

FINAL
ENVIRONMENTAL ASSESSMENT
ADDRESSING PROPOSED TACTICAL INFRASTRUCTURE
MAINTENANCE AND REPAIR ALONG THE U.S./MEXICO
INTERNATIONAL BORDER IN NEW MEXICO



Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol

JULY 2015

ABBREVIATIONS AND ACRONYMS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter	ESP	Environmental Stewardship Plan
ACEC	Areas of Critical Environmental Concern	FEMA	Federal Emergency Management Agency
ACHP	American Council on Historic Preservation	FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
ACM	asbestos-containing material	FLPMA	Federal Land Policy and Management Act
AQCR	air quality control region	FM&E	Facilities Management and Engineering
BLM	Bureau of Land Management	FONSI	Finding of No Significant Impact
BMP	Best Management Practice	FPPA	Farmland Protection Policy Act
BP	before present	FR	Federal Register
CAA	Clean Air Act	FY	Fiscal Year
CBP	U.S. Customs and Border Protection	GHG	greenhouse gas
CEQ	Council on Environmental Quality	HAP	hazardous air pollutant
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System	HPD	Historic Preservation Division
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	I	Interstate
CFR	Code of Federal Regulations	LBP	lead-based paint
CO	carbon monoxide	mg/m^3	milligrams per cubic meter
CO_2	carbon dioxide	MOU	Memorandum of Understanding
CWA	Clean Water Act	mph	miles per hour
dba	a-weighted decibel	msl	mean sea level
DHS	Department of Homeland Security	NAAQS	National Ambient Air Quality Standards
DOD	U.S. Department of Defense	NAGPRA	Native American Graves Protection and Repatriation Act
DVD	digital video disc	NEPA	National Environmental Policy Act
EA	Environmental Assessment	NHPA	National Historic Preservation Act
EIA	U.S. Energy Information Administration	NMDGF	New Mexico Department of Game and Fish
EIS	Environmental Impact Statement	NMED	New Mexico Environmental Department
EO	Executive Order	NM	New Mexico State Highway
ESA	Endangered Species Act		<i>continued on inside of back cover →</i>

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NMSLO New Mexico State Land Office
NO₂ nitrogen dioxide
NOA Notice of Availability
NO_x nitrogen oxides
NPDES National Pollutant Discharge Elimination System
NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places
O₃ Ozone
OSHA Occupational Safety and Health Administration
PA Programmatic Agreement
Pb Lead
PCB polychlorinated biphenyl
PCE primary consistent elements
PM_{2.5} particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ particulate matter equal to or less than 10 microns in diameter
PMO Program Management Office
POE Port of Entry
ppb parts per billion
ppm parts per million
PSD Prevention of Significant Deterioration
RCRA Resource Conservation and Recovery Act
RMP Resource Management Plan
ROI region of influence
RVSS Remote Video Surveillance System
ROW right of way
SBI Secure Border Initiative

SHPO State Historic Preservation Officer
SIP State Implementation Plan
SMA Special Management Areas
SOP Standard Operating Procedure
SO₂ sulfur dioxide
SSPP Strategic Sustainability Performance Plan
tpy tons per year
TSCA Toxic Substances Control Act
U.S.C. United States Code
USACE U.S. Army Corps of Engineers
USBP U.S. Border Patrol
USEPA U.S. Environmental Protection Agency
USFS U.S. Forest Service
USFWS U.S. Fish and Wildlife Service
USGS U.S. Geological Survey
VOC volatile organic compound
WSA Wilderness Study Area

FINAL

FINDING OF NO SIGNIFICANT IMPACT
Addressing Proposed Tactical Infrastructure
Maintenance and Repair Along the
U.S./Mexico International Border in New Mexico

Introduction

Pursuant to the National Environmental Policy Act (NEPA), the U.S. Department of Homeland Security (DHS) and U.S. Customs and Border Protection (CBP) has prepared an Environmental Assessment (EA), which is attached hereto and incorporated herein by reference, to document its consideration of the potential environmental impacts of a proposal to maintain and repair certain existing tactical infrastructure along the U.S./Mexico international border in the State of New Mexico. The tactical infrastructure proposed to be maintained and repaired consists of existing fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communication and surveillance tower components (including, but not limited to, Remote Video Surveillance System [RVSS] or Secure Border Initiative [SBI] towers (henceforth referred to as towers)). The existing tactical infrastructure occurs in the U.S. Border Patrol (USBP) El Paso Sector.

CBP is charged with the dual mission of securing the United States' borders while facilitating legitimate trade and travel. In supporting CBP's mission the USBP has multiple missions; to apprehend terrorists and terrorist weapons illegally entering the United States, deter illegal entries through improved enforcement and to detect, apprehend and deter smugglers of humans, drugs, and other contraband.

Proposed Action

This Proposed Action will include the maintenance and repair of tactical infrastructure along the U.S./Mexico international border in New Mexico in the USBP El Paso sector. The tactical infrastructure included in this analysis crosses multiple privately owned land parcels, and public lands managed by the Bureau of Land Management (BLM), and the U.S. Forest Service (USFS). The CBP Facilities Management and Engineering (FM&E) Office is responsible for maintenance and repair of tactical infrastructure (e.g., fences, roads, lights, communications and surveillance towers, and drainage structures) to support CBP border security requirements.

Purpose and Need

The purpose of the Proposed Action is to ensure that the physical integrity of the existing tactical infrastructure and associated supporting elements continue to perform as intended and to assist the USBP in securing the U.S./Mexico international border in New Mexico. The Proposed Action will assist CBP agents and officers in continuing the effective control of our nation's southwestern border in New Mexico. In many areas, tactical infrastructure is a critical element of border security, which assists in controlling and preventing illegal border intrusion and preventing illegal border intrusion. To achieve effective control of our nation's borders, CBP is developing a combination of personnel, technology, and infrastructure; mobilizing and rapidly

deploying highly trained USBP agents; placing tactical infrastructure strategically; and fostering partnerships with other law enforcement agencies.

The need for the Proposed Action is to ensure that the effective level of border security provided by the installed tactical infrastructure is not compromised by impacts occurring through acts of sabotage, acts of nature, or a lack of maintenance and repair. CBP must ensure that tactical infrastructure functions as it is intended, which assists CBP with the following mission requirements:

- Ensuring the highest probability of apprehending terrorists and their weapons as they attempt to enter illegally between the Ports of Entry (POEs)
- Deterring illegal entries through improved enforcement
- Detecting, apprehending, and deterring smugglers of humans, drugs, and other contraband.

This EA will provide the necessary disclosure of environmental impacts under NEPA for two Federal agencies: CBP and the BLM. All maintenance and repair work on BLM administered lands will be executed in accordance with the ROW stipulations developed by BLM and CBP. The BLM purpose, as a multiple use agency, is to make public land and its resources available for use and development to meet National, regional, and local needs, consistent with national objectives, while simultaneously applying the principles of sustained yield governing the many resources the agency manages.

The BLM's purpose is to manage roads across Public Lands that are currently utilized by CBP to support the national security mission of the United States. The BLM's specific need is to issue right of way (ROW) grant for the construction, maintenance, operation, and termination of roads on public land.

The principles of sustained yield include safeguarding wildlife and their habitat, threatened species and their habitat, endangered species and their habitat, sensitive species and their habitat, water quality, soils, paleontological, archaeological, vegetation, and watershed functions. Goals and objectives for these resources were set forth in the Mimbres Resources Management Plan (December 1993). The need is to respond to an application submitted by CBP for the subject road segments under section 507 of the Federal Land Policy and Management Act (FLPMA).

In addition, tactical infrastructure will be maintained to ensure the safety of USBP agents by preventing potential vehicular accidents by minimizing and eliminating hazardous driving conditions.

Description of the Proposed Action

The proposed maintenance and repair of existing tactical infrastructure is found in along the U.S./Mexico international border in New Mexico. However, the maintenance and repair of tactical infrastructure assets that are already addressed in previous NEPA documents will not be included. In addition, tactical infrastructure assets that are covered by a waiver issued by the Secretary of Homeland Security will not be included. The maintenance and repair activities are necessary to repair damages caused due to natural disasters, normal deterioration due to wear and

tear, and intentional destruction or sabotage. The USBP El Paso sector along the U.S./Mexico international border in New Mexico has identified a need for tactical infrastructure maintenance and repair to ensure their continued utility in securing the border. All maintenance and repair activities will be coordinated by the CBP FM&E Sector Coordinator in close coordination with the sector and managed by the Project Management Office's Maintenance and Repair Supervisor. CBP proposes to conduct the following forms of tactical infrastructure maintenance and repair.

Fences and Gates. Maintenance and repair of fences and gates consist of welding of metal fence components, replacement of damaged or structurally compromised members, reinforcing or bracing of foundations, repairing burrowing activities under fences and gates, repairing weather-related damages, and the removal of vegetation and accumulated debris. The Proposed Action will also include the repair or replacement of gate-operating equipment (e.g., locks, opening/closing devices, motors, and power supplies). There are approximately 120 miles of fence on non-tribal lands in New Mexico. The fencing consists of primary border fencing and a variety of perimeter security fencing for protecting sensitive infrastructure. Approximately 5 percent of the total fences and gates in the New Mexico region of analysis are not waived or previously covered and are therefore analyzed in this EA.

Currently, CBP has not identified fences and gates requiring maintenance on BLM controlled land. The majority of fences and gates to be repaired occur within the Roosevelt Reservation and are outside the oversight or control of Federal land managers.

Access Roads and Integrated Bridges/Crossovers. Maintenance and repair activities will consist of filling in potholes, regrading road surfaces, implementing improved water drainage measures (ensure road crowns shed water and establish drainage ditches, culverts, or other water-control features as needed to control runoff and prevent deterioration to existing infrastructure or surrounding land), applying soil stabilization agents, controlling vegetation and debris, and adding lost road surface material to reestablish intended surface elevation needed for adequate drainage. Approximately 275 miles of the 550 miles of road that are used by CBP are not waived or previously analyzed and are therefore evaluated in the EA. Most of the 275 miles are within 25 miles of the U.S./Mexico international border in New Mexico. BLM will issue a standard 60-foot ROW for 50.45 miles of road with the understanding that maintenance and repair will be confined to the width of the existing road located within the 60-foot-wide ROW—CBP will not be able to expand the road footprint beyond its current limits. The exact number of miles of roads on non-BLM lands in New Mexico could change over time to accommodate CBP needs. Bridges will also be inspected on a routine basis and their structural integrity maintained. Currently, CBP has not identified bridges that require maintenance on BLM-controlled lands. In the event that a bridge on BLM-controlled lands requires maintenance, CBP will notify BLM and seek concurrence for the maintenance and repair before executing any proposed work.

Drainage Management Structures. Maintenance and repair of drainage systems will consist of cleaning blocked culverts and grates of trash and general debris and repairing or replacing nonfunctional or damaged drainages when necessary. In addition, maintenance and repair of riprap and low-water crossings will occur when necessary to maintain proper functionality. There are an estimated 150 such structures that will be maintained and repaired by CBP in New

Mexico. Approximately 20 percent of these structures are not waived or previously analyzed and are therefore evaluated in this EA.

Vegetation Control to Maintain Road Visibility. Vegetation encroaching upon roads and bridges will be maintained to ensure visibility and to sustain safe driving conditions for USBP agents during travel. Control will be achieved by trimming, mowing, and applying selective herbicides. Application of terrestrial and aquatic herbicide will be made with products approved by the USEPA and the relevant Federal land management agency, where appropriate. Certified USBP sector or contract support personnel will use all herbicides in accordance with label requirements. Herbicide use would be part of an integrated approach that uses minimal quantities of herbicide. Vegetation control will not be conducted in designated critical habitat, suitable habitat, or in areas where threatened or endangered species occur unless a survey is conducted to ensure that the species are not present. If threatened and endangered species are present, consultation with the USFWS will be required. Any vegetation-clearing activities will only be undertaken with the permission of the landowner.

Lighting and Ancillary Power Systems. The maintenance and repair of lighting and ancillary power systems will consist of the replacement of burned-out light bulbs, restoring or replacement of damaged power lines or onsite power-generating systems (e.g., generators, fuel cells, wind turbine generators, and photovoltaic arrays), repair and replacement of associated electrical components and, where necessary, vegetation control and debris removal. Approximately 25 percent of CBP's estimated 150 lighting and ancillary power systems within the New Mexico region of analysis are not waived or previously analyzed and are therefore evaluated in this EA.

Communication and Surveillance Towers. Communication and surveillance towers and components are mounted on a combination of monopoles, water towers, radio towers, telephone poles, and buildings. The physical structures of the tower components will be repaired and maintained (e.g., painting or welding to maintain existing metal towers), as necessary. Heavy equipment potentially needed to maintain lighting and ancillary power systems includes lifts, track-hoes, backhoes, and flatbed trucks. Maintenance and repair of secondary power-generation systems will consist of replacing burned-out light bulbs, restoring and replacing damaged power lines, repairing and replacing associated electrical components, and, where necessary, controlling vegetation and removing debris. Between 10 and 15 of the total towers used by CBP in the New Mexico region of analysis are not waived or previously analyzed and are therefore considered in this EA. No water towers exist on BLM land.

Each of the towers has a small footprint; none exceeds 10,000 square feet. For all water and radio towers, the total amount of disturbance would not exceed 4 acres. Access roads to the towers are included in the road mileage previously discussed.

Equipment Storage. The maintenance and repair of the existing tactical infrastructure as previously described, requires the use of various types of equipment and support vehicles. Such equipment could include graders, backhoes, tractor mowers, dump trucks, and pick-up trucks. When assigned to an activity, the equipment will be stored within the existing footprint of the maintenance and repair location or at a staging area previously designated for such purposes by CBP. The analysis of staging areas was addressed in previous NEPA documents or was exempt under the Secretary's waiver. All staging areas, and, in turn, the activities occurring therein, that

would be used by CBP as a part of the Proposed Action have either already been analyzed in previous NEPA documents or are covered by the Secretary's waiver. Requests for staging areas on BLM administered lands will require additional planning and coordination with BLM prior to use.

Alternatives

Two alternatives were considered: Alternative 1: Proposed Action and Alternative 2: No Action Alternative.

Alternative 1: Proposed Action. Under the Proposed Action, the scope of the tactical infrastructure maintenance and repair program will be incorporated as part of the proposed maintenance and repair activities to minimize potential impacts. Maintenance and repair will occur via a periodic work plan based on anticipated situations within each sector and funding availability. Maintenance and repair requirements could change over time based on changes in usage or location, but will not exceed the scope of the EA. If the scope of the EA is exceeded, new NEPA analysis will be required. Through the use of a periodic work plan, FM&E and sector managers will still be committed to a preventative maintenance strategy and performing repairs to specified standards where necessary, but will not be subject to applying all standards to all tactical infrastructures on a fixed schedule. FM&E and the sectors will ensure the sustainability of tactical infrastructure to support mission requirements.

Alternative 2: No Action Alternative. Under the No Action Alternative, the tactical infrastructure will be maintained on an as-needed basis and will be considered primarily reactive maintenance. There will be no centralized planning process for maintenance and repair. In addition, there will be no established design or performance specifications, and not all BMPs intended to reduce impacts will be implemented. Consequently, as-needed repairs could be required more often and evaluation of potential environmental impacts will occur on a case-by-case basis.

The tactical infrastructure breakdowns that have already occurred or are imminent will likely be given the highest priority for maintenance and repair. Examples include the foundation of fencing eroding to the point of imminent failure, roads becoming impassable due to severe rutting, or uncontrolled vegetation growth impeding storm water drainage flow. Preventative maintenance and repair will be limited to those situations where a USBP Sector identifies a potential trouble spot and makes a specific request for some type of preventative maintenance and repair.

The Proposed Action and No Action Alternative have been reviewed in accordance with NEPA as implemented by the regulations of the Council on Environmental Quality (CEQ). No significant impacts on any environmental resources will be expected from the implementation of the Proposed Action. Any potential adverse impacts would be expected to be negligible to minor. Details of the environmental consequences can be found in the EA, which is hereby incorporated by reference.

Public Involvement

CBP notified relevant Federal, state, and local agencies of the Proposed Action and requested input regarding environmental concerns they might have. As part of the NEPA process, CBP coordinated with the U.S. Environmental Protection Agency (USEPA); USFWS; BLM; New Mexico Office of Historic Preservation; and other Federal, state, and local agencies. Input from agency responses has been incorporated into the analysis of potential environmental impacts.

