schaffneriana recurva</i>	Endangered
<a href="#">Bald eagle</a>	<i>Haliaeetus leucocephalus</i>	Threatened
<a href="#">Cochise pincushion cactus</a>	<i>Coryphantha robbinsorum</i>	Threatened
<a href="#">Yaqui chub</a>	<i>Gila purpurea</i>	Endangered
<a href="#">Northern aplomado falcon</a>	<i>Falco femoralis septentrionalis</i>	Endangered
<a href="#">Whooping crane</a>	<i>Grus americana</i>	Endangered
<a href="#">New Mexico ridge-nosed rattlesnake</a>	<i>Crotalus willardi obscurus</i>	Threatened
<a href="#">Jaguarundi</a>	<i>Felis yagouaroundi cacomitli</i>	Endangered
<a href="#">Mexican spotted owl</a>	<i>Strix occidentalis lucida</i>	Threatened
<a href="#">Sonora tiger salamander</a>	<i>Ambystoma tigrinum stebbinsi</i>	Endangered
<a href="#">Ocelot</a>	<i>Felis pardalis</i>	Endangered
<a href="#">Lesser long-nosed bat</a>	<i>Leptonycteris curasoae yerbabuenae</i>	Endangered
<a href="#">Mexican gray wolf</a>	<i>Canis lupus baileyi</i>	Endangered
<a href="#">Southwestern willow flycatcher</a>	<i>Empidonax traillii extimus</i>	Endangered

FROM

(FRI) 01. 29' 99 09:52/ST. 09:48/NO. 3561627740 P 2/19



United States Department of the Interior  
Fish and Wildlife Service

Arizona Ecological Services Field Office  
2321 W. Royal Palm Road, Suite 103  
Phoenix, Arizona 85021-4951  
(602) 640-2720 Fax (602) 640-2730



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EJ-EE

In Reply Refer To:  
AESO/SE  
2-21-98-I-144

January 20, 1999

Mr. William Fickel, Jr.  
Chief, Environmental Division  
Department of the Army  
Corps of Engineers  
P.O. Box 17300  
Fort Worth, Texas 76102-0300

RE: Proposed JTF-6 Activities in Yuma and Naco, Arizona

Dear Mr. Fickel:

This letter responds to your December 11, 1998, request for an inventory of threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may potentially occur in your project area (Cochise and Yuma Counties). The enclosed list may include candidate species as well. We hope the enclosed county list of species will be helpful. In future communications regarding this project, please refer to consultation number 2-21-98-I-144.

Please be aware that you may also access limited county species lists for Arizona on our internet web site at the following:

<http://ifw2cs.fws.gov/endspcs/lists/>

The enclosed list of the endangered, threatened, proposed, and candidate species includes all those potentially occurring anywhere in the county, or counties, where your project occurs. Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Also on the enclosed list is the Code of Federal Regulations (CFR) citation for each listed or proposed species. Additional information can be found in the CFR and is available at most public libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.

Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency

must request formal consultation with the Service. If the action agency determines that the planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency must enter into a section 7 conference with the Service. Candidate species are those which are being considered for addition to the list of threatened or endangered species. Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

If any proposed action occurs in or near areas with trees and shrubs growing along watercourses, known as riparian habitat, the Service recommends the protection of these areas. Riparian areas are critical to biological community diversity and provide linear corridors important to migratory species. In addition, if the project will result in the deposition of dredged or fill materials into waterways or excavation in waterways, we recommend you contact the Army Corps of Engineers which regulates these activities under Section 404 of the Clean Water Act.

The State of Arizona protects some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species in your project area.

The Service appreciates your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Tom Gatz.

Sincerely,



David L. Harlow  
Field Supervisor

Enclosures

cc: Director, Arizona Game and Fish Department, Phoenix, AZ

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

## 1) LISTED

TOTAL= 21

NAME: CANELO HILLS LADIES' TRESSES

*SPIRANTHES DELITESCENS*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: No CFR: 62 FR 665, 01-06-97

DESCRIPTION: SLENDER ERECT MEMBER OF THE ORCHID FAMILY (ORCHIDACEAE).

FLOWER: STALK 50 CM TALL, MAY CONTAIN 40 WHITE FLOWERS  
SPIRALLY ARRANGED ON THE FLOWERING STALK.

ELEVATION

RANGE: about 5000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: FINELY GRAINED, HIGHLY ORGANIC, SATURATED SOILS OF CIENEGAS

POTENTIAL HABITAT OCCURS IN SONORA, MEXICO, BUT NO POPULATIONS HAVE BEEN FOUND.

NAME: COCHISE PINCUSHION CACTUS

*CORYPHANTHA ROBBINSORUM*

STATUS: THREATENED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 51 FR 952, 1-9-1986

DESCRIPTION: A SMALL UNBRANCHED CACTUS WITH NO CENTRAL SPINES AND 11-17

WHITE RADIAL SPINES. THE BELL-SHAPED FLOWERS ARE BORNE ON  
THE ENDS OF TUBERCLES (Protrusions). FLOWERS: BELL SHAPED.

PALE YELLOW-GREEN, FRUITS, ORANGE-RED TO RED

ELEVATION

RANGE: &gt;4200 FT.

COUNTIES: COCHISE AND SONORA, MEXICO

HABITAT: SEMIDESERT GRASSLAND WITH SMALL SHRUBS, AGAVE, OTHER CACTI, AND GRAMA GRASS.

GROWS ON GRAY LIMESTONE HILLS.

NAME: HUACHUCA WATER UMBEL

*LILAEOPSIS SCHAFFNERIANA ssp RECURVA*

STATUS: ENDANGERED

CRITICAL HAB Yes RECOVERY PLAN: No CFR: 62 FR 665, 01-06-97

DESCRIPTION: HERBACEOUS, SEMI-AQUATIC PERENNIAL IN THE PARSLEY FAMILY

(UMBELLIFERAE) WITH SLENDER ERECT, HOLLOW, LEAVES THAT GROW  
FROM THE NODES OF CREEPING RHIZOMES. FLOWER: 3 TO 10

FLOWERED UMBELS ARISE FROM ROOT NODES.

ELEVATION

RANGE: 3500-6500 FT.

COUNTIES: PIMA, SANTA CRUZ, COCHISE

HABITAT: CIENEGAS, PERENNIAL LOW GRADIENT STREAMS, WETLANDS

AND IN ADJACENT SONORA, MEXICO, WEST OF THE CONTINENTAL DIVIDE. POPULATIONS ALSO ON FORT  
HUACHUCA MILITARY RESERVATION. PROPOSED CRITICAL HABITAT IN COCHISE AND SANTA CRUZ COUNTIES (63  
FR 71838)

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: NEW MEXICAN RIDGE-NOSED RATTLESNAKE *CROTALUS WILLARDI OBSCURUS*

STATUS: THREATENED

CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 43 FR 34479, 04-04-1978

DESCRIPTION: SMALL 12-24 INCHES, SECRETIVE GRAYISH-BROWN WITH DISTINCT RIDGE ON THE END OF THE SNOUT. THE DORSAL SURFACE HAS OBSCURE, IRREGULARLY SPACED WHITE CROSSBARS EDGED WITH BROWN (NOT A BOLD PATTERN).

ELEVATION  
RANGE 5600-9000 FT.

COUNTIES: COCHISE

HABITAT: PRESUMABLY CANYON BOTTOMS IN PINE-OAK &amp; PINE-FIR COMMUNITIES WITH ALDER, MAPLE, OAK, &amp; BOX ELDER

THE SUBSPECIES HAS NOT BEEN DOCUMENTED IN ARIZONA. HOWEVER, IT HAS BEEN OBSERVED NEAR THE ARIZONA BORDER IN THE PELONCILLO MOUNTAINS AND LIKELY OCCURS IN THE ARIZONA PORTION OF THAT RANGE AS WELL. ANOTHER SUBSPECIES, (*CROTALUS WILLARDI WILLARDI*), IS AN ARIZONA STATE CANDIDATE.

NAME: JAGUAR, UNITED STATES POPULATION

*PANTHERA ONCA*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: No CFR: 62 FR 39147, 7-22-97

DESCRIPTION: MUSCULAR CAT WITH RELATIVELY SHORT, MASSIVE LIMBS AND A DEEP-CHESTED BODY. CINNAMON-BUFF IN COLOR WITH BLACK SPOTS.

ELEVATION  
RANGE: <8000 FT.

COUNTIES: COCHISE, PIMA

HABITAT: IN ARIZONA, RANGED WIDELY THROUGHOUT A VARIETY OF HABITATS FROM SONORAN DESERT TO CONIFER FORESTS

MOST RECORDS ARE FROM THE MADREAN EVERGREEN-WOODLAND, SHRUB-INVADDED SEMI-DESERT GRASSLAND, AND ALONG RIVERS. HISTORIC RANGE IS CONSIDERED TO HAVE EXTENDED BEYOND THE COUNTIES LISTED ABOVE. REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. THE MOST RECENT RECORDS OF A JAGUAR IN THE U.S. ARE FROM THE NEW MEXICO/ARIZONA BORDER AREA AND IN SOUTHCENTRAL ARIZONA, BOTH IN 1996, AND CONFIRMED THROUGH PHOTOGRAPHS. UNCONFIRMED SIGHTINGS AND TRACKS CONTINUE TO BE REPORTED. THIS SPECIES HAS A SIGNED CONSERVATION AGREEMENT IN PLACE, BUT THE DEVELOPMENT OF THE AGREEMENT WAS NOT SUFFICIENT TO REMOVE THE NEED TO LIST THIS SPECIES

NAME: JAGUARUNDI

*FELIS YAGOUAROUNDI TOLTECA*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: No CFR: 41 FR 24064; 06-14-76

DESCRIPTION: SMALL CAT WITH SHORT LEGS; SLENDER, ELONGATE BODY; AND LONG TAIL HEAD SMALL &amp; FLATTENED WITH SHORT ROUNDED EARS. REDDISH-YELLOW OR BLACKISH TO BROWN-GRAY IN COLOR AND WITHOUT SPOTS.

ELEVATION  
RANGE: 3500-6000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: CAN BE FOUND IN A VARIETY OF HABITATS (SEE BELOW)

SEMI-ARID THORNY FORESTS, DECIDUOUS FORESTS, HUMID PRE-MONTANE FORESTS, UPLAND DRY SAVANNAHS, SWAMPY GRASSLANDS, RIPARIAN AREAS, AND DENSE BRUSH. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED. NO SPECIMENS HAVE BEEN COLLECTED IN ARIZONA.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: LESSER LONG-NOSED BAT

*LEPTONYCTERIS CURASOAE YERBABUENAE*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 53 FR 38456. 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE.  
 YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW.  
 TAIL MINUTE AND APPEARS TO BE LACKING, EASILY DISTURBED.

ELEVATION  
 RANGE: <8000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA, USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

NAME: MEXICAN GRAY WOLF

*CANIS LUPUS BAILEYI*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 32 FR 4001. 03-11-87; 43 FR 1912. 03-09-78

DESCRIPTION: LARGE DOG-LIKE CARNIVORE WITH VARYING COLOR, BUT USUALLY A SHADE OF GRAY, DISTINCT WHITE LIP LINE AROUND MOUTH. WEIGH 60-80 POUNDS.

ELEVATION  
 RANGE. 4,000-12,000 FT.

COUNTIES: APACHE, COCHISE, GREENLEE, PIMA, SANTA CRUZ

HABITAT: CHAPPARAL WOODLAND, AND FORESTED AREAS. MAY CROSS DESERT AREAS.

HISTORIC RANGE IS CONSIDERED TO BE LARGER THAN THE COUNTIES LISTED ABOVE. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE (COCHISE, PIMA, SANTA CRUZ) CONTINUE TO BE RECEIVED. INDIVIDUALS MAY STILL PERSIST IN MEXICO. EXPERIMENTAL NONESSENTIAL POPULATION INTRODUCED IN THE BLUE PRIMITIVE AREA OF GREENLEE AND APACHE COUNTIES.

NAME: OCELOT

*FELIS PARDALIS*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 47 FR 31670: 07-21-82

DESCRIPTION: MEDIUM-SIZED SPOTTED CAT WHOSE TAIL IS ABOUT 1/2 THE LENGTH OF HEAD AND BODY. YELLOWISH WITH BLACK STREAKS AND STRIPES RUNNING FROM FRONT TO BACK. TAIL IS SPOTTED AND FACE IS LESS HEAVILY STREAKED THAN THE BACK AND SIDES.

ELEVATION  
 RANGE. <8000 FT.

COUNTIES: SANTA CRUZ, PIMA, COCHISE

HABITAT: HUMID TROPICAL &amp; SUB-TROPICAL FORESTS, SAVANNAHS, AND SEMI-ARID THORN SCRUB.

MAY PERSIST IN PARTLY-CLEARED FORESTS, SECOND-GROWTH WOODLAND, AND ABANDONED CULTIVATION REVERTED TO BRUSH. UNIVERSAL COMPONENT IS PRESENCE OF DENSE COVER. UNCONFIRMED REPORTS OF INDIVIDUALS IN THE SOUTHERN PART OF THE STATE CONTINUE TO BE RECEIVED.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: BEAUTIFUL SHINER

*CYPRINELLA FORMOSA*

STATUS: THREATENED

CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 8-31-1984

DESCRIPTION: SMALL (2.5 INCHES) SHINY MINNOW AND VERY SIMILAR TO RED SHINER.  
MALES COLORFUL DURING BREEDING (YELLOW-ORANGE OR ORANGE  
ON CAUDAL AND LOWER FINS AND BLuish BODY.ELEVATION  
RANGE: <4500 FT.

COUNTIES: COCHISE

HABITAT: SMALL TO MEDIUM SIZED STREAMS AND PONDS WITH SAND, GRAVEL, AND ROCK BOTTOMS.