A Notice of Availability (NOA) for this EA and Draft Finding of No Significant Impact (FONSI) was published in the *Deming Headlight*, *Las Cruces Sun-News*, and the *Carlsbad Current-Argus* on March 16 and 17, 2015. This was done to solicit comments on the Proposed Action and involve the local community in the decisionmaking process.

During the 30-day public review and comment period for the Draft EA, CBP accepted comment submissions by fax, email, and by mail from the public; Federal and state agencies; Federal, state, and local elected officials; stakeholder organizations; and businesses. Three comment letters were received from Federal, state, and local agencies and were incorporated into the Final EA

Environmental Consequences

CBP prepared a Biological Assessment (BA) in accordance with the legal requirements set forth under regulations implementing Section 7 of the Endangered Species Act (50 Code of Federal Regulations [CFR] 402; 16 United States Code [U.S.C.] 1536[c]). The purpose of this BA was to review the Proposed Action in sufficient detail to determine if it could affect any federally threatened or endangered species or their critical habitat.

CBP obtained a list of federally listed species from the USFWS online database of threatened, endangered, and proposed species that occur within the four New Mexico counties within the action area. Based on NatureServe data, species listings, recovery-planning documents, and other information, CBP determined that 20 species are known to occur within or near the action area. In addition to those 20 species, nonessential experimental populations of the Mexican wolf (*Canis lupus baileyi*) and northern aplomado falcon (*Falco femoralis septentrionalis*) have been designated in New Mexico (63 FR 1752–1772, 71 FR 42298–42315). Further, CBP has concluded that the Proposed Action will have no effect on an additional 13 species or their critical habitat.

Based on the description of the Proposed Action, the descriptions of the 20 species and their habitat, the environmental baseline, the evaluation of potential effects of the Proposed Action, and BMPs developed to avoid or minimize impacts, CBP concluded that implementation of the Proposed Action is not likely to adversely affect the 20 species considered in the BA, or any designated critical habitat of those species. Additionally, the Proposed Action would have no effect on the Mexican wolf and the aplomado falcon would have no jeopardy to continued existence. These determinations were based primarily on the following factors:

- The program involves the maintenance and repair of existing tactical infrastructure. Program activities will be conducted within and immediately adjacent to the footprint of that infrastructure.

- CBP will use a centralized maintenance and repair planning process to ensure that program activities are appropriately planned and implemented.
- CBP will implement design standards and BMPs to avoid directly harming protected species and to minimize other direct and indirect adverse effects.
- When appropriate, surveys will be conducted prior to implementing maintenance and repair activities such as vegetation control and clearing within critical habitat, occupied habitat, and suitable habitat.
- The program will result in no or very minor habitat degradation and few other direct and indirect impacts on threatened and endangered species; therefore, any contribution to the cumulative adverse effects of future non-Federal activities in the region would be insignificant.
- CBP will seek approval or additional consultation from the USFWS for activities that have the potential to harm protected species or adversely modify their critical habitat.

BMPs were also developed for the following resource areas:

- Migratory Birds
- Wildlife
- Vegetation
- Land Use
- Water Resources
- Air Quality
- Geology and Soil Resources
- Noise
- Cultural Resources
- Roadways and Traffic
- Hazardous Materials and Waste Management.

A complete detailed description of BMPs can be found in **Appendix E** of the EA and is incorporated here by reference. Impacts on resources under the Proposed Action and No Action Alternative are listed below in **Table 1**.

CBP will comply with all regulatory procedures pursuant to the National Historic Preservation Act in the implementation of the Proposed Action. CBP is currently developing a Programmatic Agreement with appropriate parties for the undertakings as specified in the Proposed Action.

Table 1. Summary of Anticipated Environmental Impacts by Alternative


Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Land Use	No effects.	No effects.
Geology and Soils	Short- and long-term, minor, adverse effects.	Short- and long-term, minor, adverse effects.

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Vegetation	Short- and long-term, negligible to moderate, adverse effects.	Short- and long-term, minor to moderate, adverse effects.
Terrestrial and Aquatic Wildlife Resources	Short- and long-term, negligible to minor, adverse effects.	Short- and long-term, minor to moderate, adverse effects.
Threatened and Endangered Species	Short- and long-term, negligible to minor, adverse effects.	Short- and long-term, minor to moderate, adverse effects.
Hydrology and Groundwater	Short- and long-term, negligible to minor, adverse effects.	Short- and long-term, minor to moderate, adverse effects.
Surface Waters and Waters of the United States	Short- and long-term, negligible to minor, adverse effects.	Short- and long-term, minor to major, adverse effects.
Floodplains	Short-term, negligible to minor, adverse effects.	Short- and long-term, minor, adverse effects.
Air Quality	Short-term, negligible to minor, adverse effects.	No effects.
Noise	Long-term, negligible to minor, adverse effects.	Long-term, negligible to minor, adverse effects.
Cultural Resources	Long-term, negligible to minor, adverse effects.	Long-term, negligible, adverse effects.
Roadways and Traffic	Short-term, negligible to minor, adverse effects.	Short- and long-term, negligible to minor, adverse effects.
Hazardous Materials and Waste Management	Long-term, negligible to minor, adverse effects.	Long-term, negligible to minor, adverse effects.
Socioeconomic Resources, Environmental Justice, and Protection of Children	Short- and long-term, negligible, beneficial effects.	No effects.
BLM Realty and Minerals	Long-term, beneficial effects.	Short- and long-term, negligible to minor, adverse effects.
Sustainability and Greening	No effects.	No effects.
Aesthetics and Visual Resources	No effects.	No effects.
Climate Change	No effects.	No effects.
Human Health and Safety	No effects.	No effects.
Utilities and Infrastructure	No effects.	No effects.

Finding


Based upon the results of the EA and the environmental design measures to be implemented, the Preferred Alternative is not expected to have a significant effect on the environment. Therefore, no additional environmental documentation under NEPA is warranted, and the preparation of an Environmental Impact Statement is not required.

6-25-15
Date



Woody Lee
Chief
Strategic Planning and Analysis Directorate
U.S. Customs and Border Protection

7-13-2015
Date



Karl H. Calvo
Executive Director
Facilities Management and Engineering
U.S. Customs and Border Protection

COVER SHEET

FINAL
ENVIRONMENTAL ASSESSMENT
ADDRESSING PROPOSED TACTICAL INFRASTRUCTURE MAINTENANCE AND REPAIR
ALONG THE U.S./MEXICO INTERNATIONAL BORDER IN NEW MEXICO

DEPARTMENT OF HOMELAND SECURITY,
U.S. CUSTOMS AND BORDER PROTECTION,
U.S. BORDER PATROL

Lead Agency: Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP).

Cooperating Agency: U.S. Department of the Interior, Bureau of Land Management (BLM), Las Cruces District Office.

Affected Location: U.S./Mexico international border in New Mexico.

Proposed Action: CBP proposes to maintain and repair existing tactical infrastructure along the U.S./Mexico international border in New Mexico. The existing tactical infrastructure along the U.S./Mexico international border in New Mexico is within the USBP El Paso Sector.

Report Designation: Final Environmental Assessment (EA).

Abstract: CBP proposes to maintain and repair existing tactical infrastructure along the U.S./Mexico international border in New Mexico. The existing tactical infrastructure includes fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communication and surveillance tower components (including, but not limited to, Remote Video Surveillance System [RVSS] or Secure Border Initiative [SBI] towers [which are, henceforth, referred to as towers]). The existing tactical infrastructure occurs within the USBP El Paso Sector in New Mexico.

The EA analyzes and documents potential environmental consequences associated with the Proposed Action. The analyses presented in the EA indicate that implementation of the Proposed Action would not result in significant environmental impacts, and a Finding of No Significant Impact (FONSI) has been prepared in accordance with CBP requirements. A separate FONSI/Decision Record will be prepared by the BLM.

Throughout the National Environmental Policy Act (NEPA) process, the public may obtain information concerning the status and progress of the Proposed Action and the EA via the project Web site at <http://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs-review> by emailing NM.TIMR.EA@cbp.dhs.gov; by written request to Mr. Joseph Zidron, Environmental Protection Specialist, Customs and Border Protection, 24000 Avila Road – Suite 5020, Laguna Niguel, CA 92677; or by fax to (919) 785-1187.

FINAL

**ENVIRONMENTAL ASSESSMENT
ADDRESSING PROPOSED TACTICAL
INFRASTRUCTURE MAINTENANCE AND REPAIR
ALONG THE U.S./MEXICO INTERNATIONAL
BORDER IN NEW MEXICO**

**Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol**

JULY 2015



This document printed on paper that contains at least 30 percent postconsumer fiber.

EXECUTIVE SUMMARY

INTRODUCTION

The Department of Homeland Security (DHS) and U.S. Customs and Border Protection (CBP) propose to maintain and repair certain existing tactical infrastructure within a corridor ranging from approximately 10 to 52 miles north along the U.S./Mexico international border in the State of New Mexico. The existing tactical infrastructure proposed to be maintained and repaired consists of fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communication and surveillance tower components (including, but not limited to, Remote Video Surveillance System [RVSS] or Secure Border Initiative [SBI] towers [henceforth referred to as towers]). The existing tactical infrastructure occurs in U.S. Border Patrol (USBP) El Paso Sector.

The tactical infrastructure included in this analysis crosses multiple privately owned land parcels, and Federal and state lands managed by the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the New Mexico State Land Office (NMSLO), respectively. The CBP Facilities Management and Engineering (FM&E) Office is responsible for tactical infrastructure maintenance and repair to support CBP border security requirements.

The Environmental Assessment (EA) addresses the maintenance and repair of existing tactical infrastructure. Tactical infrastructure included in this EA is found in the USBP El Paso Sector along the U.S./Mexico international border in New Mexico. However, the maintenance and repair of tactical infrastructure assets that are already covered in previous National Environmental Policy Act (NEPA) documents will not be included within the scope of this EA. This EA also does not address maintenance and repair of any tactical infrastructure on tribal lands in New Mexico. In addition, tactical infrastructure assets that are covered by a waiver issued by the Secretary of Homeland Security (the Secretary) are also excluded from the scope of this EA.

This EA has been prepared through coordination with Federal and state agencies to identify and assess the potential impacts associated with the proposed maintenance and repair of tactical infrastructure. This EA is also being prepared to fulfill the requirements of the NEPA.

PURPOSE AND NEED

The purpose of the Proposed Action is to ensure that the physical integrity of the existing tactical infrastructure and associated supporting elements continue to perform as intended and assist the USBP in securing the U.S./Mexico international border in New Mexico. In many areas, tactical infrastructure is a critical element of border security, which contributes as a force multiplier for controlling and preventing illegal border intrusion. To achieve effective control of our nation's borders, CBP is developing the right combination of personnel, technology, and infrastructure; mobilizing and rapidly deploying people and resources; and fostering partnerships with other law enforcement agencies.

The Proposed Action is needed to maintain the level of border security provided by the existing tactical infrastructure that could otherwise become compromised through acts of sabotage, acts

of nature, or a concession in integrity due to a lack of maintenance and repair. CBP must ensure that tactical infrastructure functions as it is intended, which assists CBP with the following mission requirements:

- Establishing substantial probability of apprehending terrorists and their weapons as they attempt to enter illegally between the Ports of Entry (POEs)
- Deterring illegal entries through improved enforcement
- Detecting, apprehending, and deterring smugglers of humans, drugs, and other contraband.

Furthermore, well-maintained tactical infrastructure allows ready access to the U.S./Mexico international border for rapid response to detected threats and facilitates the ability to adjust quickly to changing threats.

This EA will provide the necessary disclosure of environmental impacts under NEPA for two Federal agencies: CBP and the U.S. Department of the Interior Bureau of Land Management BLM. The BLM would utilize the analysis of this EA to develop a Finding of No Significant Impact (FONSI) and Decision Record, in accordance with Public Land regulation. All maintenance and repair work on BLM administered lands will be executed in accordance with the ROW stipulations developed by BLM and CBP; a copy of the ROW stipulations is included in this EA as **Appendix H**. The BLM purpose, as a multiple use agency, is to make public land and its resources available for use and development to meet National, regional, and local needs, consistent with national objectives, while simultaneously applying the principles of sustained yield governing the many resources the agency manages.

The BLM's purpose is to manage roads across Public Lands that are currently utilized by CBP to support the national security mission of the United States. The BLM's specific need is to issue right of way (ROW) grant for the construction, maintenance, operation, and termination of roads on public land.

The principles of sustained yield include safeguarding wildlife and their habitat, threatened species and their habitat, endangered species and their habitat, sensitive species and their habitat, water quality, soils, paleontological, archaeological, vegetation, and watershed functions. Goals and objectives for these resources were set forth in the Mimbres Resources Management Plan (December 1993). The need is to respond to an application submitted by CBP for the subject road segments under section 507 of the Federal Land Policy and Management Act (FLPMA).

PUBLIC INVOLVEMENT

CBP notified relevant Federal, state, and local agencies of the Proposed Action and requested input regarding environmental concerns they might have. As part of the NEPA process, CBP coordinated with the U.S. Environmental Protection Agency (USEPA); U.S. Fish and Wildlife Service (USFWS); New Mexico Historic Preservation Division; and other Federal, state, and local agencies. Input from agency responses has been incorporated into the analysis of potential environmental impacts.

Notices of Availability (NOAs) for this EA and Draft FONSI were published in the *Deming Headlight*, *Las Cruces Sun-News*, and *Carlsbad Current-Argus*. This was done to solicit comments on the Proposed Action and involve the local community in the decisionmaking process.

During the 30-day public review and comment period for the Draft EA, CBP accepted comment submissions by fax, by email, through the project-specific web site, and by mail from the public; Federal and state agencies; Federal, state, and local elected officials; stakeholder organizations; and businesses. Three comment letters were received from Federal, state, and local agencies and were incorporated into the Final EA (see **Appendix B**).

DESCRIPTION OF THE PROPOSED ACTION

CBP proposes to maintain and repair existing tactical infrastructure consisting of fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communications and surveillance tower components not directly associated with the tactical infrastructure covered by the Secretary's waiver and prior NEPA documentation. The maintenance and repair activities are necessary to repair damage caused by natural disasters, normal deterioration due to wear and tear, and intentional destruction or sabotage. The existing tactical infrastructure is found along the U.S./Mexico international border in New Mexico and cuts across multiple landownership categories including lands under CBP ownership, lands managed by other Federal agencies, and private property. Most of the maintenance and repair activities associated with the Proposed Action would occur within 25 miles of the U.S./Mexico international border in New Mexico. CBP would develop a comprehensive protocol for coordinating the necessary maintenance and repair activities within the different classes of landownership. No tactical infrastructure on tribal lands is included in this EA.

All maintenance and repair activities would be executed in accordance with the ROW stipulations included in **Appendix H**, coordinated by the CBP FM&E Sector Coordinator in close coordination with the El Paso Sector, and managed by the Program Management Office's Maintenance and Repair Supervisor. Maintenance and repair activities on BLM land would comply with the BLM Gold Book Standards, as required. CBP proposes to conduct the following forms of tactical infrastructure maintenance and repair.

Fences and Gates

Maintenance and repair of existing fences and gates would consist of welding metal fence components, replacing damaged or structurally compromised components, reinforcing or bracing foundations, repairing burrowing activities under fences and gates, repairing weather-related damages, and removing vegetation and accumulated debris. The Proposed Action would also include the repair or replacement of gate-operating equipment (e.g., locks, opening/closing devices, motors, and power supplies). There are approximately 120 miles of fence on non-tribal lands in New Mexico. The fencing consists of primary border fencing and a variety of perimeter security fencing to protect sensitive infrastructure. Approximately 5 percent of the fences and gates installed by CBP within the New Mexico region of analysis are not covered by a Secretary's waiver or previously analyzed and are, therefore, evaluated in this EA.

Currently, CBP has not identified fences and gates requiring maintenance on BLM-managed land. The majority of fences and gates to be repaired occur within the Roosevelt Reservation and are outside the oversight or control of Federal land managers.