VIRTUALLY EXTIRPATED IN THE UNITED STATES. WITH THE EXCEPTION OF A FEW ISOLATED POPULATIONS ON  
NATIONAL WILDLIFE REFUGES AND IN MEXICO. SAME CRITICAL HABITAT AS YAQUI CHUB AND CATFISH (SEE 49 FR  
34490, 08-31-1984).

NAME: YAQUI CATFISH

*ICTALURUS PRICEI*

STATUS: THREATENED

CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 08-31-1984

DESCRIPTION: SIMILAR TO CHANNEL CATFISH (*ictalurus punctatus*) EXCEPT ANAL FIN  
BASE IS SHORTER AND THE DISTAL MARGIN OF THE ANAL FIN IS  
BROADLY ROUNDED WITH 23-25 SOFT RAYS. BODY USUALLY  
PROFUSELY SPECKLED.ELEVATION  
RANGE. 4000-5000 FT.

COUNTIES: COCHISE

HABITAT: MODERATE TO LARGE STREAMS WITH SLOW CURRENT OVER SAND AND ROCK BOTTOMS

CRITICAL HABITAT ALL AQUATIC HABITATS IN THE MAIN PORTION OF SAN BERNADINO NATIONAL WILDLIFE  
REFUGE

NAME: YAQUI CHUB

*GILA PURPUREA*

STATUS: ENDANGERED

CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 49 FR 34490, 08-31-1984

DESCRIPTION: MEDIUM SIZED MINNOW (<8 INCHES) DARK COLORED, LIGHTER BELOW.  
DARK TRIANGULAR CAUDAL SPOTELEVATION  
RANGE. 4000-6000 FT.

COUNTIES: COCHISE (AZ), MEXICO

HABITAT: DEEP POOLS OF SMALL STREAMS, POOLS, OR PONDS NEAR UNDERCUT BANKS.

CRITICAL HABITAT INCLUDES ALL AQUATIC HABITATS OF THE MAIN PORTION SAN BERNADINO NATIONAL WILDLIFE  
REFUGE.

FROM

(FRI) 01. 29' 99 09:54/ST. 09:48/NO. 3561627740 P 8/19

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: YAQUI TOPMINNOW

*POECILOPSIS OCCIDENTALIS SONORIENSIS*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 32 FR 4001. 03-11-1967

DESCRIPTION: SMALL (2 INCHES) TOPMINNOW GUPPY-LIKE. LIVE BEARING. LACKING DARK SPOTS. BREEDING MALES JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: COCHISE

HABITAT: SMALL TO MODERATE SIZED STREAMS, SPRINGS, & CIENEGAS GENERALLY IN SHALLOWS

NAME: AMERICAN PEREGRINE FALCON

*FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70: 35 FR 8495. 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE-RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES. SPECIES HAS BEEN PROPOSED FOR DELISTING (83 FR 45446) BUT STILL RECEIVES FULL PROTECTION UNDER ESA

NAME: BALD EAGLE

*HALIAEETUS LEUCOCEPHALUS*

STATUS: THREATENED

CRITICAL HAB No RECOVERY PLAN: Yes CFR. 60 FR 35999. 07-12-95

DESCRIPTION: LARGE. ADULTS HAVE WHITE HEAD AND TAIL. HEIGHT 28 - 38". WINGSPAN 66 - 96". 1-4 YRS DARK WITH VARYING DEGREES OF MOTTLED BROWN PLUMAGE. FEET BARE OF FEATHERS.

ELEVATION RANGE: VARIES FT.

COUNTIES: YUMA, LA PAZ, MOHAVE, YAVAPAI, MARICOPA, PINAL, COCONINO, NAVAJO, APACHE, SANTA CRUZ, PIMA, GILA, GRAHAM, COCHISE

HABITAT: LARGE TREES OR CLIFFS NEAR WATER (RESERVOIRS, RIVERS AND STREAMS) WITH ABUNDANT PREY

SOME BIRDS ARE NESTING RESIDENTS WHILE A LARGER NUMBER WINTERS ALONG RIVERS AND RESERVOIRS. AN ESTIMATED 200 TO 300 BIRDS WINTER IN ARIZONA. ONCE ENDANGERED (32 FR 4001. 03-11-1967; 43 FR 6233, 02-14-78) BECAUSE OF REPRODUCTIVE FAILURES FROM PESTICIDE POISONING AND LOSS OF HABITAT, THIS SPECIES WAS DOWN LISTED TO THREATENED ON AUGUST 11, 1995. ILLEGAL SHOOTING, DISTURBANCE, LOSS OF HABITAT CONTINUES TO BE A PROBLEM.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: CACTUS FERRUGINOUS PYGMY-OWL

*GLAUCIDIUM BRASILIANUM CACTORUM*

STATUS: ENDANGERED

CRITICAL HAB Yes RECOVERY PLAN: No CFR: 62 FR 10730, 3-10-97

DESCRIPTION: SMALL (APPROX. 7"), DIURNAL OWL REDDISH BROWN OVERALL WITH CREAM-COLORED BELLY STREAKED WITH REDDISH BROWN. SOME INDIVIDUALS ARE GRAYISH BROWN

ELEVATION RANGE: <4000 FT.

COUNTIES: MARICOPA, YUMA, SANTA CRUZ, GRAHAM, GREENLEE, PIMA, PINAL, GILA, COCHISE

HABITAT: MATURE COTTONWOODWILLOW, MESQUITE BOSQUES, AND SONORAN DESERTSCRUB

RANGE LIMIT IN ARIZONA IS FROM NEW RIVER (NORTH) TO GILA BOX (EAST) TO CABEZA PRIETA MOUNTAINS (WEST). ONLY A FEW DOCUMENTED SITES WHERE THIS SPECIES PERSISTS ARE KNOWN. ADDITIONAL SURVEYS ARE NEEDED. LISTING EFFECTIVE APRIL 9, 1997. PROPOSED CRITICAL HABITAT IN PIMA, COCHISE, PINAL AND MARICOPA COUNTIES (64 FR 71821).

NAME: MEXICAN SPOTTED OWL

*STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDEROSA PINE/GAMBEL OAK TYPE. IN CANYONS, AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERRED.

NAME: NORTHERN APLOMADO FALCON

*FALCO FEMORALIS SEPTENTRIONALIS*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: Yes CFR: 51 FR 6686, 01-25-86

DESCRIPTION: RUFIOUS UNDERPARTS, GRAY BACK, LONG BANDED TAIL, AND A DISTINCT BLACK AND WHITE FACIAL PATTERN. SMALLER THAN PEREGRINE LARGER THAN KESTREL BREEDS BETWEEN MARCH- JUNE

ELEVATION RANGE: 3500-8000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: GRASSLAND AND SAVANNAH

SPECIES FORMERLY NESTED IN SOUTHWESTERN US. NOW OCCURS AS AN ACCIDENTAL. GOOD HABITAT HAS LOW GROUND COVER AND MESQUITE OR YUCCA FOR NESTING PLATFORMS. CONTINUED USE OF PESTICIDES IN MEXICO ENDANGERS THIS SPECIES. NO RECENT CONFIRMED REPORTS FOR ARIZONA.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: SOUTHWESTERN WILLOW FLYCATCHER

*EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED

CRITICAL HAB Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 8") GRAYISH-GREEN BACK AND WINGS,  
WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH  
BELLY, TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION

RANGE: &lt;8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM,  
YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW &amp; TAMARISK VEGETATION COMMUNITIES ALONG RIVERS &amp; STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO  
SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO  
DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR  
REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS. CRITICAL HABITAT ON PORTIONS OF THE 100-YEAR  
FLOODPLAIN ON SAN PEDRO AND VERDE RIVERS; WET BEAVER AND WEST CLEAR CREEKS, INCLUDING TAVASCI  
MARSH AND ISTER FLAT; THE COLORADO RIVER, THE LITTLE COLORADO RIVER, AND THE WEST, EAST, AND  
SOUTH FORKS OF THE LITTLE COLORADO RIVER. REFERENCE 60 CFR: 62 FR 39129, 7/22/97.

NAME: WHOOPING CRANE

*GRUS AMERICANA*

STATUS: ENDANGERED

CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967; 43

DESCRIPTION: TALLEST AMERICAN BIRD (UP TO 5 FEET) SNOWY WHITE, LONG NECK  
AND LEGS, BLACK WING TIPS, RED CROWN, AND BLACK WEDGE  
SHAPED PATCH OF FEATHERS BEHIND ITS EYE.

ELEVATION

RANGE: 4500 FT

COUNTIES: COCHISE

HABITAT: MARSHES, PRAIRIES, RIVER BOTTOMS

BIRDS IN THE ROCKY MOUNTAIN POPULATION ARE OCCASIONAL VISITORS IN ARIZONA DURING MIGRATION  
USUALLY NEAR WILCOX PLAYA.

NAME: SONORA TIGER SALAMANDER

*AMBYSTOMA TIGRINUM STEBBINSI*

STATUS: ENDANGERED

CRITICAL HAB No RECOVERY PLAN: No CFR: 62 FR 665, 01-06-97

DESCRIPTION: 2.8 TO 4.9" SNOUT-VENT LENGTH WITH LIGHT-COLORED BANDS ON A  
DARK BACKGROUND. AQUATIC LARVAE ARE UNIFORM DARK COLOR  
WITH PLUME-LIKE GILLS AND TAIL FINS.

ELEVATION

RANGE: 4000-6300 FT.

COUNTIES: SANTA CRUZ, COCHISE

HABITAT: STOCK TANKS AND IMPOUNDED CIENEGAS IN SAN RAFAEL VALLEY, HUACHUCA MOUNTAINS

ALSO OCCURS IN THE FOOTHILLS OF THE EAST SLOPE OF THE PATAGONIA AND HUACHUCA MOUNTAINS.  
POPULATIONS ALSO ON FORT HUACHUCA.

FROM

(FRI) 01. 29' 99 09:55/ST. 09:48/NO. 3561627740 P 11/19

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

**2) PROPOSED**

**TOTAL= 1**

**NAME: BLUMER'S DOCK (CHIRICAHUA)**

*RUMEX ORTHONEURUS*

**STATUS: PROPOSED**

**CRITICAL HAB No RECOVERY PLAN: No CFR:**

**DESCRIPTION: LARGE LONG-LIVED PERENNIAL PLANT IN THE BUCKWHEAT FAMILY**

**THAT CAN REACH 1.2-2.0 METERS, LARGE BROAD, OVAL SEMI-SUCCULENT LEAVES ARE BRIGHT GREEN. CONSPICUOUS SECONDARY VEINS AT RIGHT ANGLES TO THE MIDVEIN**

**ELEVATION**

**RANGE: 6500-9000 FT**

**COUNTIES: APACHE, COCHISE, GILA, GRAHAM, NAVAJO**

**HABITAT: MID TO HIGH ELEVATION SPRINGS, STREAMS, & WETLANDS WITH MOIST ORGANIC SOILS OR SHADED CANYONS**

**SPECIES FOUND IN CHIRICAHUA, PINALENO, HUACHUCA, SIERRA ANCHA, AND WHITE MOUNTAINS. SPECIES FOUND ON CORONADO, A-S, TONTO, SOME ON AND COCONINO. SPECIES ALSO FOUND IN WESTERN AND NORTHERN NEW MEXICO (GILA, SANTA FE, AND CARSON NF).**

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

## 3) CANDIDATE

TOTAL= 5

NAME: LEMMON FLEABANE

*ERIGERON LEMMONII*

STATUS: CANDIDATE

CRITICAL HAB No RECOVERY PLAN: No CFR:

DESCRIPTION: A PROSTRATE PERENNIAL IN THE SUNFLOWER FAMILY. STEMS AND LEAVES ARE DENSELY HAIRY. FLOWERS LOOK LIKE SMALL DELICATE DAISIES WITH WHITE TO LIGHT PURPLE OUTER PETALS AND YELLOW INNER PETALS.

ELEVATION

RANGE: 1500-6000 FT.

COUNTIES: COCHISE

HABITAT: GROWS IN DENSE CLUMPS IN CREVICES, LEDGES, AND BOULDERS IN CANYON BOTTOMS IN PINE-OAK WOODLAND

ONE SITE ON FORT HUACHUCA MILITARY RESERVATION

NAME: GILA CHUB

*GILA INTERMEDIA*

STATUS: CANDIDATE

CRITICAL HAB No RECOVERY PLAN: No CFR:

DESCRIPTION: DEEP COMPRESSED BODY, FLAT HEAD, DARK OLIVE-GRAY COLOR ABOVE, SILVER SIDES. ENDEMIC TO GILA RIVER BASIN.

ELEVATION

RANGE. 2000 - 3500 FT.

COUNTIES: SANTA CRUZ, GILA, GREENLEE, PIMA, COCHISE, GRAHAM, YAVAPAI

HABITAT: POOLS, SPRINGS, CIENEGAS, AND STREAMS

MULTIPLE PRIVATE LANDOWNERS, INCLUDING THE NATURE CONSERVANCY, THE AUDUBON SOCIETY, AND OTHERS, ALSO FT. HUACHUCA. SPECIES ALSO FOUND IN SONORA, MEXICO.

NAME: HUACHUCA SPRINGSNAIL

*PYRGULOPSIS THOMPSONI*

STATUS: CANDIDATE

CRITICAL HAB No RECOVERY PLAN: No CFR:

DESCRIPTION: VERY SMALL (1.7-3.2mm) CONICAL SHELL. IDENTIFICATION MUST BE VERIFIED BY CHARACTERISTICS OF REPRODUCTIVE ORGANS.

ELEVATION

RANGE. 4500-6000 FT.