Access Roads and Integrated Bridges/Crossovers

Maintenance and repair of access roads and bridges would consist of filling in potholes, regrading road surfaces, implementing improved water drainage measures (e.g., ensuring road crowns shed water and establishing drainage ditches, culverts, or other water-control features as needed to control runoff and prevent deterioration to existing infrastructure or surrounding land), applying soil stabilization agents, controlling vegetation and debris, and adding lost road surface material to reestablish intended surface elevation needed for adequate drainage. BLM will issue a standard 60-foot ROW for 50.45 miles of road with the understanding that maintenance and repair will be confined to the width of the existing road located within the 60-foot-wide ROW—CBP will not be able to expand the road footprint beyond its current limits. If future CBP needs identify that additional road segments require maintenance and repair on BLM property, CBP would apply for a ROW amendment to add the additional road segments. The ROW amendment would be subject to additional environmental evaluation in order to satisfy NEPA requirements. Additionally, if any future proposed maintenance and repair activities would occur outside the existing road footprint on BLM-managed lands, CBP would coordinate with BLM prior to beginning maintenance and repair activities. The exact number of miles of roads within New Mexico could change over time to accommodate CBP needs.

Approximately 275 of the 550 miles of road within the region of analysis that are used by CBP are not covered by a Secretary's waiver or previously analyzed and are therefore evaluated in this EA. Most of the 275 miles are within 25 miles of the U.S./Mexico international border in New Mexico. Currently, CBP has not identified bridges that require maintenance on BLM-managed lands. In the event that a bridge on BLM-managed lands requires maintenance, CBP would notify BLM and seek concurrence for maintenance and repair activities before executing any proposed work.

Drainage Management Structures

Maintenance and repair of drainage systems would consist of cleaning blocked culverts and grates of trash and general debris and repairing or replacing nonfunctional or damaged drainage structures when necessary. Resizing and replacing or repairing culverts or flow structures would occur, as necessary, to maintain proper functionality; and riprap, gabions, and other erosion-control structures would be repaired, resized, or added to reduce erosion and improve water flow. In addition, maintenance and repair of riprap and low-water crossings would occur when necessary to maintain proper functionality. Maintenance and repair requirements would consist of restoring or replacing damaged or displaced riprap. The removal of any accumulated debris to create a sustainable, efficient low-water crossing could also occur. All debris and trash removed from culverts and grates would be hauled away to an appropriate disposal facility. There are an estimated 150 such structures that would be maintained and repaired by CBP in New Mexico. Approximately 20 percent of these structures are not covered by a Secretary's waiver or previously analyzed and are, therefore, evaluated in this EA.

Vegetation Control to Maintain Road Visibility

Vegetation encroaching upon roads and bridges would be maintained to ensure visibility and to sustain safe driving conditions for USBP agents during travel. Control of vegetation would be achieved by trimming, mowing, and applying selective herbicides. In areas deemed too difficult to mow, such as under guardrails, within riprap, and immediately adjacent to bodies of water within the proposed setbacks, herbicides would be used if appropriate. Appropriate best management practices (BMPs) would be followed for all herbicide use (see **Appendix E**). Herbicides safe for aquatic use would be used within aquatic systems. Application of terrestrial and aquatic herbicide would be made with products approved by the USEPA and the relevant Federal land management agency, where appropriate. Certified USBP sector or contract support personnel certified in herbicide application would use all herbicides in accordance with label requirements. Herbicide use would be part of an integrated approach that uses minimal quantities of herbicide, and would not be applied in, or immediately adjacent to, BLM Wilderness Study Areas (WSAs). Heavy equipment needed would include mowers, trimmers, and equipment necessary for mechanical grubbing. BMPs would be used to stabilize the work areas and avoid impacts on biological resources (see **Appendix E**).

CBP would conduct surveys for nesting migratory birds and nests if maintenance occurred during the nesting season (February 1 through September 1). Vegetation control would not occur in critical habitat of threatened or endangered species. If CBP determined that vegetation control must be conducted within critical habitat of threatened or endangered species, they would consult further with the USFWS.

Lighting and Ancillary Power Systems

Maintenance and repair would consist of the replacement of burned-out light bulbs, restoring/replacement of damaged power lines or onsite power-generating systems (e.g., generators, fuel cells, wind turbine generators, and photovoltaic arrays), repair and replacement of associated electrical components, and, where necessary, vegetation control and debris removal. Heavy equipment potentially needed to maintain lighting and ancillary power systems includes lifts, track-hoes, backhoes, and flatbed trucks. Approximately 25 percent of CBP's estimated 150 lighting and ancillary power systems within the New Mexico region of analysis are not covered by a Secretary's waiver or previously analyzed and are, therefore, evaluated in this EA.

Communications and Surveillance Towers

Communications and surveillance towers and their components are mounted on a combination of monopoles, water towers, radio towers, telephone poles, and buildings. The physical structures of the communications and surveillance tower components would be repaired and maintained (e.g., painting and welding to maintain existing metal towers), as necessary. Painting towers on BLM land would be done in accordance with BLM-approved communication site plan stipulations. Heavy equipment potentially needed to maintain lighting and ancillary power systems includes lifts, track-hoes, backhoes, and flatbed trucks. Maintenance and repair of secondary power-generation systems would consist of the replacement of burned-out light bulbs, restoration or replacement of damaged power lines, repair and replacement of associated

electrical components, and, where necessary, vegetation control and debris removal. Between 10 and 15 of the total towers used by CBP in the New Mexico region of analysis are not covered by a Secretary's waiver or previously analyzed and are, therefore, considered in this EA. No water towers exist on BLM land.

Each of the towers has a small footprint; none exceeds 10,000 square feet. For all water and radio towers, the total amount of disturbance would not exceed 4 acres. Access roads to the towers are included in the road mileage previously discussed.

Equipment Storage

The maintenance and repair of the existing tactical infrastructure, as previously described, requires the use of various types of equipment and support vehicles. Such equipment could include graders, backhoes, tractor mowers, dump trucks, flatbed trucks, and pick-up trucks. When assigned to an activity, the equipment will be stored within the existing footprint of the maintenance and repair location or at a staging area previously designated for such purposes by CBP. All the staging areas, and, in turn, the activities occurring therein that would be used by CBP as a part of the Proposed Action have either already been analyzed in previous NEPA documents or are covered by the Secretary's waiver. Requests for staging areas on BLM administered lands would require additional planning and coordination with BLM prior to use. BMPs would be used to avoid impacts on wildlife and threatened and endangered species once equipment is moved (see **Appendix E**).

ALTERNATIVES ANALYSIS

Alternatives Considered

Alternative 1: Proposed Action. Under the Proposed Action, maintenance and repair would be performed as described in **Section 2.2**. A comprehensive set of BMPs would be incorporated as part of the proposed maintenance and repair activities to minimize potential impacts. Maintenance and repair would occur via a periodic work plan based on anticipated situations within the Sector and funding availability. Although centrally managed by FM&E, prioritization of projects based upon evolving local requirements within the Sector would determine maintenance and repair schedules. This alternative would accommodate changes in tactical infrastructure maintenance and repair requirements. Maintenance and repair requirements could change over time based on changes in usage or location, but would not exceed the scope of the EA. If the scope of the EA is exceeded, new NEPA analysis would be required. Using such an approach, FM&E and sector managers would be committed to a preventative maintenance strategy and performing repairs to specified standards where necessary. FM&E and the Sector would ensure the sustainability of tactical infrastructure to support mission requirements.

Alternative 2: No Action Alternative. Under the No Action Alternative, the tactical infrastructure along the U.S./Mexico international border in New Mexico would be maintained on an as-needed basis and would consist primarily of reactive maintenance. This approach would lack centralized standardization of maintenance and repair activities, and BMPs intended to reduce impacts might not be implemented. Such ad hoc maintenance would not address the overall maintenance requirements for tactical infrastructure and would not be considered

sustainable in quality, resulting in the gradual degradation of the tactical infrastructure. Maintenance and repair activities planned on an ad hoc basis without uniform application of centralized standards would likely lead to inconsistent outcomes and greater risk to environmental resources, CBP personnel, and CBP needs if no BMPs could be implemented. The No Action Alternative would not meet CBP mission needs and does not address the Congressional mandates for gaining effective control of the U.S./Mexico international border in New Mexico. However, inclusion of the No Action Alternative is prescribed by the Council on Environmental Quality (CEQ) regulations and has been carried forward for analysis in the EA. The No Action Alternative also serves as a baseline against which to evaluate the impacts of the Proposed Action.

SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 provides an overview of potential impacts anticipated under each alternative considered, broken down by resource area. **Section 3** of this EA addresses these impacts in more detail.

Table ES-1. Summary of Anticipated Environmental Impacts by Alternative

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Land Use	No new construction would occur; therefore, no effects on land use plans or policies would be expected.	The No Action Alternative would result in continuation of existing land uses. No effects on land use would be expected.
Geology and Soils	Short- and long-term, minor, adverse effects on soils, primarily from the control of vegetation and use of herbicides would be expected. Erosion- and-sediment control plans and BMPs would be implemented to reduce the potential for adverse effects associated with erosion and sedimentation. No prime farmland soils exist within the region of analysis, therefore, no impacts on prime farmland soils would occur.	Short- and long-term, minor, direct and indirect, adverse effects on soils would be expected under this alternative. CBP would continue current maintenance and repair activities and tactical infrastructure would be maintained on an as-needed basis.
Vegetation	Short- and long-term, negligible to moderate, direct, adverse effects on terrestrial and aquatic vegetation would occur. BMPs would be used to avoid or minimize these effects. In-water maintenance and repair activities could result in direct and indirect impacts on aquatic plants and their habitats.	Short- and long-term, minor to moderate, direct, adverse effects on terrestrial and aquatic vegetation could occur from the No Action Alternative. In-water maintenance and repair activities could result in direct and indirect impacts on aquatic plants and their habitats.

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Terrestrial and Aquatic Wildlife Resources	Short- and long-term, negligible to minor, direct and indirect, adverse effects on terrestrial and aquatic species could occur due to habitat degradation. These activities would result in temporary noise effects and displacement of terrestrial species. Near- and in-water maintenance activities could result in direct and indirect impacts on aquatic species and their habitat from increases in erosion, turbidity, and sedimentation.	Short- and long-term, minor to moderate, direct and indirect, adverse effects on terrestrial and aquatic species could occur from the No Action Alternative. Adverse effects on terrestrial species could occur due to habitat degradation associated with vegetation-control activities. Near- and in-water maintenance activities could result in direct and indirect impacts on aquatic species and their habitat from increases in erosion, turbidity, and sedimentation.
Threatened and Endangered Species	Short- and long-term, negligible to minor, direct and indirect, adverse effects on terrestrial and aquatic threatened and endangered species would be expected. Appropriate BMPs would be implemented and adverse effects from the maintenance activities would be avoided or minimized	Short- and long-term, minor to moderate, direct and indirect, adverse effects on threatened and endangered species would be expected under this alternative. Tactical infrastructure would be maintained and repaired on an as-needed basis. There would be no centralized planning process for maintenance and repair. Therefore, maintenance and repair of tactical infrastructure would be performed only on resources in disrepair.
Hydrology and Groundwater	Short- to long-term, minor, adverse, and beneficial impacts on groundwater and hydrology would be expected. Vegetation control within the road setback might cause short- to long-term, negligible to minor, adverse impacts on groundwater and hydrology by increasing erosion into wetlands, surface waters, and other groundwater recharge areas. Herbicides would result in long-term, minor, direct, adverse effects on groundwater if spills were to occur.	Short- and long-term, minor to moderate, direct and indirect, adverse impacts on hydrology and groundwater would be expected. Degrading infrastructure, particularly eroding roads, might lead to increased sediments, nutrients, and contaminants in wetlands, streams, and other groundwater recharge areas, and blocked drainage structures could increase flood risk.
Surface Waters and Waters of the United States	Short- and long-term, negligible to minor, indirect, adverse impacts could occur on surface water resources from vegetation control and debris removal, and the grading of roadways, which could cause increased sedimentation into wetlands, arroyos, or other surface water or drainage features. BMPs would be applied to minimize sedimentation.	Short- and long-term, minor to major, direct and indirect, adverse impacts on surface waters might occur. Degrading infrastructure, particularly eroding roads, could lead to increased sediments, nutrients, and contaminants in wetlands, streams, arroyos, and other water-related features, and blocked drainage structures could increase flood risk.

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Floodplains	Short-term, negligible to minor, indirect, adverse impacts could occur on floodplain areas from vegetation control and debris removal, which could cause increased sedimentation into floodplains and drainage structures. Short-term, minor, adverse impacts would result from the introduction of fill material during grading. Long-term, minor, beneficial impacts on floodplains could occur by minimizing erosion of road material into floodplain areas.	Short- and long-term, minor to moderate, direct and indirect, adverse impacts could occur on floodplains. Degrading infrastructure, particularly eroding roads, might lead to increased sediments and other fill materials in the floodplain, and blocked drainage structures could impair flow, which could increase flood risk.
Air Quality	Air pollutant emissions would be generated as a result of grading, filling, compacting, trenching, and maintenance and repair activities, but these emissions would be temporary and would not be expected to generate any offsite effects. No significant effects on regional or local air quality would occur, and a negligible contribution towards statewide greenhouse gas inventories would be anticipated.	No direct or indirect adverse impacts would be expected on local or regional air quality from implementation of the No Action Alternative. CBP would continue current maintenance and repair activities and tactical infrastructure would be maintained on an as-needed basis.
Noise	Long-term, periodic, negligible to minor, adverse effects on the ambient noise environment would occur. Populations within 1,000 feet of the proposed maintenance and repair activities would have the potential to be exposed to a greater adverse effect than that described for the No Action Alternative.	Long-term, periodic, negligible to minor, adverse effects on the ambient noise environment would occur. CBP would continue current maintenance and repair activities and tactical infrastructure would be maintained on an as-needed basis.
Cultural Resources	There is the potential for long-term, minor, adverse effects on archaeological sites from the grading of roads that have not been previously graded. All other activities have negligible to no potential to impact cultural resources.	Negligible or no potential to impact cultural resources would be expected. There would be no Programmatic Agreement under the No Action Alternative. As a result, undertakings with the potential to cause effects on historic properties would follow the review and mitigation procedures set forth in Section 106 of the National Historic Preservation Act (NHPA). Unanticipated find procedures would be identical to those of the Proposed Action. Less ground-disturbing activities would take place and unanticipated finds would therefore be less likely.

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Roadways and Traffic	Short-term, negligible to minor, adverse effects on transportation would be expected from short-term roadway closures and detours while work is underway. Long-term, minor to moderate, beneficial effects on transportation would allow for faster, safer, and more efficient responses by the USBP to threats.	Most roadway repairs would be reactive to immediate issues affecting these roadways and would not address the long-term maintenance requirements. As-needed repairs would not be considered sustainable in quality because they would result in gradual degradation of these roadways.
Hazardous Materials	Long-term, negligible to minor, adverse impacts on hazardous substances, petroleum products, hazardous and petroleum wastes, and pesticides would be expected. Due to the nature and age of the tactical infrastructure, it is not anticipated to contain asbestos-containing materials (ACMs), lead-based paints (LBPs), polychlorinated biphenyls (PCBs), or solid waste, and therefore no impacts on these resources would be expected.	Long-term, negligible to minor, adverse impacts on solid waste would be expected due to the deterioration of tactical infrastructure over time. No impacts on hazardous substances, petroleum products, hazardous and petroleum wastes, pesticides, ACMs, LBPs, and PCBs would be expected. Due to the nature and age of the tactical infrastructure it is not anticipated to contain ACMs, LBPs, PCBs, or solid waste.
Socioeconomic Resources, Environmental Justice, and Protection of Children	Short-term, minor, beneficial effects would result from increases to payroll earnings and taxes and the purchase of materials required for maintenance and repair. Short- to long-term, indirect, beneficial impacts on the protection of children in the areas along the U.S./Mexico border would occur.	Under the No Action Alternative, there would be no change from the baseline conditions; therefore, no impacts would be expected.

Resource Area	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
BLM Realty and Minerals	No adverse impacts on BLM Realty and Minerals programs would be expected under the Proposed Action. BLM does not anticipate that granting ROW for operation and maintenance of the proposed TIMR project would result in any negative impacts on mining claims, or authorized leases and ROWs, because maintenance of the existing roads does not conflict with any current mining claim, lease, or ROW use. Long-term, beneficial impacts on encumbrances on Public Land would be expected because physical access would be improved.	Under the No Action Alternative, ROW applications would not be granted for the BLM ROW avoidance areas. Maintenance and repair activities within the ROW avoidance areas would not be completed by CBP and would not follow the procedures described in the proposed work plan. Repairs performed on an as-needed basis would result in gradual degradation of these roadways. The No Action Alternative would result in greater impacts on ROW avoidance areas than the Proposed Action due to a reduction to physical access to these areas. Therefore, the No Action Alternative would result in short- and long-term impacts on ROW avoidance areas.
Sustainability and Greening	Negligible.	Negligible.
Aesthetics and Visual Resources	Negligible.	Negligible.
Climate Change	Negligible.	Negligible.
Human Health and Safety	Negligible.	Negligible.
Utilities and Infrastructure	Negligible.	Negligible.