COUNTIES: COCHISE, SANTA CRUZ

HABITAT: AQUATIC AREAS, SMALL SPRINGS WITH VEGETATION SLOW TO MODERATE FLOW

INDIVIDUALS FOUND ON FIRM SUBSTANCES (ROOTS, WOOD, AND ROCKS) OTHER POPULATIONS FOUND ON FORT HUACHUCA MILITARY PROPERTY

FROM

(FRI) 01. 29' 99 09:55/ST. 09:48/NO. 3561627740 P 13/19

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

NAME: MOUNTAIN PLOVER

*CHARADRIUS MONTANUS*

STATUS: CANDIDATE

CRITICAL HAB No RECOVERY PLAN: No CFR:

DESCRIPTION: WADING BIRD; COMPACTLY BUILT; IN BREEDING SEASON WITH WHITE FOREHEAD AND LINE OVER THE EYE; CONTRASTING WITH DARK CROWN; NONDESCRIPT IN WINTER. VOICE IS LOW, VARIABLE WHISTLE. ELEVATION

RANGE: VARIABLE FT.

COUNTIES: YUMA, SANTA CRUZ, PIMA, COCHISE, PINAL, APACHE

HABITAT: OPEN ARID PLAINS, SHORT-GRASS PRAIRIES, AND SCATTERED CACTUS.

AZ PROVIDES WINTERING HABITAT ONLY. SPECIES PRIMARILY FOUND IN ROCKY MOUNTAIN STATES FROM CANADA TO MEXICO

NAME: CHIRICAHUA LEOPARD FROG

*RANA CHIRICAHUENSIS*

STATUS: CANDIDATE

CRITICAL HAB No RECOVERY PLAN: No CFR:

DESCRIPTION: CREAM COLORED TUBERCLES (spots) ON A DARK BACKGROUND ON THE REAR OF THE THIGH, DORSOLATERAL FOLDS THAT ARE INTERRUPTED AND DEFLECTED MEDIALY, AND A CALL GIVEN OUT OF WATER DISTINGUISH THIS SPOTTED FROG FROM OTHER LEOPRO ELEVATION

RANGE. 3000-3300 FT.

COUNTIES: SANTA CRUZ, APACHE, GILA, PIMA, COCHISE, GREENLEE, GRAHAM, YAVAPAI, COCONINO, NAVAJO

HABITAT: STREAMS, RIVERS, BACKWATERS, PONDS, AND STOCK TANKS THAT ARE FREE FROM INTRODUCED FISH AND BULLFROGS

REQUIRE PERMANENT OR NEARLY PERMANENT WATER SOURCES. POPULATIONS NORTH OF THE GILA RIVER ARE THOUGHT TO BE CLOSELY-RELATED, BUT DISTINCT, UNDESCRIBED SPECIES. SPECIES ALSO FOUND ON FORT HUACHUCA

FROM

(FRI) 01. 29' 99 09:55/ST. 09:48/NO. 3561627740 P 14/19

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY:

COCHISE

1/14/99

# CONSERVATION AGREEMENT

TOTAL= 1

NAME: RAMSEY CANYON LEOPARD FROG

*RANA SUBAQUAVOCALIS*

STATUS: NONE

CRITICAL HAS No RECOVERY PLAN. No CFR:

DESCRIPTION: BROWN OR GREEN FROG, 2.5 TO 4 INCHES LONG; SPOTS ROUNDED

WITH LIGHT BORDERS; DORSOLATERAL FOLDS ARE INTERRUPTED

POSTERIORLY AND DEFLECTED MEDIALY; YELLOWISH PIGMENTATION

ON THE GROIN WHICH MAY EXTEND INTO THE POSTERIOR VENTER

ELEVATION

RANGE: 5,000 FT FT.

COUNTIES: COCHISE

HABITAT: STTREAM AND PONDED AQUATIC HABITATS

CONSERVATION AGREEMENT BETWEEN THE SERVICE, ARIZONA GAME AND FISH DEPARTMENT, THE NATURE CONSERVANCY, BUREAU OF LAND MANAGEMENT, CORONADO NATIONAL FOREST, THE US ARMY INTELLIGENCE CENTER AND FORT HUACHUCA, AND A PRIVATE LANDOWNER WAS FINALIZED JULY 1996

**APPENDIX D**

**Consultation Letters**

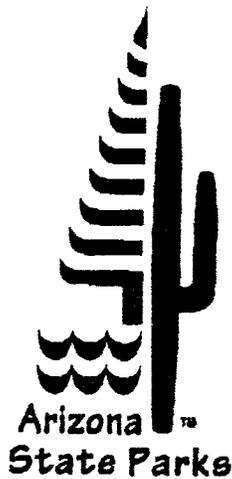
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"Managing and conserving natural, cultural, and recreational resources"

March 15, 1999

Linda Ashe  
US Army Corps of Engineers  
Fort Worth District  
ATTN: CESWF-PL-RE, Room 3A14  
819 Taylor Street  
Fort Worth, Texas 76102-0300

RE: Cochise County; Draft Environmental Assessment for Proposed JTF-6  
Installation of Reconnaissance Light Poles in the Vicinity of Naco, Arizona;  
DOD-Corps



Jane Dee Hull  
Governor

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Rafael Payan  
Assistant Director

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602-542-4180

Director's Office Fax:  
602-542-4188

Dear Ms. Ashe,

Thank you for providing this office with a copy of the Draft Environmental Assessment (DEA) prepared in connection with the above-referenced undertaking. I have reviewed the documentation and offer the following comments:

Both in previous consultation and in the DEA, the Corps of Engineers has proposed to monitor construction in the vicinity of two historic properties, AZ F:9:13 and 23 (ASM), which have been identified in the project area. In response to consultation pursuant to Section 106 of the National Historic Preservation Act (see letter to William Fickel, dated February 8, 1999), I recommended additional monitoring of ground-disturbing activities in the vicinity of tributaries to Greenbush Draw. Significant archaeological sites have been found along drainages in southeastern Arizona, but are not always readily identified during surface inspections. Monitoring of excavations in the immediate vicinity of the drainages that cross the border in the project area should insure that impacts to such properties are avoided or minimized.

We appreciate your continued cooperation with this office. Please call me at (602) 542-7137 if you have questions or concerns.

Sincerely,

Carol Heathington  
Compliance Specialist  
State Historic Preservation Office

**"Managing and conserving natural, cultural, and recreational resources"**

February 8, 1999

William Fickel, Jr.  
 Chief, Environmental Division  
 Fort Worth District, Corps of Engineers  
 P.O. Box 17300  
 Fort Worth, Texas 76102-0300

RE: Cochise County; JTF-6 Installation of Reconnaissance Light Poles in the  
 Vicinity of Naco, Arizona; DOD-Corps

Dear Mr. Fickel,

Thank you for providing our office with a copy of the survey report prepared in connection with the above-referenced undertaking. I have reviewed the documentation submitted and have the following comments pursuant to 36 CFR Part 800:

Two historic properties, AZ F:9:13 and 23 (ASM), have been identified in the project area; both have been determined eligible for inclusion on the National Register of Historic Places under criterion *d*. The consultant's report recommends archaeological monitoring of ground disturbance in the vicinity of those properties. Your letter indicates that an archaeologist will be onsite during placement of light poles in the vicinity, to insure that both sites are avoided. On that basis, you have determined that this undertaking will have *no adverse effect* on historic properties.

We recommend that an archaeologist also monitor any ground disturbing activity in the vicinity of Greenbush Draw and its tributaries. As you know, significant Paleoindian sites have been recorded in this vicinity. Such sites are often obscured by subsequent deposition and are therefore not always identified during surface inspections. Monitoring of excavations in the immediate vicinity of the drainages that cross the border in the project area should insure that impacts to such properties are avoided or minimized. Based on monitoring of any such disturbance, we concur with your determination.

We appreciate your continued cooperation with this office in considering the impact of Federal undertakings on historic preservation. Please call me at (602) 542-7137 if you have questions or concerns.

Sincerely,



Carol Heathington  
 Compliance Specialist  
 State Historic Preservation Office



Jana Dee Hull  
 Governor

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General Fax:  
 602-542-4180

Director's Office Fax:  
 602-542-4188

REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**FORT WORTH DISTRICT, CORPS OF ENGINEERS**  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300

January 6, 1999

Environmental Division

SUBJECT: Proposed JTF-6 Activities near Naco, Arizona.

Mr. James Garrison, State Historic Preservation Officer  
Arizona State Parks  
1300 West Washington  
Phoenix, Arizona 85007

Dear Mr. Garrison:

The U.S. Army Corps of Engineers, Fort Worth District (COE), is acting on behalf of INS/U.S. Border Patrol and Joint Task Force-Six (JTF-6) in regard to the above mentioned project. The Fort Worth District is preparing a Draft Environmental Assessment for JTF-6 for this project located in Naco, Arizona.

The proposed project consists of installing reconnaissance light poles both one mile east and west of the Naco Port of Entry. Figure B indicates the location of this project. A Class I Overview was conducted previous to the field survey. A Class III archaeological inventory was conducted on November 23, 1998. We have enclosed a copy of Technical Report No. 98-22 for this project survey. No previously unknown cultural resources were encountered during the survey. Two previously recorded archaeological sites (AZ FF:9:23 and AZ FF:9:13) were identified on the eastern portion of this project area. An archaeologist-monitor will be on site during placement of the light poles to ensure avoidance of both sites.

Given the avoidance measures, the COE has determined, in accordance with 36 CFR Part 800.5(a) and (d), that the proposed Yuma JTF-6 Border Surveillance project as planned will have *no adverse effect* on National Register listed or eligible properties. If any cultural resources or human remains are encountered during construction, the COE will notify your office pursuant to 36 CFR 800.11.

We request that you review the enclosed information. If you agree with our determination for this project, we would appreciate your concurrence. Further, in accordance with 36 CFR Part 800.5 we understand that your response to this request will be made within 30 days following receipt of this letter.

-2-

If you require additional information or have any questions, please contact Ms. Patience Patterson at (817) 978-6390. Thank you for your assistance with this project.

Sincerely,



William Fickel, Jr.  
Chief, Environmental Division

Enclosures

Copy Furnished w/o enclosures:

JTF-6  
ATTN: Milton Blankenship  
Bldg. 11603, Biggs AAF  
Ft. Bliss, TX 79918-0058

THE STATE



OF ARIZONA

## GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000

www.gf.state.az.us

*Governor*

Jane Dee Hull

*Commissioners:*

Chairman, Herb Guenther, Tucson

Michael M. Golightly, Flagstaff

William Berlat, Tucson

M. Jean Hassell, Scottsdale

Dennis D. Manning, Alpine

*Director*

Duane L. Shroufe

*Deputy Director*

Thomas W. Spalding

---

**Tucson Office, 555 N. Greasewood Rd., Tucson, AZ 85745**

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March 12, 1999

Ms. Linda Ashe  
Ecological Communications Corporation  
Barton Oaks Plaza Two, Ste. 170  
901 S. MoPac Expressway  
Austin, Texas 78746

Re: JTF-6 Draft Environmental Assessment for Installation  
of Light Poles at the Port of Entry at Naco, Arizona.

Dear Ms. Ashe:

The Arizona Game & Fish Department (Department) has reviewed the above-referenced project for its potential to adversely affect special status species, habitats of special concern, and other significant wildlife resources.

The proposed project entails the installation of a total of approximately 40 light poles spaced at about 300-400 feet intervals for approximately 2 miles centered on the truck Port of Entry at Naco, Arizona. The pole alignment is approximately 60 feet north of the International Border with Mexico. Poles will be constructed of concrete and be 40-45 feet high.

Based on a review of the Department's Heritage Data Management System<sup>1</sup> (HDMS), no occurrence of any special status species has been documented within a 3-mile radius of the proposed project. The Department does not expect

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<sup>1</sup> Information contained in the Department's HDMS is dynamic and updated on a periodic basis. Any information, therefore, is likely to become outdated shortly after its release. Such information is intended to serve as a guide regarding what species may be found in a particular area. It does not represent the results of comprehensive species-specific surveys.

Ms. Ashe  
March 12, 1999  
2

that implementation of the project will adversely affect habitat conditions in the area. However, the Department is concerned that the project may increase raptors' vulnerability to electrocution. We recommend that power line installation conform to those techniques promoted in *Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 1996*<sup>2</sup>.

Thank you for the opportunity to review and comment on the Draft EA. We would appreciate receiving a copy of the Final EA upon its completion.

Please give me a call at 520/628-5982 Ext. 137 if you have questions.

Sincerely,



Sherry A. Ruther  
Habitat Specialist

SAR:sr

cc: John Kennedy, Project Evaluation Program Supervisor,  
Habitat Branch, PHX (AGFD Log No. 2-19-99/01)  
Brad Fulk, District Wildlife Manager

C:\PROJECTS\FEDS\LIGHTS AT NACO - JTF6

REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
FORT WORTH DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300

December 11, 1998

Environmental Division

**SUBJECT: Proposed JTF-6 Activities in Yuma and Naco, Arizona**

Arizona Game and Fish Department  
Arizona Natural Heritage Program  
2221 West Greenway Road  
Phoenix, Arizona 85023-4399

Dear Gentlemen:

The U.S. Army Corps of Engineers, Fort Worth District, is preparing two Draft Environmental Assessments (EA's) for proposed construction activities of Joint Task Force Six (JTF-6) located at Yuma and Naco, Arizona.

The proposed project in Yuma, Yuma County, Arizona, would consist of installing border lights and camera poles for a distance of approximately 9 miles along the U.S.-Mexico border (Figure A). Military personnel involved with this project would be housed in Yuma for the duration of the construction period. The action is proposed to begin in late spring/early summer of 1999.

The proposed project near Naco, Cochise County, Arizona, would consist of installing lighting poles one mile east and one mile west of the pedestrian Port of Entry (Figure B). Military personnel for this proposed project would be housed in either Naco or Sierra Vista. This action is also proposed to begin late spring/early summer 1999.

We are contacting your office to solicit your assistance in determining if any state listed threatened, endangered, or other species of concern near the proposed project site could be impacted by the Proposed Action. A copy of the draft EA will be forwarded to your office upon completion. If you require any additional information at this time, please contact Ms. Linda Ashe of my staff at (817) 978-6382.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Fickel, Jr.", written in a cursive style.