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**FINAL
ENVIRONMENTAL ASSESSMENT
ADDRESSING PROPOSED TACTICAL INFRASTRUCTURE MAINTENANCE AND REPAIR
ALONG THE U.S./MEXICO INTERNATIONAL BORDER**

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1. INTRODUCTION

The Department of Homeland Security (DHS) and U.S. Customs and Border Protection (CBP) propose to maintain and repair certain existing tactical infrastructure within a corridor ranging from approximately 10 to 52 miles north along the U.S./Mexico international border in New Mexico. The tactical infrastructure proposed to be maintained and repaired consists of fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communications and surveillance tower components (including, but not limited to, Remote Video Surveillance System [RVSS] or Secure Border Initiative towers [SBIInet] towers, henceforth referred to as towers) along the U.S./Mexico international border. Although the majority of anticipated tactical infrastructure can be found within the geographic areas shown in **Figure 1-1**, the exact extent could change over time to accommodate CBP needs. The existing tactical infrastructure in New Mexico occurs in the U.S. Border Patrol (USBP) El Paso Sector.

The tactical infrastructure included in this analysis crosses multiple privately owned land parcels, and Federal and state lands managed by the Bureau of Land Management (BLM), the U.S. Forest Service (USFS) and the New Mexico State Land Office (NMSLO). The CBP Facilities Management and Engineering (FM&E) Office is responsible for maintenance and repair of tactical infrastructure (e.g., fences and gates, roads, lights, tower components, and drainage structures) to support CBP border security requirements.

This Environmental Assessment (EA) addresses the maintenance and repair of existing tactical infrastructure. However, the maintenance and repair of tactical infrastructure assets that are already covered in previous National Environmental Policy Act (NEPA) documents will not be included within the scope of this EA. This EA also does not address maintenance and repair of any tactical infrastructure on tribal lands in New Mexico. In addition, tactical infrastructure assets that are covered by a waiver issued by the Secretary of Homeland Security (the Secretary) are also excluded from the scope of this EA.

The Secretary's waiver authority is derived from Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, as amended. Under Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act, the U.S. Congress gave the Secretary the authority to waive such legal requirements that the Secretary deems necessary to ensure the expeditious construction of tactical infrastructure. Since 2005, the Secretary has issued five separate waivers: San Diego Border Infrastructure System waiver (70 Federal Register [FR] 55622), the Barry M. Goldwater Range waiver (72 FR 2535), the San Pedro National Riparian Conservation Area (72 FR 60870) waiver, and April 2008 waivers for construction of among other things, pedestrian and vehicular fence along the international border (73 FR 19077) (73 FR 19078). Although the Secretary's waivers meant that CBP no longer had any specific legal obligation under the laws that were included in the waivers, both DHS and CBP remained committed to responsible environmental stewardship. For example, CBP prepared Environmental Stewardship Plans (ESPs) in lieu of NEPA documents for the tactical infrastructure constructed under the April 2008 waivers.

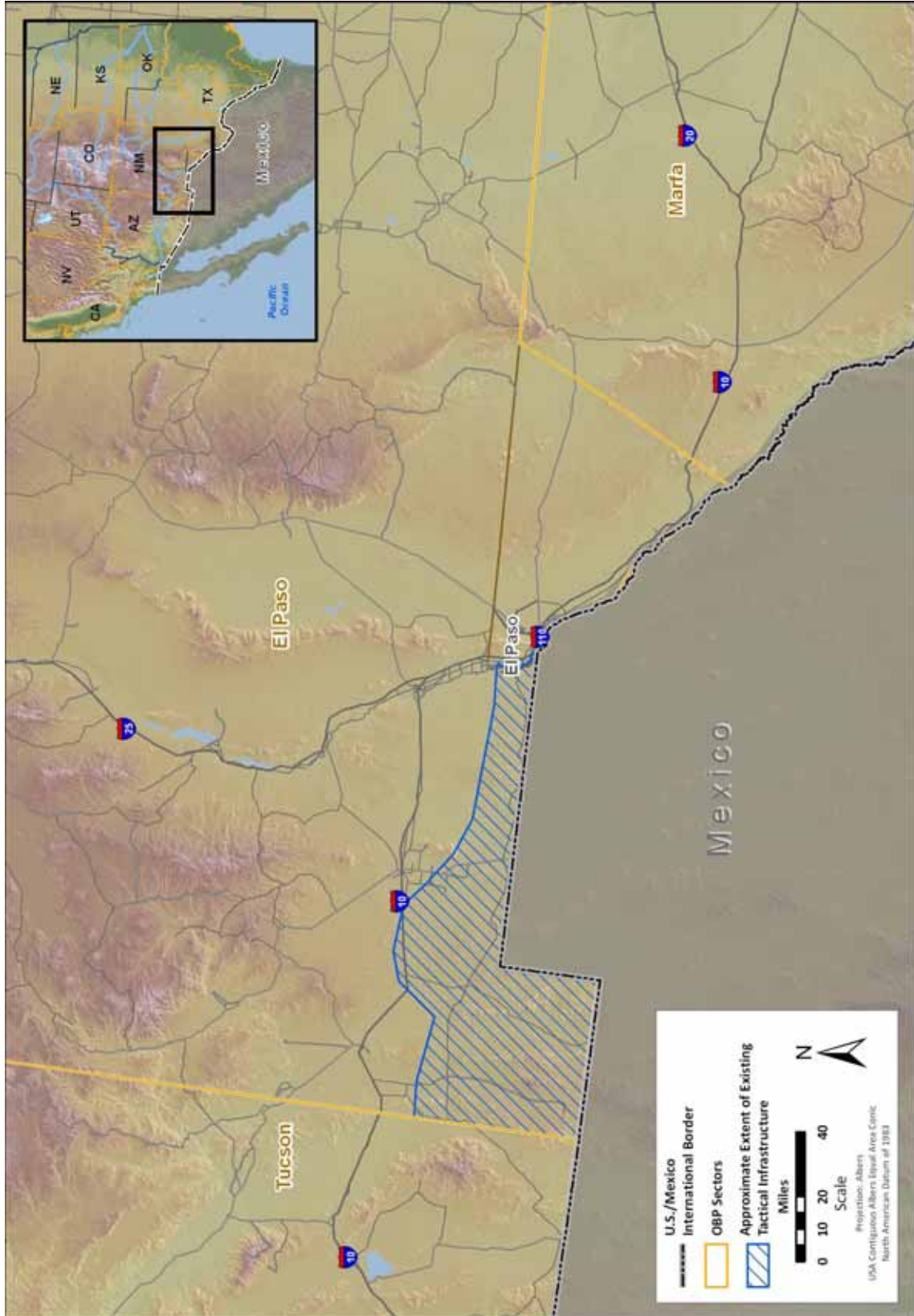


Figure 1-1. Region of Analysis for Proposed Tactical Infrastructure Maintenance and Repair Activities in New Mexico

In preparing the ESPs, CBP coordinated with various stakeholder groups, including state and local governments, Federal and state land managers and resource agencies, and the interested public. The ESPs analyzed the potential environmental impacts associated with the construction and maintenance of such tactical infrastructure and discussed mitigation measures that would be implemented by CBP.

In furtherance of the Secretary's commitment to environmental stewardship, CBP continues to work in a collaborative manner with local government, state, and Federal land managers and the interested public to identify environmentally sensitive resources and develop appropriate best management practices (BMPs) to avoid or minimize adverse impacts resulting from tactical infrastructure projects. This EA addresses the cumulative impacts of all maintenance and repair activities within the region of analysis including the tactical infrastructure analyzed in previous NEPA documents or ESPs. This comprehensive and integrated environmental impacts analysis of all tactical infrastructure assets within the region of analysis reflects CBP's environmental stewardship in better understanding the cumulative impacts and its commitments to minimize the potential negative impacts. This EA discusses tactical infrastructure maintenance and repair activities and their attributes that will enhance positive environmental benefits.

This EA is divided into six sections plus appendices. **Section 1** provides background information on USBP missions, identifies the purpose of and need for the Proposed Action, describes the area in which the Proposed Action would occur, and explains the public involvement process. **Section 2** provides a detailed description of the Proposed Action, alternatives considered, and the No Action Alternative. **Section 3** describes existing environmental conditions in the areas where the Proposed Action would occur, and identifies potential environmental impacts that could occur within each resource area under the alternatives evaluated in detail. **Section 4** discusses potential cumulative impacts and other impacts that might result from implementation of the Proposed Action, combined with foreseeable future actions. **Sections 5** and **6** provide a list of preparers and references for the EA.

1.1 USBP BACKGROUND

USBP has multiple missions (CBP 2010a), including the following:

- Apprehend terrorists and terrorist weapons illegally entering the United States
- Deter illegal entries through improved enforcement
- Detect, apprehend, and deter smugglers of humans, drugs, and other contraband.

USBP's new and traditional missions, referred to in the preceding list, are complementary.

USBP has nine administrative sectors along the U.S./Mexico international border within the states of California, Arizona, New Mexico, and Texas. The sectors are San Diego, El Centro, Yuma, Tucson, El Paso, Big Bend, Del Rio, Laredo, and Rio Grande Valley.

This EA examines the maintenance and repair of tactical infrastructure along the U.S./Mexico international border in New Mexico in the El Paso Sector.

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to ensure that the physical integrity of existing tactical infrastructure and associated supporting elements continue to perform as intended and assist the USBP in securing the U.S./Mexico international border in New Mexico. In many areas, tactical infrastructure is a critical element of border security, which assists in controlling and preventing illegal border intrusion. To achieve effective control of our nation's borders, CBP is developing the right combination of personnel, technology, and infrastructure; mobilizing and rapidly deploying highly trained USBP agents; placing tactical infrastructure strategically; and fostering partnerships with other law enforcement agencies.

The need for the Proposed Action is to ensure that the increased level of border security provided by existing tactical infrastructure is not compromised by impacts occurring through acts of sabotage, acts of nature, or a concession in integrity due to a lack of maintenance and repair. CBP must ensure that tactical infrastructure functions as it is intended, which assists CBP with the following mission requirements:

- Establishing substantial probability of apprehending terrorists and their weapons as they attempt to enter illegally between the Ports of Entry (POEs)
- Deterring illegal entries through improved enforcement
- Detecting, apprehending, and deterring smugglers of humans, drugs, and other contraband.

This EA will provide the necessary disclosure of environmental impacts under NEPA for two Federal agencies: CBP and the BLM. The BLM would utilize the analysis of this EA to develop a Finding of No Significant Impact (FONSI) and Decision Record, in accordance with Public Land regulation. All maintenance and repair work on BLM administered lands will be executed in accordance with the ROW stipulations developed by BLM and CBP; a copy of the ROW stipulations is included in this EA as **Appendix H**. The BLM purpose, as a multiple use agency, is to make public land and its resources available for use and development to meet National, regional, and local needs, consistent with national objectives, while simultaneously applying the principles of sustained yield governing the many resources the agency manages.

The BLM's purpose is to manage roads across Public Lands that are currently utilized by CBP to support the national security mission of the United States. The BLM's specific need is to issue right of way (ROW) grant for the construction, maintenance, operation, and termination of roads on public land.

The principles of sustained yield include safeguarding wildlife and their habitat, threatened species and their habitat, endangered species and their habitat, sensitive species and their habitat, water quality, soils, paleontological, archaeological, vegetation, and watershed functions. Goals and objectives for these resources were set forth in the Mimbres Resources Management Plan (December 1993). The need is to respond to an application submitted by CBP for the subject road segments under section 507 of the Federal Land Policy and Management Act (FLPMA).

Tactical infrastructure would be maintained to ensure USBP agent safety by preventing potential vehicular accidents by minimizing and eliminating hazardous driving conditions.

1.3 DECISIONS TO BE MADE

The BLM would decide whether to grant authorization of ROW serial number 128957 to authorize maintenance and repair, as described in the Proposed Action, of 50.45 miles of existing roadway on BLM-managed lands in Hidalgo and Luna Counties in New Mexico. CBP would decide whether to perform maintenance and repair, as described in the Proposed Action, on lands throughout New Mexico managed by Federal and state governments and private individuals, including the segments of road identified on BLM-managed lands.

1.4 FRAMEWORK FOR ANALYSIS

NEPA is a Federal statute requiring the identification and analysis of potential environmental impacts of proposed Federal actions before those actions are taken. The Council on Environmental Quality (CEQ) is the principal Federal agency responsible for the administration of NEPA. The CEQ regulations mandate that all Federal agencies use a systematic, interdisciplinary approach to environmental planning and the evaluation of actions that might affect the environment. This process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions.

The process for implementing NEPA is codified in 40 Code of Federal Regulations (CFR) 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, BLM NEPA guidance in 43 CFR subpart 2804.25(d) (1), *Public Lands: Interior* and DHS Directive 023-01 *Environmental Planning Program*, and CBP policies and procedures. The CEQ was established under NEPA to implement and oversee Federal policy in this process. CEQ regulations specify the following when preparing an EA:

- Briefly provide evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a FONSI
- Aid in an agency’s compliance with NEPA when an EIS is unnecessary
- Facilitate preparation of an EIS when one is necessary.

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

Within the framework of environmental impact analysis under NEPA, additional authorities that might be applicable include the Clean Air Act (CAA), Clean Water Act (CWA) (including a National Pollutant Discharge Elimination System [NPDES] storm water discharge permit and Section 404 permit), Section 10 of the Rivers and Harbors Act of 1899, Noise Control Act, Endangered Species Act (ESA), Migratory Bird Treaty Act, National Historic Preservation Act (NHPA), Archaeological Resources Protection Act, Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), and various Executive Orders (EOs). A summary of laws, regulations, and EOs that might be applicable to the Proposed Action is presented in **Appendix A**.

The Proposed Action conforms with decisions, objectives, and conditions identified in the BLM's Mimbres Resource Management Plan (RMP). The Mimbres RMP allows for granting ROWs, leases, and permits to qualified individuals, businesses, and government entities for the use of public land. This EA was prepared in accordance with the FLMPA of 1976.

1.5 PUBLIC INVOLVEMENT

Agency and public involvement in the NEPA process promotes open communication between the public and the government and enhances the decisionmaking process. All persons or organizations having a potential interest in the Proposed Action are encouraged to submit input into the decisionmaking process.

NEPA and implementing regulations from the CEQ and DHS direct agencies to make their EAs and EISs available to the public during the decisionmaking process and prior to actions being taken. The premise of NEPA is that the quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process.

Through the public involvement process, CBP notified relevant Federal, state, and local agencies of the Proposed Action and requested input on environmental concerns they might have regarding the Proposed Action. The public involvement process provides CBP with the opportunity to cooperate with and consider state and local views in its decision regarding implementing this Federal proposal. As part of the EA process, CBP has coordinated with agencies such as the U.S. Environmental Protection Agency (USEPA) Region 6, U.S. Fish and Wildlife Service (USFWS) Southwest Region, New Mexico Department of Game and Fish, New Mexico Historic Preservation Division (HPD), appropriate Native American Tribes and Nations, and local agencies. Agency responses will be incorporated into the analysis of potential environmental impacts. The following is a list of Federal and state agencies and stakeholder groups that will be coordinated with during the NEPA process.

- Federal Agencies
 - USEPA Region 6
 - USFWS Southwest Region
 - U.S. Army Corps of Engineers (USACE) Albuquerque District
 - BLM New Mexico State Office
 - BLM Las Cruces Field Office
 - United States Section, International Boundary and Water Commission.

- State Agencies
 - NMSLO
 - New Mexico Department of Game and Fish
 - New Mexico Department of Transportation
 - New Mexico Environment Department
 - New Mexico HPD.
- Stakeholders
 - Federally Recognized Native American Tribes and Nations.

A Notice of Availability (NOA) for the EA and draft FONSI was published in the *Deming Headlight*, *Las Cruces Sun-News*, and the *Carlsbad Current-Argus*. This was done to solicit comments on the Proposed Action and alternatives and involve the local community in the decisionmaking process. Comments were received from Federal, state, and local agencies and have been incorporated into the Final EA. Comment letters are included in **Appendix B**.

Hard copies of the Draft EA were made available at the following libraries: *Lordsburg-Hidalgo Library*, 208 East Third Street, Lordsburg, NM 88001; *Marshall Memorial Library*, 100 South Diamond Street, Deming, NM 88030; and *Thomas Brannigan Memorial Library*, 200 East Picacho Avenue, Las Cruces, NM 88001. Throughout the NEPA process, the public can obtain information concerning the status and progress of the EA via the project Web site at <http://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs-review>.

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2. PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This section describes the Proposed Action and the alternatives considered. As discussed in **Section 1.3**, the NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, which are defined in **Section 1.2**. CEQ regulations specify the inclusion of a No Action Alternative against which potential effects can be compared.

2.2 SCREENING CRITERIA TO DEVELOP THE ALTERNATIVES

Each alternative to the Proposed Action considered in the EA must be reasonable and meet CBP's purpose and need (as described in **Section 1.2**). Such alternatives must also meet essential technical, engineering, and economic threshold requirements to ensure that each is practical, environmentally sound, economically viable, and complies with governing standards and regulations. CBP uses an optimal mix of tactical infrastructure development, application of remote surveillance technologies, and deployment of USBP agents to achieve border security objectives. The following screening criteria were used to develop the Proposed Action and evaluate potential alternatives:

- ***Protecting Persistent Impedance Requirements.*** Tactical infrastructure must support CBP mission needs by its capability to hinder or delay individuals illegally crossing the U.S./Mexico international border in New Mexico, either on foot or by vehicle traffic. The continuous maintenance and repair of the fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and communications and surveillance tower components are imperative to the safe and rapid response capabilities of USBP agents.
- ***Maintain Remote Surveillance Capability.*** Proposed maintenance and repair activities must ensure tower infrastructure sites are accessible to perform the appropriate maintenance and repair activities on an as-needed basis and ensure continued functionality of the supporting components, foundation footers/pads, perimeter fencing, tower structures, and designated work/storage areas.
- ***Minimize Potential Negative Environmental Impacts.*** Proposed maintenance and repair activities would be evaluated for their potential environmental impacts and BMPs would be planned or implemented in proportion to the risk in consultation with the appropriate regulatory and resources agencies. Particular management attention would be devoted to protecting the following sensitive environmental resources.
 - ***Threatened or Endangered Species and Critical Habitat.*** The maintenance and repair of tactical infrastructure should be conducted in such a manner as to have negligible to minor impacts on threatened or endangered species and their critical habitat. BMPs would be implemented so that a determination of No Effect, or at most, a determination of May Affect, but Not Likely to Adversely Affect, would be achieved. Any maintenance and repair activities that could not be mitigated to

a determination of May Affect, but Not Likely to Adversely Affect using BMPs may require separate Section 7 consultation. CBP has initiated consultation with the USFWS and a Biological Assessment is being prepared for maintenance and repair activities within New Mexico.

- *Wetlands and Floodplains.* The maintenance and repair of tactical infrastructure should be conducted in such a manner as to have negligible to minor impacts on wetlands, surface waters of the United States, and floodplain resources to the maximum extent practical. CBP is consulting with the USACE districts to minimize wetland and floodplain impacts and identify potential avoidance, minimization, and conservation measures.
- *Cultural and Historic Resources.* The maintenance and repair of tactical infrastructure should be conducted in such a manner as to have negligible impacts on cultural and historic resources to the maximum extent practical. CBP is in the process of consulting with the State Historic Preservation Officer (SHPO) to develop a Programmatic Agreement (PA). Under the Proposed Action, undertakings with the potential to cause effects on historic properties would be covered by a PA between CBP, the Advisory Council on Historic Properties (ACHP), the SHPO, Federal agencies and tribes. If the activity or project is not covered under the PA, CBP would be required to conduct the applicable Section 106 review for those activities that are not covered. If the EA and FONSI are issued prior to approval of the PA, CBP would be required to conduct the standard Section 106 review process for these activities until they are covered by an executed PA. Therefore, CBP is required to comply with Section 106 of the NHPA, as amended, and its implementing regulations (36 CFR 800) before conducting maintenance and repair activities.
- *BLM-designated Special Management Areas (SMA) and Areas of Critical Environmental Concern (ACEC).* The maintenance and repair of tactical infrastructure should be conducted to reduce adverse impacts on BLM-designated SMAs and ACECs to the maximum extent practical. In order to ensure the project is compliant with the BLM Mimbres RMP, CBP is coordinating with the BLM Las Cruces District Office LCDO to identify any BLM concerns related to SMAs and ACECs. SMAs within the Las Cruces District Office LCDO include two trails (including the southern portions of the Continental Divide Trail), four research natural areas, nine Wilderness Study Areas (WSAs), and a national natural landmark. ACECs are defined in the FLPMA as "...areas within the public land where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural system or processes, or to protect life and safety from natural hazards." Within the Action Area, there are a total of six ACECs. Additionally, an ACEC for the Chihuahua scurfpea is proceeding through the nomination process.

Section 2.3 presents Alternative 1: Proposed Action, **Section 2.4** presents Alternative 2: No Action Alternative, and **Section 2.5** discusses alternatives considered but eliminated from further detailed analysis.

2.3 ALTERNATIVE 1: PROPOSED ACTION

Under Alternative 1: Proposed Action, the scope of the tactical infrastructure maintenance and repair program would include reactive maintenance and repair activities (e.g., resolving damage from intentional sabotage or severe weather events) and preventive/scheduled maintenance and repair activities designed to ensure environmental sustainability (e.g., culvert replacement, drainage and grate cleaning, preventive soil erosion measures). All maintenance and repair activities would occur via a periodic work plan based on anticipated situations within the Sector and funding availability. Although centrally managed by FM&E, prioritization of projects based upon evolving local requirements within the Sector would determine maintenance and repair schedules. This alternative would allow for changes in tactical infrastructure maintenance and repair requirements. Maintenance and repair requirements could change over time based on changes in usage or location, but would not exceed the scope of this EA. If the scope of the EA is exceeded, new NEPA analysis would be required. Tactical infrastructure covered by the Secretary's waiver or prior NEPA analyses (e.g., boat ramps, staging areas) are not within the scope of the Proposed Action.

The USBP El Paso Sector along the U.S./Mexico international border in New Mexico has identified a need for tactical infrastructure maintenance and repair to ensure their continued utility in securing the border. All maintenance and repair activities would be executed in accordance with the ROW stipulations included in **Appendix H**, coordinated by the CBP FM&E Sector Coordinator, and managed by the Program Management Office's (PMO) Maintenance and Repair Supervisor. Maintenance and repair activities on BLM land would comply with the BLM Gold Book Standards, as required. Although the majority of anticipated tactical infrastructure can be found within the geographic areas shown in **Figure 1-1**, the exact extent could change over time to accommodate CBP needs.

2.3.1 Tactical Infrastructure Assets

CBP proposes to maintain and repair existing tactical infrastructure consisting of fences and gates, roads and bridges/crossovers, drainage structures and grates, lighting and ancillary power systems, and tower components not directly associated with the tactical infrastructure covered by the Secretary's waiver and prior NEPA documentation. Maintenance and repair standards for roads are shown in **Appendix C**. The following paragraphs describe the types of tactical infrastructure CBP proposes to maintain and repair.

Fences and Gates. Maintenance and repair of existing fences and gates would consist of welding metal fence components, replacing damaged or structurally compromised members, reinforcing or bracing foundations, repairing burrowing activities under fences and gates, repairing weather-related damages, and removing vegetation and accumulated debris. The Proposed Action would also include repairing or replacing gate-operating equipment (e.g., locks, opening/closing devices, motors, and power supplies). There are approximately 120 miles of fence on non-tribal lands in New Mexico. The fencing consists of primary border fencing and a

variety of perimeter security fencing to protect sensitive infrastructure. Approximately 5 percent of the total fences installed by CBP within the New Mexico region of analysis are not covered by a Secretary's waiver or previously analyzed and are, therefore, considered in this EA.

Currently, CBP has not identified fences and gates requiring maintenance on BLM-managed land. The majority of fences and gates to be repaired occur within the Roosevelt Reservation and are outside the oversight or control of Federal land managers.

Some earth moving could be necessary for fence and gate maintenance. To replace damaged or structurally compromised portions of fences and gates, heavy equipment might be needed for filling, compacting, and trenching. On-road haul trucks and cranes, or other such equipment could be required to replace heavy fence and gate parts. All necessary erosion-control BMPs (see **Appendix E**) would be adopted to ensure stabilization of the project areas.

Access Roads and Integrated Bridges/Crossovers. Maintenance and repair of access roads and bridges would consist of filling in potholes, regrading road surfaces, implementing improved water drainage measures (e.g., ensuring road crowns shed water and runoff flows to establishing drainage ditches, culverts, or other water-control features as needed to control runoff and prevent deterioration to existing infrastructure or surrounding land), applying soil stabilization agents, controlling vegetation and debris, and adding lost road surface material to reestablish intended surface elevation needed for adequate drainage.

Maintenance of the existing roads would be in accordance with proven maintenance and repair standards. Maintenance and repair activities on BLM land would comply with the BLM Gold Book Standards, as required. All of the road repair standards CBP would follow have been developed based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resource agencies. These maintenance and repair standards are provided in **Appendix C**. Bridges would be inspected on a routine basis and their structural integrity maintained.

Currently, CBP has not identified bridges that require maintenance on BLM-managed lands. In the event that a bridge on BLM-managed lands requires maintenance, CBP would notify the BLM and seek concurrence for the maintenance and repair before executing any proposed work.

Earth moving could be necessary for access road and integrated bridge/crossover maintenance. Heavy equipment would be needed for activities such as grading, filling, and compacting. The majority of proposed maintenance and repair would occur on graded earth roads and two-track roads (see **Appendix C**). Because of their lack of formal construction design, these two roadway types are subject to the greatest deterioration if left unmaintained. When subjected to heavier traffic, rutting occurs, which, in turn, is exacerbated by runoff that further erodes roads. Unmanaged storm water flow also causes erosion to occur, washing out complete sections of road and, in many instances, making roads impassable.

Commercial grading equipment would be used to restore an adequate surface to graded earth roads. USBP sector personnel and contract support personnel well-versed in grading techniques would be employed for such activity. A poorly re-graded surface often results in rapid deterioration of the surface. The restored road would be slightly crowned and absent of windrows in the gutter line to avoid ponding and channeling within the road during rain events.

Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues. The addition of material to these roads would be kept to the minimum needed to achieve the proposed objective. All necessary erosion-control BMPs (see **Appendix E**) would be adopted to ensure stabilization of the project areas.

Approximately 275 miles of the 550 miles of road that are used by CBP have previously been analyzed under NEPA or have been covered by a Secretary's waiver. Most of the 275 miles are within 25 miles of the U.S./Mexico international border in New Mexico. BLM will issue a standard 60-foot ROW for 50.45 miles of road with the understanding that maintenance and repair will be confined to the width of the existing road located within the 60-foot-wide ROW—CBP will not be able to expand the road footprint beyond its current limits. If future CBP needs identify that additional road segments require maintenance and repair on BLM property, CBP would apply for a ROW amendment to add the additional road segments. The ROW amendment would be subject to additional environmental evaluation in order to satisfy NEPA requirements. Additionally, if any future proposed maintenance and repair activities would occur outside the existing road footprint on BLM managed lands, CBP would coordinate with BLM prior to beginning maintenance and repair activities.

The exact number of miles of roads within New Mexico on non-BLM lands could change over time to accommodate CBP needs. Therefore, the number of miles of roads associated within the Proposed Action should be considered somewhat flexible and not constrained by a quantifiable number. Bridges would be inspected on a routine basis and their structural integrity maintained. Future actions, such as major changes to roadway networks and major upgrades to existing roadways, would require separate NEPA analysis.

Drainage Management Structures. Maintenance and repair of drainage systems would consist of cleaning blocked culverts and grates (e.g., cattle guards) of trash and general debris and repairing or replacing nonfunctional or damaged drainage structures when necessary. Maintenance and repair of existing drainage turnouts along the sides of existing dirt roads, a common feature in southern New Mexico ranch and range roads, would occur as needed to allow for continued unimpeded flow. Resizing and replacing or repairing culverts or flow structures would occur, as necessary, to maintain proper functionality; and riprap, gabions, and other erosion-control structures would be repaired, resized, or added to reduce erosion and improve water flow.

In addition, maintenance and repair of riprap and low-water crossings would occur when necessary to maintain proper functionality. Low-water crossings consist of riprap at waterway edges and articulated matting or similar hardened material in the middle. The function of the riprap is to protect the articulated matting from being washed away and enhances the stability and longevity of the materials. Maintenance and repair requirements would consist of restoring damaged or displaced ripraps. Articulated matting (or similar hardened material) would be restored, replaced, or strengthened to maintain its functionality. Built-up debris could also be removed to create a sustainable, efficient low-water crossing. All debris and trash removed from culverts and grates would be hauled away to an appropriate disposal facility. During the planning process for such activities, appropriate coordination with the USACE would occur and appropriate permits would be acquired if necessary.

Heavy equipment such as on-road haul trucks and cranes would be required for replacing culverts, low-water crossings, and riprap for the maintenance and repair of drainage structures. For in-water work, all necessary BMPs would be adopted to ensure stabilization of the project areas. Most work would be conducted from existing roads and other disturbed areas; however, heavy equipment might be needed adjacent to those roads to repair or replace drainage and erosion-control structures. In the unlikely event that off-footprint work would be required on BLM-managed lands as part of the project, CBP would provide ample pre-project notifications to BLM to ensure the maintenance activity is adequately addressed within the scope of this EA and to ensure that sufficient environmental protections exist for all resource categories.

No maintenance and repair work, movement of maintenance vehicles, or equipment staging would occur in BLM-designated WSAs.

The removal of any accumulated debris to create a sustainable, efficient low-water crossing could also occur. There are an estimated 150 drainage management structures associated with the tactical infrastructure to be maintained and repaired in the New Mexico region of analysis; 20 percent are not covered by a Secretary's waiver or previously analyzed and are, therefore, considered in this EA.

Vegetation Control to Maintain Road Visibility. Vegetation encroaching upon roads and bridges would be maintained to ensure visibility and to sustain safe driving conditions for USBP agents during travel. Control of vegetation would be achieved by trimming, mowing, and applying selective herbicides. In areas deemed too difficult to mow, such as under guardrails, within riprap, and immediately adjacent to bodies of water within the proposed setbacks, herbicides would be used if appropriate. Appropriate BMPs would be followed for all herbicide use (see **Appendix E**). Herbicides safe for aquatic use would be used within aquatic systems. Application of terrestrial and aquatic herbicide would be made with products approved by the USEPA and the relevant Federal land management agency, where appropriate. Certified USBP sector or contract support personnel would use all herbicides in accordance with label requirements. Herbicide use would be part of an integrated approach that uses minimal quantities of herbicide, and would not be applied in, or immediately adjacent to, BLM WSAs. Heavy equipment needed would include mowers, trimmers, and equipment necessary for mechanical grubbing. BMPs would be used to stabilize the work areas and avoid impacts on biological resources (see **Appendix E**).

CBP would conduct surveys for nesting migratory birds and nests if maintenance occurred during the nesting season (February 1 through September 1). Vegetation control would not occur in critical habitat of threatened or endangered species. If CBP determined that vegetation control must be conducted within critical habitat of threatened or endangered species, they would further consult with the USFWS.

Lighting and Ancillary Power Systems. The maintenance and repair of lighting and ancillary power systems would consist of replacing burned-out light bulbs, restoring or replacing damaged power lines or onsite power-generating systems (e.g., generators, fuel cells, wind turbine generators, and photovoltaic arrays), repairing and replacing of associated electrical components, and, where necessary, controlling vegetation and removing debris. Approximately 25 percent of CBP's approximately 150 lighting and ancillary power systems within the region of analysis are

not covered by a Secretary's waiver or previously analyzed and are, therefore, considered in this EA.