William Fickel, Jr.  
Chief, Environmental Division

FROM

(TUE) 01. 12' 99 16:58/ST. 16:49/NO. 3561627665 P 2/2

SHELDON R. JONES  
Director



G. JOHN CARAVETTA  
Associate Director

*EV-EMU*

# Arizona Department of Agriculture

1688 West Adams, Phoenix, Arizona 85007  
(602) 542-4373 FAX (602) 542-0999

PLANT SERVICES DIVISION

December 18, 1998

William Fickel, Jr.  
Chief, Environmental Division  
Department of the Army  
Ft. Worth District Corps of Engineers  
P.O. Box 17300  
Ft. Worth, TX 76102-0300

RE: Proposed JTF-6 Activities in Yuma & Naco, Arizona

Dear Mr. Fickel:

The Arizona Department of Agriculture has reviewed the referenced information dated December 11, 1998.

Based on the information provided, the project is not expected to have any significant adverse impact to protected plant species. The Department recommends that if any protected plants exist on site, they be avoided or transplanted, preferably on site.

We appreciate the opportunity to review the proposed action. If you need additional information, please contact me at 602/542-3292.

Sincerely,

A handwritten signature in cursive script that reads "James McGinnis" with the initials "JM" and "clw" written below it.

James McGinnis  
Chief Enforcement Officer  
Resource Protection

JM:clw

REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
FORT WORTH DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300  
December 11, 1998

Environmental Division

SUBJECT: Proposed JTF-6 Activities in Yuma and Naco, Arizona

Mr. James McGinnis  
Arizona Department of Agriculture  
Plant Services Division  
1688 West Adams  
Phoenix, Arizona 85007

Dear Mr. McGinnis:

The U.S. Army Corps of Engineers, Fort Worth District, is preparing two Draft Environmental Assessments (EAs) for proposed construction activities of Joint Task Force Six (JTF-6) located at Yuma and Naco, Arizona.

The proposed project in Yuma, Yuma County, Arizona, would consist of installing border lights and camera poles for a distance of approximately 9 miles along the U.S.-Mexico border (Figure A). Military personnel involved with this project would be housed in Yuma for the duration of the construction period. The action is proposed to begin in late spring/early summer of 1999.

The proposed project near Naco, Cochise County, Arizona, would consist of installing lighting poles one mile east and one mile west of the pedestrian Port of Entry (Figure B). Military personnel for this proposed project would be housed in either Naco or Sierra Vista. This action is also proposed to begin late spring/early summer 1999.

Both projects are located in previously cleared or heavily grazed areas. We are contacting your office to solicit your assistance in determining if any special requirements or permits may be necessary under the Arizona Native Plant Law to complete the proposed action. If you require any additional information at this time, please contact Ms. Linda Ashe of my staff at (817) 978-6382.

Sincerely,

A handwritten signature in black ink, appearing to read "William Fickel, Jr.", with a long horizontal flourish extending to the right.

William Fickel, Jr.  
Chief, Environmental Division

MAR 12 1999



INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

Ms. Linda Ashe  
U.S. Army Corps of Engineers  
Fort Worth District  
Attn: CESWF-PL-RE, Room 3A14  
819 Taylor Street  
Fort Worth, Texas 76102-0300

Re: Draft Environmental Assessment, Joint Task Force Six Proposed Lighting Project, Naco,  
Cochise County, Arizona

Dear Ms. Ashe:

The U. S. Section of the International Boundary and Water Commission (USIBWC) has reviewed the referenced document. The USIBWC is concerned that boundary monument, cross boundary drainage and transboundary pollution impacts do not occur; therefore, the following comments are provided for your consideration.

Placement of the proposed light poles equipment and any structural elements must be at least two feet away from the International Boundary. Since exact locations of proposed light equipment are not reported, please submit a complete plan and profile of proposed structures prior to construction for our review and approval. Provide a cross section map which shows the boundary, boundary fence, any roads and the proposed work. Electrical lines crossing the access roads to the monuments and points of ingress and egress should be coordinated with the USIBWC. Provide a typical elevation sketch of the electrical system illustrating the elevation of wires over road intersections. The wire height should not hinder monument operations and maintenance and transportation of equipment.

Access along the boundary shall be left open or made accessible for periodic routine maintenance of the monuments. The line of sight between the International Boundary Monuments should be maintained free of obstruction. The boundary monument numbers in the project area are 91, 92, 92A, 92B, 92C and 93. A complete list of the boundary monuments for Cochise County is attached.

The USIBWC will coordinate with the Mexican Section of the International Boundary and Water Commission on the proposed activity. Please provide this office with three copies of the final environmental assessment for our files and provide one copy to Mr. Stephen Tencza at the Nogales Field Office, 865 Rio Rico Industrial Park, Rio Rico, AZ 85648; telephone (520) 281-1832.

FROM

(THU) 03. 18' 99 09:35/ST. 09:34/NO. 3561627878 P 3

We appreciate the opportunity to review this document. If you have any questions, please contact me at (915) 832-4148, or have your staff contact Steve Fox at (915) 832-4736.

Sincerely,

*Yusuf E. Farran*

Yusuf E. Farran, P.E.

Division Engineer

Environmental Management Division

Attachment as stated

WESTERN LAND BOUNDARY MONUMENTS  
COORDINATES AND DISTANCES

TYPE: M=Masonry  
I=Iron  
G=Granite  
MA=Marble

ELEVATION:

\*=+/-1.00M  
\*\*=+/-0.50M  
\*\*\*=+/-2.00M  
\*\*\*\*=+/-0.10M  
\*\*\*\*\*=+/-0.20M  
\*\*\*\*\*=+/-0.30M  
\*\*\*\*\*=+/-5.00M

ARIZONA		COCHISE COUNTY					
MON #	Latitude	Longitude	Distance Meters	Kilometers Miles Btw.	Elev. Meters	Type	
72	N 31 19 56	W 109 03 39	290156.38	180.31	2.53	***1538.30	I
73	N 31 19 58	W 109 05 17	292687.87	181.88	3.80	1266.80	M
74	N 31 19 59	W 109 07 37	296480.61	184.24	5.68	***1322.00	I
75	N 31 19 59	W 109 11 16	302159.12	187.77	4.04	1211.10	I
76	N 31 20 00	W 109 13 48	306193.08	190.28	3.48	*1172.40	I
77	N 31 20 01	W 109 15 54	309676.13	192.44	1.96	1132.60	M
78	N 31 20 01.784	W 109 17 12.807	311642.95	193.66	5.99	****1161.70	I
79	N 31 20 02	W 109 20 48	317630.48	197.38	4.68	****1243.10	I
80	N 31 20 02	W 109 23 55	322308.79	200.29	1.34	**1465.10	I
81	N 31 20 02	W 109 24 45	323636.95	201.12	1.80	1479.40	I
82	N 31 20 02	W 109 25 53	325433.15	202.24	1.87	1374.20	M
83	N 31 20 02	W 109 27 06	327303.49	203.40	6.07	1363.70	I
84	N 31 20 02	W 109 30 55	333363.91	207.17	2.04	1252.80	I
84A	N 31 20 01.992	W 109 32 12.439	335403.91	208.44	1.93		I
85	N 31 20 02	W 109 33 25	337341.51	209.64	1.59	1203.80	I
85A	N 31 20 02	W 109 34 26	338931.51	210.63	2.85		I
86	N 31 20 02	W 109 36 06	341785.61	212.40	6.32	****1204.20	I
87	N 31 20 02	W 109 40 12	348111.12	216.33	6.68	1248.60	I
88	N 31 20 02	W 109 44 24	354796.30	220.48		****1315.80	I