Communications and Surveillance Towers. Communications and surveillance towers and components are mounted on a combination of monopoles, water towers, radio towers, telephone poles, and buildings. The physical structures of the tower components would be repaired and maintained (e.g., painting or welding to maintain existing metal towers), as necessary. Painting towers on BLM land would be done in accordance with BLM-approved communication site plan stipulations. Heavy equipment potentially needed to maintain lighting and ancillary power systems includes lifts, track-hoes, backhoes, and flatbed trucks. Maintenance and repair of secondary power-generation systems would consist of replacing burned-out light bulbs, restoring and replacing damaged power lines, repairing and replacing associated electrical components, and, where necessary, controlling vegetation and removing debris. Between 10 and 15 of the total towers used by CBP in the New Mexico region of analysis are not covered by a Secretary's waiver or previously analyzed and are, therefore, considered in this EA under the Proposed Action. No water towers exist on BLM land.

Each of the towers has a small footprint, and none exceeds 10,000 square feet. For all water and radio towers, the total amount of disturbance would not exceed 4 acres. Roads to the towers are included in the road mileage previously discussed.

Equipment Storage. The maintenance and repair of the existing tactical infrastructure as previously described requires the use of various types of equipment and support vehicles. Such equipment could include graders, backhoes, tractor mowers, dump trucks, flatbed trucks, and pick-up trucks. When assigned to an activity, the equipment would be stored within the existing footprint of the maintenance and repair location or at a staging area previously designated for such purposes by CBP. All the staging areas, and, in turn, the activities occurring therein, that would be used by CBP as a part of the Proposed Action have either already been analyzed in previous NEPA documents or are covered by the Secretary's waiver. Requests for staging areas on BLM administered lands would require additional planning and coordination with BLM prior to use.

2.3.2 Location of Tactical Infrastructure to be Maintained and Repaired

The existing tactical infrastructure found along the U.S./Mexico international border in New Mexico cuts across multiple landownership categories including lands under CBP ownership, lands managed by other Federal agencies, tribal lands, and private property. CBP would develop a comprehensive protocol for coordinating the necessary maintenance and repair activities within the different types of landownership.

CBP-Owned Tactical Infrastructure: CBP would undertake necessary maintenance and repair activities to ensure the continuity of the intended functionality of the existing tactical infrastructure and to protect invested resources as responsible stewards of Federal resources entrusted to CBP.

Tactical Infrastructure Assets on Land Managed by Other State and Federal Agencies: These tactical infrastructure assets are located on lands managed by the USFS, BLM, and the NMSLO.

CBP would establish mutually agreed-upon processes for performing maintenance and repair activities on tactical infrastructure located on lands owned by these agencies. CBP is committed to work through the appropriate permit granting authority established within these agencies to ensure that CBP-proposed maintenance and repair activities would be accomplished in a manner that is mutually beneficial to all agencies. As an example of this commitment, CBP actively participates in the Borderland Management Task Force working committee to coordinate these activities on a regular basis.

The maintenance and repair of existing roads within the jurisdiction of BLM would occur within existing footprints, which consist of the current number and width of lanes, shoulders, medians, curvature, grades, clearances, side slopes and existing drains and their appurtenances. Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues.

Tactical Infrastructure Assets on Tribal Land: As stated previously, the maintenance and repair of tactical infrastructure assets on tribal lands is not analyzed in this EA. For maintenance and repair of tactical infrastructure assets on tribal land, CBP would formally seek consultations with the representatives of federally recognized Native American tribes. Upon successful agreement with the tribes, appropriate environmental documentation would be prepared.

Tactical Infrastructure Assets on Private Land: CBP would conduct maintenance and repair activities on privately held properties in voluntary cooperation with private landowners. No maintenance and repair would occur without a consent agreement in place between CBP and cooperating landowners.

2.3.2.1 Tactical Infrastructure Mapped Within the Region of Analysis in New Mexico

The blue hatched area depicted on **Figure 1-1** is the geographic area where CBP tactical infrastructure would be found, and represents the limits of analysis for this EA. Additional detailed maps of the tactical infrastructure addressed in this EA along the U.S./Mexico international border in New Mexico are provided in **Appendix D**, which accompanies this EA as a digital video disc (DVD). In addition to displaying existing tactical infrastructure, the maps display ranges of threatened and endangered species within the region of analysis. The maps depict additional activities occurring within threatened and endangered species ranges that would require use of species-specific BMPs, as formally agreed upon in consultation with the USFWS, and that are discussed further in the Biological Assessment.

The maps delineate species ranges, designated critical habitat, extent of suitable habitat, and documented sightings of the species in the area. Special-use designations and land management agency practices are considered in maintenance and repair planning. As an example, no maintenance and repair activities would be permitted in WSAs. Coordination with land management agencies, Federal land managers, and the USFWS, if necessary, would occur and appropriate BMPs would be implemented. The maps presented in **Appendix D** are not intended to be used as an implementation tool for maintenance and repair activities, but instead represent a method to show the ranges of potential threatened and endangered species.

Depending on the number and nature of resources that could be impacted, a graduated series of BMPs would be identified to reduce impacts to less than significant levels. The BMPs are presented in **Appendix E** along with the affected resources. The combination of the informative maps and the relevant BMPs will provide CBP with a visual framework for applying appropriate maintenance and repair solutions in sensitive areas.

2.3.3 Maintenance and Repair Program

The Proposed Action would consist of both preventative and reactive maintenance. The types of maintenance employed as a part of the Proposed Action would vary by tactical infrastructure asset.

As part of the Proposed Action, fences and gates would be inspected on a routine basis to ensure gate mechanisms operate correctly and fence components are in good working condition. Maintenance and repair of fences and gates would occur as required. As part of preventative maintenance and repair of roads, the inspection, maintenance, and repair activity would occur approximately every 3 months and reactive maintenance and repair would occur following intentional sabotages or weather events. During maintenance and repair of roads, integrated bridges/crossovers would be inspected, maintained, and repaired, as required. Drainage management structures would be inspected regularly during the rainy season and preventative maintenance and repair would occur to ensure operability. After storm events, reactive maintenance and repair would occur to ensure the structures are clear of debris and blockages. Preventative maintenance and repair of light systems would occur approximately every 2 to 3 years and all lights would be replaced. Maintenance and repair of towers would occur on an as-needed basis following regular inspections. Maintenance and repair of ancillary power systems would occur according to manufacturer specifications. Maintenance and repair (including vegetation control) would occur twice a year and would be scheduled to avoid migratory bird nesting seasons, or surveys would be conducted to determine if bird nests are present that must be avoided.

Under the Proposed Action, centralized maintenance and repair planning would be conducted by FM&E. In addition, FM&E would have complete program management responsibility for implementing maintenance and repair activities. For example, FM&E would formulate standard design specifications, which would consider BMPs and the environmental conditions of the tactical infrastructure to determine the priority and type of maintenance and repair needed.

As a part of FM&E's centralized maintenance and repair planning, CBP interdisciplinary maintenance and repair technical staff, including environmental staff, would participate in reviewing and approving a maintenance and repair Work Plan. The process for developing the maintenance and repair Work Plan would involve the following steps:

- **Step 1.** USBP El Paso Sector and Border Patrol Facilities and Tactical Infrastructure field maintenance and repair representatives identify maintenance and repair needs.
- **Step 2.** A team of CBP PMO interdisciplinary subject matter experts, including environmental staff, would decide on the best technical approach for ensuring desired specifications and standards and implementing applicable BMPs.

- **Step 3.** The USBP El Paso sector BPFTI maintenance and repair PMs would develop a work plan of maintenance and repair activities for specified time intervals (e.g., quarterly, semi-annually, or some other time interval in accordance with the terms and condition of contracts and availability of funding). Coordination with appropriate landowners and regulatory agencies would occur on an as-needed basis. Portions of this step might be accomplished informally before Step 3.
- **Step 4.** A cost estimate for the proposed maintenance and repair Work Plan would be prepared and submitted to the CBP chain-of-command for approval. Maintenance and repair actions are prioritized in coordination with USBP Sector management.
- **Step 5.** Fully trained and qualified personnel (both CBP in-house and contractor personnel) would perform work Plan maintenance and repair activities and trained and experienced CBP personnel would monitor their work progress.
- **Step 6.** CBP representatives would review the completed maintenance and repair work and ensure it was completed to the prescribed specifications and standards and the corresponding BMPs were followed.
- **Step 7.** CBP and contractor personnel would provide suggestions for future Work Plans based on the execution and outcomes of tactical infrastructure maintenance and repair and would support the interdisciplinary technical team in developing improved maintenance and repair solutions in the future.

Appropriate environmental training is a prerequisite for personnel actively engaged in tactical infrastructure maintenance and repair. These personnel would receive ongoing environmental training appropriate to their role in tactical infrastructure maintenance and repair. This approach fully incorporates CBP's efforts to integrate the NEPA process with their Environmental Management System in accordance with CEQ guidance (CEQ 2007).

2.4 ALTERNATIVE 2: NO ACTION ALTERNATIVE

The No Action Alternative would maintain the status quo. It is not a proposal to eliminate maintenance and repair activities. Under the No Action Alternative, CBP would continue to perform the required maintenance and repair of tactical infrastructure; however, maintenance and repair would be conducted on an as-needed basis, using a largely reactive approach. There would be no centralized planning process for maintenance and repair. Rather, the El Paso Sector in New Mexico would request that FM&E conduct a particular maintenance and repair activity and FM&E would be responsible for executing the request. In addition, there would be no established design or performance specifications, which could mean that as-needed repairs are required more often and evaluation of potential environmental impacts would occur on a case-by-case basis.

Under the No Action Alternative, there would be no systematic approach to preventative maintenance. Thus, tactical infrastructure breakdowns that have already occurred or are imminent would likely be given the highest priority for maintenance and repair. Examples include the foundation of fencing eroding to the point of imminent failure, roads becoming impassable due to severe rutting, or uncontrolled vegetation growth impeding storm water drainage flow. Preventative maintenance and repair would be limited to those situations where a

USBP Sector identifies a potential trouble spot and makes a specific request for some type of preventative maintenance and repair.

The No Action Alternative would continue to meet minimum CBP mission needs, but the lack of a centralized planning effort, established performance specifications, and a preventative maintenance plan would make it far more difficult for CBP to prevent the gradual degradation of tactical infrastructure. In addition, it is possible that not all BMPs would be implemented during emergency maintenance and repair scenarios. The lack of coordinated environmental staff support and formalized planning under this alternative increases the potential for unintended delays in complying with NEPA, the ESA, and other environmental requirements. The No Action Alternative serves as a baseline against which an evaluation of the impacts of the Proposed Action can be made. **Table 2-1** provides an overview of the alternatives for analysis in the EA.

Table 2-1. Summary of Alternatives Identified

Management Approaches	Alternative 1: Proposed Action	Alternative 2: No Action Alternative
Maintenance and Repair Activities and Environmental Impacts	Preventative and reactive maintenance and repair activities to minimize environmental impacts.	Reactive maintenance and repair when infrastructure breaks down.
Design and Performance Specifications	Establish design specifications and a subsequent maintenance and repair approach.	None.
Maintenance and Repair Organizational Approach	Central maintenance and repair planning and decentralized execution. In-house environmental staff expertise used to minimize potential environmental impacts. Coordinated environmental planning to make most efficient use of staff resources and minimize delays in critical maintenance and repair actions.	Ad hoc and decentralized planning and execution without coordinated environmental staff support resulting in inefficiencies complying with NEPA and other environmental requirements.

2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DETAILED ANALYSIS

2.5.1 Upgrade All Existing Unpaved Roads to FC-2 All-Weather Roads

Under this alternative, all existing roads would be upgraded to the FC-2 (all-weather roads) classification. Adopting this alternative would be cost-prohibitive and cause significant environmental impacts. This alternative would greatly enhance CBP’s capability to improve border security, but for the aforementioned reasons, this alternative was eliminated from further detailed study in the EA.

2.5.2 No Maintenance and Repair of Tactical Infrastructure

Under this alternative, tactical infrastructure would not be maintained or repaired. This alternative would allow tactical infrastructure to degrade until breakdown of the infrastructure occurred and the initial functional intent would no longer exist. This alternative would lead to the deterioration of tactical infrastructure over time, creating safety hazards, uncontrolled erosion and other associated environmental concerns, and the abandonment of foreign materials within an environmental setting. In addition, because this alternative would result in the degradation and disrepair of tactical infrastructure, it would not meet the purpose and need as stated in **Section 1.2** or comply with USBP mission objectives. For these reasons, this alternative was eliminated from further detailed analysis in the EA.

2.5.3 Maintenance and Repair Program Using Only Mandatory BMPs

Under this alternative, the scope of the tactical infrastructure maintenance and repair program would be the same as the Proposed Action, but only mandatory BMPs would be implemented in the planning and execution of maintenance and repair (i.e., BMPs developed by CBP to promote environmental stewardship would not be used [see **Appendix E**]). Work Plans for scheduled and reactive maintenance and repair would be formulated by analyzing the lowest cost and the minimum acceptable design standards and specifications. FM&E would still have program management responsibility for implementing maintenance and repair to design specifications; however, only mandatory BMPs would be factored into the maintenance and repair Work Plan or the life-cycle costs of maintaining and repairing tactical infrastructure. In addition, environmental planning would be limited to compliance with applicable minimum requirements. This alternative would not meet CBP's commitment to environmental stewardship and would not minimize potential negative environmental effects; therefore, this alternative was eliminated from further detailed analysis in the EA.

2.6 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

CBP has identified its Preferred Alternative as Alternative 1. Implementation of Alternative 1 would best meet CBP's purpose and need as described in **Section 1.2**. Alternative 1 is also preferred because it would be in line with the current tactical infrastructure maintenance and repair methodology covered by the Secretary's waiver and other NEPA documents.

3. AFFECTED ENVIRONMENT AND CONSEQUENCES

This section provides a characterization of the affected environment and an analysis of the potential direct and indirect effects each alternative would have on the affected environment. Each alternative was evaluated for its potential to affect physical, biological, and socioeconomic resources. Cumulative and other effects are discussed in **Section 4**. All potentially relevant resource areas were initially considered in this EA. Some were eliminated from detailed examination because of their inapplicability to this proposal. General descriptions of the eliminated resources and the basis for elimination are described in **Section 3.1**.

The following discussion elaborates on the nature of the characteristics that might relate to resources.

- *Short-term or long-term.* These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term effects are those that would occur only with respect to a particular activity or for a finite period or only during the time required for maintenance and repair activities. Long-term effects are those that are more likely to be persistent and chronic.
- *Direct or indirect.* A direct effect is caused by and occurs contemporaneously at or near the location of the action. An indirect effect is caused by a proposed action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action. For example, a direct effect of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.
- *Negligible, minor, moderate, or major.* These relative terms are used to characterize the magnitude or intensity of an impact. Negligible effects are generally those that might be perceptible but are at the lower level of detection. A minor effect is slight, but detectable. A moderate effect is readily apparent. A major effect is one that is severely adverse or exceptionally beneficial.
- *Adverse or beneficial.* An adverse effect is one having unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment. A single act might result in adverse effects on one environmental resource and beneficial effects on another resource.
- *Significance.* Significant effects are those that, in their context and due to their intensity (severity), meet the thresholds for significance set forth in CEQ regulations (40 CFR Part 1508.27).
- *Context.* The context of an effect can be localized or more widespread (e.g., regional).
- *Intensity.* The intensity of an effect is determined through consideration of several factors, including whether an alternative might have an adverse impact on the unique characteristics of an area (e.g., historical resources, ecologically critical areas), public health or safety, or endangered or threatened species or designated critical habitat. Effects are also considered in terms of their potential for violation of Federal, state, or

local environmental law; their controversial nature; the degree of uncertainty or unknown effects, or unique or unknown risks; if there are precedent-setting effects; and their cumulative effects (see **Section 4**).

3.1 PRELIMINARY IMPACT SCOPING

This section presents the characteristics of the affected environment and an analysis of the potential direct and indirect impacts each alternative would have on the affected environment. Cumulative and other impacts are discussed in **Section 4**. All potentially relevant resource areas were initially considered in this EA. In accordance with NEPA, CEQ regulations, and DHS Directive 023-01, the following evaluation of environmental effects focuses on those resources and conditions potentially subject to effects, on potentially significant environmental issues deserving of study, and deemphasizes insignificant issues. Some environmental resources and issues that are often analyzed in an EA have been omitted from detailed analysis. The following provides the basis for such exclusions.

Aesthetics and Visual Resources

The Proposed Action would not have a major effect on aesthetics or visual resources, as existing infrastructure would be maintained or repaired and no additional infrastructure would be installed. Therefore, the appearance of tactical infrastructure would not change and no major effect on aesthetics and visual resources would be anticipated.

Climate Change

On September 22, 2009, the USEPA issued a final rule for mandatory greenhouse gas (GHG) reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on carbon dioxide (CO₂) and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of CO₂ equivalent per year. The first emissions report is due in 2011 for 2010 emissions. Although GHGs are not currently regulated under the CAA, the USEPA has clearly indicated that GHG emissions and climate change are issues that need to be considered in future planning. GHGs are produced by the burning of fossil fuels and through industrial and biological processes.

The maintenance and repair of tactical infrastructure would not have a major effect on GHG emissions or climate. Emissions and their impact on air quality are discussed in **Section 3.10**.

Human Health and Safety

Maintenance and repair site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. Occupational Safety and Health Administration (OSHA) and the USEPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors.

Personnel are exposed to safety risks from the inherent dangers at any maintenance and repair site. Contractors would be required to establish and maintain safety programs at the maintenance and repair sites. The proposed maintenance and repair would not expose members of the general public to increased safety risks. Therefore, because the Proposed Action would not introduce new or unusual safety risks, and assuming appropriate protocols are followed and implemented, detailed examination of safety is not included in this EA.

Additionally, due to the remote location of the region of analysis, the likelihood of this project impacting the health and safety of humans other than USBP agents and contractors or USBP personnel performing the road repairs is extremely low. However, minor, beneficial impacts on safety could occur from public use of repaired roads.

All occupational safety standards and BMPs, as outlined in **Appendix E** of this document, would be implemented.

Sustainability and Greening

NEPA identifies the need to “encourage [the] productive and enjoyable harmony between man and his environment” as a primary purpose (42 United States Code [U.S.C.] § 4321). The traditional definition of sustainability calls for policies and strategies that meet society’s present needs without compromising the ability of future generations to meet their own needs.

A number of policies, statutes, EOs, and supplemental agency policies and guidance exist to shape the Federal government’s policies on sustainability. EO 13423 (January 24, 2007), *Strengthening Federal Environmental, Energy, and Transportation Management*, promotes environmental practices, including acquisition of bio-based, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and maintenance of cost-effective waste prevention and recycling programs in their facilities. EO 13514 (October 5, 2009), *Federal Leadership in Environmental, Energy, and Economic Performance*, sets sustainability goals for Federal agencies and focuses on making improvements in their environmental, energy, and economic performance. EO 13514 does not rescind or eliminate the requirements of EO 13423. Instead, it expands on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423 (FedCenter 2010). In addition to these EOs, DHS Directive 025-01, *Sustainable Practices for Environmental, Energy and Transportation Management*, establishes a policy to develop and implement sustainable practices programs to help ensure that operations and actions are carried out in an environmentally, economically, and fiscally sound manner.

Implementation of the Proposed Action for the maintenance and repair of tactical infrastructure would use negligible amounts of resources. The adaptive management process would further the use of CBP’s Environmental Management System in accordance with EO 13423, EO 13514, and DHS Directive 025-01. Therefore, beneficial effects on sustainability and greening would be expected.

Utilities and Infrastructure

The proposed maintenance and repair of tactical infrastructure along the U.S./Mexico international border in New Mexico would occur in remote areas distanced from nearby utilities.

USBP and its contractors would therefore not use existing utilities and infrastructure to complete maintenance and repair activities. Due to the remote location of the region of analysis, impacts on utilities and infrastructure would not be expected. Consequently, analysis of this resource area has been omitted from detailed analysis.

3.2 LAND USE

3.2.1 Definition of the Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel of land. In many cases, land use descriptions are codified in local zoning laws. However, there is no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meaning of various land use descriptions, “labels,” and definitions vary among jurisdictions. Natural conditions of property can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic areas. There is a wide variety of land use categories resulting from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational.

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

3.2.2 Affected Environment

The region of analysis is entirely within the El Paso Sector and is managed largely by the BLM, the NMSLO, and private individual as rangeland or agricultural area, with part of the area within the Federal government’s 60-foot Roosevelt Reservation.

The Roosevelt Reservation is within 60 feet of the international boundary between the United States and Mexico within the states of California, Arizona, and New Mexico. The reservation was set aside in 1907 by President Theodore Roosevelt as a protection against the smuggling of goods between the United States and Mexico. Land use for the Roosevelt Reservation is designated for border enforcement (CBP 2007b).

Pursuant to a 2006 Memorandum of Understanding (MOU) among DHS, U.S. Department of the Interior, and the U.S. Department of Agriculture regarding Cooperative National Security and Counterterrorism Efforts on Federal Lands along the United States Borders, the parties agreed that operation and construction within the 60-foot Roosevelt Reservation is consistent with the purpose of the reservation. However, the 2006 MOU did not specifically exempt CBP activities

within the Roosevelt Reservation from compliance within environmental laws. Accordingly, CBP activities that are not covered by a Secretary's waiver or addressed in a previous NEPA document are included within the scope of the Proposed Action.

Maintenance and repair activities within the portion of BLM-managed land within the region of analysis are guided by the Mimbres RMP and is in portions of Dona Ana, Luna, Grant, and Hidalgo counties. BLM land use practices in these areas are governed by the Mimbres RMP and are based on two broad principles, multiple use (management of various surface and subsurface resources in combination to best serve the needs of the American people) and sustained yield (the continued achievement and maintenance of a high level of annual or periodic output of various renewable resources associated with multiple use).

Development in the remainder of the region of analysis is sparse and accounts for only a small fraction of the land use within the region of analysis. There is a small amount of development near the Columbus POE. Farming exists in the western portion of the state where there are agricultural lands. Through pump irrigation, this area produces vegetable, cotton, and chili crops, and fallow lands are set aside for future crops. However, most of the cropland lies outside of or immediately adjacent to the region of analysis corridor (CBP 2007a, CBP 2007b).

3.2.3 Environmental Consequences

3.2.3.1 Alternative 1: Proposed Action

No new construction or change in land use would occur under the Proposed Action; therefore, no effects on land use plans or policies would be expected. The Proposed Action would result in the continuation of the existing land uses as repair and maintenance only would occur within the region of analysis. This alternative would be compatible with the existing land use categories in the tactical infrastructure maintenance and repair region of analysis and, therefore, would not result in any changes in land use.

3.2.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, tactical infrastructure maintenance and repair activities along the U.S./Mexico international border in New Mexico would continue and current maintenance activities and tactical infrastructure would be maintained on an as-needed basis. The No Action Alternative would result in continuation of existing land uses. No effects on land use would be expected as a result of the No Action Alternative.

3.3 GEOLOGY AND SOILS

3.3.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of topography and physiography, geology, soils, and, where applicable, geologic hazards and paleontology. Topography and physiography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features. Geology is the

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

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

Prime farmland is protected under the Farmland Protection Policy Act (FPPA) of 1981. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is also available for these uses. The intent of the FPPA is to minimize the extent that Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The Natural Resources Conservation Service (NRCS) is responsible for overseeing compliance with the FPPA and has developed the rules and regulations for implementation of the Act (see 7 CFR Part 658, 5 July 1984).

3.3.2 Affected Environment

Regional Geology. Surface features in the eastern part of southern New Mexico are predominantly sand dunes composed of Quaternary alluvium (2.4 million years before present [BP] to recent), and lower Permian carbonates (260 to 251 million years BP) and mixed clastic sediments. The surface geology of the central and western parts of southern New Mexico is characterized by alternate Quaternary deposits and a varied age range of igneous intrusives, volcanoes, and mixed fragments of older rocks and carbonate sedimentary rocks (USACE 1994a).

The surficial materials were deposited on topographic low areas as other rock formations had been uplifted and fractured by the ongoing tectonism and extensive volcanism. Rocks and sediments exposed at the surface include scattered recent volcanics and faulted fragments of basement rock ranging in age from lower Cretaceous limestones (approximately 130 million years BP) to pre-Cambrian basement intrusives (as old as one billion years BP) (USACE 1994b).

Across Doña Ana, Luna, and Hidalgo counties, landforms are dominated by volcanic activity and, to a lesser degree, faulted igneous intrusive rocks. There are massive basalt flows west of the Rio Grande River and a mountain range of eroded pre-Cambrian metamorphics surrounded by younger ash flow tuffs south of the City of Deming. The southwestern corner of New Mexico is largely covered by volcanic flows of various compositions (USACE 1994b). Every major type of volcanic landform (including composite volcano, shield volcano, caldera, and cinder cones) occurs in New Mexico (USGS 2008). The valleys between volcanic mountains are narrow and relatively flat, often containing playa lakes (USACE 1994b).

The pre-Cambrian rocks are metamorphics with igneous rock intruding remnants of very old mountain cores that have been uplifted and eroded periodically. The Upper Paleozoic and Upper

Mesozoic rocks are mixed limestone and clastic sedimentary, with a variety of origins from deep marine to shoreline to riverine with terrace deposits along major rivers similar to the Rio Grande River. The Tertiary rocks overlying the Cretaceous sediments are thick sequences of intrusive and extrusive igneous rocks. Intermittent volcanism over the past 30 to 40 million years has resulted in widespread extrusive basaltic flows (USACE 1994b).

Topography. New Mexico's topography consists mainly of elevated plateaus (mesas), mountain ranges, canyons, valleys, and arroyos (typically dry streambeds) (WRCC undated). The U.S./Mexico international border in New Mexico lies within the Basin and Range and the Rio Grande Rift physiographic provinces (from west to east). The Basin and Range topography includes numerous roughly parallel fault-block mountain ranges trending north-south separated by nearly flat desert basins (U.S. Army 2001). The Rio Grande Rift physiographic province is a north-south trending zone of extension that bisects the State of New Mexico and reaches as far north as Leadville, Colorado, and as far south as west Texas. The Rio Grande Rift size results from the Colorado Plateau pulling away from the Southern High Plains physiographic province (NMBGMR 2008a). The course of the Rio Grande River is controlled by the rift.

Several major structural basins are found along the southern part of New Mexico. The wide, gentle, undisturbed Delaware Basin stretches across southeastern New Mexico and into Texas, underlying the relatively level Valley and Southern High Plains subprovinces. The characteristic landforms of the Delaware Basin, only sparsely represented throughout the study area, are broad lowlands, isolated plateaus, and terraced valleys along modern rivers (USACE 1994b). Many of the streams in the study area have no outlet to the ocean, so water collects in the broad basins, forming large lakes and playas during wet years (NMBGMR 2008a).

In general, terrain along the U.S./Mexico international border in New Mexico becomes more rugged towards the west, where elevation at Animas Peak (Hidalgo County) is 8,482 feet above mean sea level (msl). From west to east, the U.S./Mexico international border in New Mexico contains the Guadalupe Mountains associated with the Coronado National Park (parkland is not within the tactical infrastructure and maintenance region of analysis), the Animas Mountains, Whitewater Mountains, San Luis Mountains, and the Little and Big Hatchet Mountains. Hilo Peak is north of the Whitewater Mountains and Big Hatchet peak is north of Alamo Hueco, with peaks at 5,955 and 8,441 feet above msl, respectively. Within southeastern Hidalgo County, the Dog and Alamo Hueco mountains are also present, with Pierce Peak at an elevation of 6,159 feet above msl. Luna and Doña Ana counties are less rugged than Hidalgo County, but do have elevated terrain near the U.S./Mexico international border associated with the Cedar Mountain Range, Tres Hermanas, Florida Mountains, the East Portillo Mountains and a portion of the West Portillo mountains (NMDOT 2005).

Soils. Twenty-two soil associations occur within the limits of the study area. The soils of the study area are varied in texture and range from fine sands to clay loams. Of the 22 soil associations mapped, 10 have a low to moderate potential for erosion and 12 have a low to severe potential for erosion. Limitations to construction vary geographically depending upon the soil association(s) encountered (USACE 1994a). **Appendix F** presents the soils mapped within the tactical infrastructure and maintenance region of analysis.

The region of analysis is in three soil and water conservation districts: Hidalgo, Deming, and La Union (now Doña Ana). These districts, as authorized by the Soil and Water Conservation District Act (73-20-25 through 73-20-48 NMSA 1978), control and prevent soil erosion; prevent floodwater and sediment damage; promote conservation, development, and beneficial application and proper disposal of water; and conserve and develop natural resources to promote welfare of the public (NMDOA 2010).

Prime Farmland. Of the 22 soil associations mapped within the region of analysis, the Mimbres loam is considered to be a farmland of statewide importance. However, onsite investigation did not reveal evidence of active or past irrigation activities. The NRCS field office was contacted for support in preparation of an AD-1006 rating form; NRCS responded with a determination that FPPA does not apply to this soil (CBP 2007b).

Geologic Hazards. The tectonic setting for the region of analysis is the composite effect of many major episodes of uplift, igneous activity, and subsidence, dating from the pre-Cambrian (approximately one billion years BP) overlain by activity associated with the Rio Grande Rift of relatively recent times (30 to 40 million years BP). There is evidence of Paleozoic-aged block-faulting along both north-south and northwest-southeast axes in the form of major fault-bounded uplifted rocks that have exposed a variety of rock types at the surface and intervening sediment-filled areas of subsidence between faults. Activity along the Rio Grande Rift included mountain-building processes along the uplifted eastern margin and deep basin sedimentation in the down-dropped rocks. The rift parallels the eastern border of Doña Ana County and crosses into Mexico near the southeastern corner of the county. Areas near the rift continue to be occasionally unstable to the present day with respect to local faulting (USACE 1994b).

The 2008 New Mexico Seismic Hazard Map shows that the seismic hazard rating along the U.S./Mexico international border in New Mexico ranges from 6 to 16 percentage of the force of gravity, with the highest rating in the central part of the state near Santa Fe. The seismic hazard map indicates that there is the potential for minor to moderate damage from seismic activity (USGS 2000). Eleven faults are within 30 miles of the U.S./Mexico international border in New Mexico. The most recent major rupture of the faults occurred less than 130,000 years BP. Therefore, movement along faults in the region of analysis is unlikely to occur (USGS 2009).

Other geologic hazards that are present in New Mexico include debris flows, rockfalls, and landslides (NMBGMR 2008b). These hazards are exacerbated by heavy precipitation that induces sediment movement.

3.3.3 Environmental Consequences

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

Effects on geology and soils would be significant if they would alter the lithology (i.e., the character of a rock formation), stratigraphy (i.e., the layering of sedimentary rocks), and geological structures that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability; or change the soil composition, structure, or function within the environment.

3.3.3.1 Alternative 1: Proposed Action

Regional Geology. No impacts on geology would be anticipated from implementing the Proposed Action.

Topography. Long-term, negligible, adverse impacts on topography would be anticipated from grading activities that would locally alter existing topography. Areas proposed for grading have been previously graded, and, therefore, impacts would be negligible.

Soils. Tactical infrastructure maintenance and repair activities along the U.S./Mexico international border in New Mexico would be expected to result in short- and long-term, minor, adverse effects on soils, primarily from the control of vegetation and use of herbicides. Control of vegetation would reduce overall water absorption by vegetation and decrease root structures within soils, increasing stormwater velocity and erosion and sedimentation potential. Erosion-and-sediment-control plans would be developed and implemented both during and following site development to contain soil and runoff on site, and would reduce potential for adverse effects associated with erosion and sedimentation and transport of sediments in runoff.

Roads classified as FC-3 (graded earth), FC-4 (two-track), and FC-5 (sand) would have the greatest potential for erosion. Grading activities (associated primarily with FC-3 and FC-5 roads) would result in short-term, minor, adverse impacts on soil resulting from erosion and sedimentation if compaction does not occur during or immediately after the grading process. However, maintenance of roads would reduce the effects incurred from negligence, such as rutting, washout, and long-term soil erosion. Grading activities in more rugged terrain could result in greater potential for soil erosion and sedimentation than in flat terrain increasing the need for immediate compaction. Therefore, more mountainous areas, such as western New Mexico, would be more susceptible to soil erosion and sedimentation during grading. Once grading activities have subsided, and soils have once again compacted under vehicle weight, soil erosion and sedimentation into nearby water bodies would be much less likely to occur. Proper crowning of roads and installation of ditches to manage stormwater runoff on FC-3 and FC-5 roads would also reduce the potential for soil erosion and sedimentation. Therefore, maintenance of roads would result in a long-term, beneficial impact on soils.