-----ARIZONA-----		-----COCHISE COUNTY-----					
MON #	Latitude	Longitude	Distance Meters	Kilometers Miles Btw.	Elev. Mon. Meters	Type	
89	N 31 20 02	W 109 46 36	358259.36	222.63	3.46	*****1354.10	I
90	N 31 20 02	W 109 49 08	362249.94	225.11	3.99	*****1390.30	I
91	N 31 20 02.168	W 109 52 20.727	367398.41	228.31	5.15	1476.10	I
92	N 31 20 01.98	W 109 56 01.00	372091.76	231.85	5.70	*****1399.10	I
92A	N 31 20 02	W 109 56 33	374061.76	232.45	0.97		I
92B	N 31 20 02	W 109 56 55	374576.96	232.77	0.51		I
92C	N 31 20 02	W 109 57 52	376071.36	233.70	1.50		I
93	N 31 20 02	W 109 58 44	37554.61	234.62	1.48	****1402.70	I*
94	N 31 20 02	W 110 00 51	380863.48	236.68	2.32	****1399.70	I
95	N 31 20 02	W 110 03 01	384338.55	238.84	3.48	1375.90	I
96	N 31 20 02	W 110 04 57	387412.16	240.75	3.07	1354.20	I
97	N 31 20 02	W 110 07 14	391036.10	243.00	3.62	1327.10	I
98	N 31 20 02.471	W 110 09 21.101	394381.22	245.08	3.35	1316.10	M
99	N 31 20 02	W 110 12 30	399373.94	248.18	4.99	*****1426.60	I
100	N 31 20 01	W 110 15 34	404231.94	251.20	4.86	*1839.90	I
101	N 31 20 01	W 110 15 50	404674.36	251.47	0.43	*****1848.60	I
102	N 31 20 00	W 110 16 56	406403.73	252.54	1.72	*1800.40	I
103	N 31 20 00	W 110 20 09	411518.36	255.72	5.12	**1611.00	I
104	N 31 20 00	W 110 21 38	413870.93	257.18	2.35	*1618.50	I
105	N 31 19 59	W 110 23 24	416659.97	258.91	2.78	*1596.20	I
106	N 31 19 58	W 110 27 29	423141.42	262.94	6.49	1583.30	M
					2.93		

REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
FORT WORTH DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 17300  
FORT WORTH, TEXAS 76102-0300  
December 11, 1998

Environmental Division

SUBJECT: Proposed JTF-6 Activities in Yuma and Naco, Arizona

Mr. Sam Spiller  
U.S. Fish and Wildlife Service  
3616 W. Thomas, Suite 6  
Phoenix, Arizona 85019

Dear Mr. Spiller:

The U.S. Army Corps of Engineers, Fort Worth District, is preparing two Draft Environmental Assessments (EAs) for proposed construction activities of Joint Task Force Six (JTF-6) located at Yuma and Naco, Arizona.

The proposed project in Yuma, Yuma County, Arizona, would consist of installing border lights and camera poles for a distance of approximately 9 miles along the U.S.-Mexico border (Figure A). Military personnel involved with this project would be housed in Yuma for the duration of the construction period. The action is proposed to begin in late spring/early summer of 1999.

The proposed project near Naco, Cochise County, Arizona, would consist of installing lighting poles one mile east and one mile west of the pedestrian Port of Entry (Figure B). Military personnel for this proposed project would be housed in either Naco or Sierra Vista. This action is also proposed to begin late spring/early summer 1999.

Both projects are located in previously cleared or heavily grazed areas. We are contacting your office to solicit your assistance in determining if any federally listed threatened, endangered, or other species of concern near the proposed project site which could be impacted by the Proposed Action. A copy of the draft EA will be forwarded to your office upon completion. If you require any additional information at this time, please contact Ms. Linda Ashe of my staff at (817) 978-6382.

Sincerely,

A handwritten signature in black ink, appearing to read "Mah E J", written over a horizontal line.

William Fickel, Jr.  
Chief, Environmental Division

for

**APPENDIX E**

**Notice of Availability**

**PUBLISHERS AFFIDAVIT**

STATE OF ARIZONA )

) SS.

COUNTY OF COCHISE )

*[Handwritten Signature]*

being duly sworn, deposes and says:

That she is the Secretary of the Sierra Vista Herald

and the Bisbee Daily Review, newspapers published six days a week in Bisbee and Sierra Vista, Cochise County, State of Arizona

Notice of Availability of Environmental Assessment for Proposed JTF-6 Mission

a copy of which is hereto attached, was published in its issues for 3 times on the following dates:

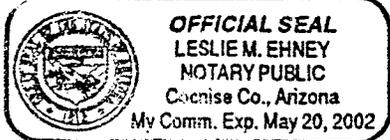
February 12, 1999

February 14, 1999

February 15, 1999

Subscribed and sworn to me this 15<sup>th</sup> day of February, 1999

*[Handwritten Signature: Leslie M. Ehney]*  
NOTARY PUBLIC



**MY COMMISSION EXPIRES**

**PUBLIC NOTICE**

**Public Notice/Notice of Availability**  
Interested parties are hereby notified that Joint Task Force Six (JTF-6) has prepared an Environmental Assessment for a Proposed JTF-6 Mission near Naco, Cochise County, Arizona. This notice is being issued to interested parties in accordance with the National Environmental Policy Act (NEPA), Public Law 91-190, and regulations for implementing the Procedural Provisions of the NEPA, 40 Code of Federal Regulations, 1500-1508. The purpose of the Proposed Action is to install approximately 2 miles of light poles along the United States-Mexico international land border. The proposed poles will extend along the existing border fence approximately 60 feet north of the border for a distance of one mile east and one mile west of the Truck Port of Entry in Naco, Arizona.  
The EA is available for public review beginning February 15, 1999 and ending March 15, 1999. Comments will be accepted for the same 30-day period. The document is available for public viewing at the Naco Post Office located at 3833 South Giesler in Naco, Arizona or the Warren Post Office, located at 319 Arizona Street in Bisbee, Arizona. Post Office lobby hours are from 8:00 a.m. to 5:00 p.m. daily. Post Office window hours are from 8:00 a.m. to 12:30 p.m. and 1:30 p.m. to 4:30 p.m. Monday through Friday. All questions and comments regarding the Environmental Assessment should be directed, in writing, to the following:  
U.S. Army Corps of Engineers  
Fort Worth District  
Attn: CESWF-PL-RE  
Room 3A14  
819 Taylor Street  
Fort Worth, Texas 76102-0300  
For further information, contact the Fort Worth District, Corps of Engineers, Technical Manager at (817) 978-6382.  
Publish: February 12, 14, 15, 1999