Any maintenance to towers would be anticipated to result in a short-term, negligible impact from erosion of soils due to potential ground disturbance for repairs or replacement of equipment. This would be a localized impact.

Short- to long-term, beneficial impact on soil could occur due to clearing blockages from drainage structures and low-water crossings where blockages have caused water ponding, which could result in soil erosion and sedimentation. In addition, erosion and downstream

sedimentation could occur where blocked drainage cause rerouting and creation of new drainage channels.

Herbicides could impact soil depending on the type of herbicide used. For example, glyphosate is a chemical found in commonly used herbicides. Glyphosate is absorbed strongly onto soil particles, with low potential to move through soil to contaminate groundwater. Microbes in the soil readily and completely degrade it even under low-temperature conditions. Therefore, the application of appropriate herbicides to soil could minimize the runoff and leaching of chemicals

As some chemicals do adsorb strongly to soil, the soil chemistry could be altered temporarily until the chemicals have adequately degraded from microbial action resulting in short-term, minor, direct, adverse impacts on soils. Short term, negligible impacts could occur after weedy vegetation has died but before other vegetation has become established. Soil could locally be more susceptible to erosion and sedimentation before preferable vegetation is established.

Timing of application contributes to the effectiveness of an herbicide on target plants and on non-target plants and features such as soil. Therefore, application of a highly soluble herbicide during a dry period presents a far different hazard to soil than during a rainy season. The same contrast occurs between clear versus rainy days, and calm versus windy days (Neary and Michael undated).

Prime Farmland. Although prime farmland soils exist within the tactical infrastructure and maintenance region of analysis, no impacts on these soils would be expected to occur because the maintenance and repair of tactical infrastructure would be confined to the existing footprints. Therefore, there would be no effects on state or Federal farmlands or farmland soils.

Geologic Hazards. Geological hazards are prevalent throughout the U.S./Mexico international border in the form of seismic events, landslides, debris flows, and rock falls. Continued maintenance of the tactical infrastructure would be beneficial to repair infrastructure and remove debris following a geological event.

BMPs would be implemented to minimize soil erosion and sedimentation. BMPs could include installing silt fencing and sediment traps, applying water to disturbed soil to control dust, and revegetating disturbed areas as soon as possible after disturbance, as appropriate (see **Appendix E**). Soil erosion- and sediment-control measures, such as silt fencing or curtains, would be implemented in areas where erosion and sedimentation are anticipated to result from maintenance and repair activities. Erosion- and sediment-control measures would be included in site plans to minimize long-term erosion and sediment production at each site. Use of storm water control measures that favor infiltration would minimize the potential for erosion and sediment production as a result of future storm events (see **Sections 3.7** and **3.8** for an evaluation of impacts on water resources). However, as much of the region of analysis along the U.S./Mexico international border is only sparsely vegetated, it is anticipated that control of vegetation would have a long-term, minor impact on soil erosion and sedimentation, specifically during storm events.

3.3.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, tactical infrastructure maintenance and repair activities along the U.S./Mexico international border in New Mexico would continue and current maintenance activities and tactical infrastructure would be maintained on an as-needed basis. There is a potential for short- and long-term, minor, direct and indirect, adverse impacts on soils due to soil disturbance from grading and other ground-disturbing maintenance activities. By completing maintenance and repair work on an as-needed basis, and not periodically as described in the Proposed Action, the potential exists for an increased impact on soils from emergency activities, such as repair of a road after washout. Therefore, it is possible that greater impacts would occur under the No Action Alternative than the Proposed Action because the potential for erosion and sedimentation would be greater since a proactive approach to maintenance and repair would not occur.

3.4 VEGETATION

3.4.1 Definition of the Resource

Vegetation resources include all plants that are found within the region of analysis. This section describes the affected environment for native and nonnative vegetation to support discussion of environmental consequences for vegetation. Vegetation analysis and descriptions were conducted using Bailey's multi-tiered classification of ecoregions contained in the *Descriptions of the Ecoregions of the United States* (Bailey 1995). Additionally, the USGS Gap Analysis Program Level 3 data and associated NatureServe descriptions of the ecological systems (USGS 2007, NatureServe 2010a) were used to describe the vegetation in the region of analysis.

An ecoregion contains geographically distinct environmental communities and conditions. Bailey's (1995) *Description of the Ecoregions of the United States* is based on several tiers of ecoregion classification. These include domains, divisions, and provinces. Domains are the largest geographic level of ecoregional classification and are generally defined by climate. Domains are split into divisions, which are defined according to climate and vegetation. Divisions are subsequently split into provinces that are typically defined by their major plant formations. Because ecoregions are defined by their shared biotic and abiotic characteristics, they represent practical units on which to base conservation planning (USFS 2010).

The USGS's Gap Analysis Program mapping of the United States was used to achieve a finer resolution of the vegetative communities within the region of analysis (USGS 2007). NatureServe (2010a) defines ecological systems as representing recurring groups of biological communities that are found in similar physical environments and are influenced by similar ecological processes such as fire or flooding. Ecological systems represent classification units that are readily identifiable by conservation and resource managers in the field. Ecological systems describe groups that are "taxonomically" broader than alliances and associations.

3.4.2 Affected Environment

The vegetation of southern New Mexico has been classified as a Tropical/Subtropical Desert Division (Bailey 1995). Within this division is the Chihuahuan Desert Province. The entire New Mexico region of analysis is encompassed by the Chihuahuan Desert Province.

The Chihuahuan Desert is primarily composed of undulating plains with elevations near 4,000 feet above msl, with somewhat isolated mountains that rise 2,000 to 5,000 feet above msl. Extensive arid grasslands cover most of the high plains of the province. A number of shrubs, most of them thorny, are also typical of the Chihuahuan Desert. They frequently grow in open stands, but sometimes form low, closed thickets.

Within the portion of the Chihuahuan Desert Province that is within the southwestern corner of the region of analysis are the Peloncillo-Animas Mountains. These ranges, also known as sky islands, compose part of the Madrean sky island archipelago, which has a mixture of species from the Nearctic and Neotropic regions and is world-renowned for its unique plant and animal diversity (Felger and Wilson 1995, DeBano et al. 1995).

There are approximately 37 ecological systems in the region of analysis (NatureServe 2010a). The eight largest of these systems account for more than 95 percent of the land cover and are summarized in **Table 3-1**. These ecological systems generally define the landscape and are described in the following paragraphs (NatureServe 2010a). Other ecological systems, including riparian woodland and shrubland and mixed-conifer and upper montane conifer-oak woodland, which are habitat for endangered species described in **Section 3.6**, are uncommon in the region of analysis. A table listing all ecological systems in the region is presented in **Appendix D**.

Apacherian–Chihuahuan Semi-Desert Grassland and Steppe. This ecological system is the most dominant system of the Chihuahuan Desert Province and composes more than 50 percent of the region of analysis. This system is composed of desert grassland, mixed shrub-succulent, or oak savanna that is typical of southwestern New Mexico, southeastern Arizona, and the Apacherian region of northern Mexico. It is found on gently sloping bajadas (lower slopes of mountains characterized by loose alluvial sediments and poor soil development) that support frequent fires throughout the sky islands and on mesas, foothills, and desert mountain slopes up to 5,479 feet above msl in elevation in the Chihuahuan Desert. It is characterized by many species of perennial grasses such as black grama (*Bouteloua eriopoda*), hairy grama (*Bouteloua hirsuta*), Chino grama (*Bouteloua ramosa*), sideoats grama (*Bouteloua curtipendula*), blue grama (*Bouteloua gracilis*), plains lovegrass (*Eragrostis intermedia*), bullgrass (*Muhlenbergia emersleyi*), bush muhly (*Muhlenbergia porteri*), curlyleaf muhly (*Muhlenbergia setifolia*), and James' galleta (*Pleuraphis jamesii*); and succulent species of agave (*Agathymus* spp.), sotol (*Dasyilirion* spp.), and yucca (*Yucca* spp.); short-shrub species of mimosa (*Mimosa* spp.), and quinine (*Parthenium* spp.); and tall-shrub/short-tree species of acacia (*Acacia* spp.), mesquite (*Prosopis* spp.), and various oaks (*Quercus* spp.) (NatureServe 2010a).

Chihuahuan Creosotebush, Mixed Desert, and Thorn Scrub. This ecological system, the second most dominant composing 21 percent of the region of analysis, is the common lower elevation desert scrub that occurs throughout much of the Chihuahuan Desert. Stands typically occur in flat to gently sloping desert basins and plains, extending up into the lower slopes of

Table 3-1. Ecological System Features Within the Region of Analysis

Ecological System	Percent of Region of Analysis	Location in Region of Analysis	Predominant Features
Apacherian-Chihuahuan Semi-Desert Grassland and Steppe	50	gently sloping bajadas	desert grassland, mixed shrub-succulent or oak savanna
Chihuahuan Creosotebush, Mixed Desert and Thorn Scrub	21	flat to gently sloping desert basins and plains, extending up into the lower slopes of mountains	moderate to sparse shrub layer frequently dominated by creosote bush
Chihuahuan Stabilized Coppice Dune and Sand Flat Scrub	11	open desert scrub of vegetated coppice dunes and sandsheets	predominately honey mesquite or sand sagebrush
Madrean Encinal	5	foothills, canyons, bajadas (and plateaus) within the sky islands of southwestern New Mexico	woodlands, dominated by Madrean evergreen oaks
Apacherian – Chihuahuan Mesquite Upland Scrub	4	central to western portion of New Mexico	invasive upland shrublands
Madrean Pinyon-Juniper Woodland	2	foothills, mountains, and plateaus in southwestern New Mexico	pinyon and juniper trees
Chihuahuan Mixed Salt Desert Scrub	1	Chihuahuan Desert Province	extensive open-canopied shrublands
Chihuahuan Sandy Plains Semi-Desert Grassland	1	sandy plains and sandstone mesas	dry grasslands

mountains, which are characterized by loose sediment and poor soil development. The vegetation is characterized by a moderate to sparse shrub layer frequently dominated by creosote bush (*Larrea tridentata*) with tarbush (*Flourensia cernua*) also present. Scattered shrubs or succulents can also be present such as lechuguilla (*Agave lechuguilla*), mariola (*Parthenium incanum*), leatherwood (*Dirca palustris*), allthorn (*Castela erecta* ssp. *texaba*), and yuccas. Additionally, tarbush is often present in silty basins. Shrub diversity is typically low because this ecological system lacks thornscrub and other mixed desert scrub species that are common on the gravelly mid to upper piedmont deposits. However, shrub diversity and cover can increase locally where soils are deeper and along minor drainages with occasional representatives of fourwing saltbush (*Atriplex canescens* var. *canescens*), snakeweed (*Gutierrezia sarothrae*), and honey mesquite (*Prosopis glandulosa*). Herbaceous cover is usually low and composed of grasses. Common species can include black grama, low woollygrass (*Dicanthelium acuminatum fasciculatum*), bush muhly, tobosagrass (*Pleuraphis mutica*), burrograss (*Scleropogon brevifolius*), and alkali sacaton (*Sporobolus airoides*) (NatureServe 2010a).

Chihuahuan Stabilized Coppice Dune and Sand Flat Scrub. This system, which composes 11 percent of the region of analysis, includes the open desert scrub of vegetated coppice dunes and sandsheets found in the Chihuahuan Desert. Stands are usually dominated by honey mesquite or sand sagebrush (*Artemisia filifolia*) but also include fourwing saltbush, Torrey's jointfir (*Ephedra torreyana*), longleaf jointfir (*Ephedra trifurca*), frosted mint (*Poliomintha incana*), and little-leaf sumac (*Rhus michauxii*). Soaptree yucca (*Yucca elata*), snakeweed, black grama, and mesa dropseed (*Sporobolus flexuosus*) are also commonly present (NatureServe 2010a).

Madrean Encinal. This ecological system is within the western portion of the region of analysis and accounts for 5 percent of total land cover. This system typically occurs on foothills, canyons, bajadas, and plateaus within the sky islands of southwestern New Mexico. These woodlands are dominated by Madrean evergreen oaks. Lower elevation stands are typically open woodlands or savannas where they transition into desert grasslands, chaparral, or, in some cases, desertscrub. Common evergreen oak species include Arizona white oak (*Quercus alba*), Emory oak (*Quercus emoryi*), gray oak (*Quercus grisea*), and Mexican blue oak (*Quercus oblongifolia*). Chaparral species such as point-leaf manzanita (*Arctostaphylos pungens*), alderleaf mountain mahogany (*Cercocarpus montanus*), bitterbrushes (*Purshia* spp.), Wright's silktassel (*Garrya wrightii*), Sonoran scrub oak (*Quercus turbinella*), birchleaf buckthorn (*Frangula betulifolia*), or sumacs (*Rhus* spp.) can be present but do not dominate (NatureServe 2010a).

Apacherian-Chihuahuan Mesquite Upland Scrub. This system is in the central and western portions of the region of analysis and accounts for 4 percent of the region of analysis. It often occurs as invasive upland shrublands that are concentrated in the extensive desert grassland in the Chihuahuan Desert foothills, but also extends into the sky island region of the region of analysis. Mesquites and other deep-rooted shrubs exploit areas of deep-soil moisture that are unavailable to grasses and cacti. Vegetation is typically dominated by honey mesquite or velvet mesquite (*Prosopis velutina*) and succulents. Other desert scrub species that can also dominate include viscid acacia (*Acacia neovemecosa*), whitethorn acacia (*Acacia constricta*), one-seed juniper (*Juniperus monosperma*), or redberry juniper (*Juniperus coahuilensis*). Over the past 100 years, this system has expanded through conversion of desert grasslands resulting from drought, overgrazing by livestock, and decreases in fire frequency (NatureServe 2010a).

Madrean Pinyon-Juniper Woodland. This system, which composes almost 2 percent of the region of analysis, occurs on foothills, mountains, and plateaus in southwestern New Mexico, and is closely associated with the sky island archipelago. The soils of this system are generally dry and rocky. The presence of Mexican pinyon (*Pinus cembroides*), border pinyon (*Pinus discolor*), or other Madrean trees and shrubs is indicative of this woodland system. Redberry juniper, alligator juniper (*Juniperus deppeana*), Pinchot's juniper (*Juniperus pinchotii*), one-seed juniper, or pinyon pine (*Pinus edulis*) are common. Madrean oaks such as Arizona white oak, Emory oak, or gray oak can also be dominant. Ponderosa pine (*Pinus ponderosa*) is absent or sparse. If present, understory layers are variable and can be dominated by shrubs or grasses (NatureServe 2010a).

Chihuahuan Mixed Salt Desert Scrub. This ecological system is scattered throughout the Chihuahuan Desert Province of the region of analysis. It accounts for more than 1 percent of the

New Mexico region of analysis and includes extensive open-canopied shrublands in saline basins in the Chihuahuan Desert. Stands often occur on alluvial flats (sediment deposited by one or more rivers or streams) and around playas (dry lake basins). Substrates are generally fine-textured, saline soils. Vegetation is typically composed of one or more saltbush species such as four-wing saltbush, or mound saltbush (*Atriplex obovata*) with species of iodine bush (*Allenrolfea occidentalis*), tar bush, pickleweed (*Salicornia* spp.), seepweed (*Suaeda* spp.), or other salt-tolerant plants. Grass species can include alkali sacaton, galleta grass (*Pleuraphis* spp.), or saltgrass (*Distichlis spicata*) at varying densities (NatureServe 2010a).

Chihuahuan Sandy Plains Semi-Desert Grassland. This system occurs across the eastern portions of the region of analysis and composes 1 percent of the total area. These dry grasslands are found on sandy plains and sandstone mesas. The herbaceous layer is typically dominated by black grama and mesa dropseed with other characteristic Chihuahuan species. Other common species are Indian ricegrass (*Achnatherum hymenoides*), purple threeawn (*Aristida purpurea*), blue grama, New Mexico feathergrass (*Hesperostipa neomexicana*), sand muhly (*Muhlenbergia arenicola*), James' galleta, alkali sacaton, spike dropseed (*Sporobolus contractus*), and sand dropseed (*Sporobolus cryptandrus*). Typically, there are scattered desert shrubs and stem succulents present such as Torrey's jointfir (*Ephedra torreyana*), longleaf jointfir (*Ephedra trifurca*), tree cholla (*Opuntia imbricata*), banana yucca (*Yucca baccata*), soaptree yucca (*Yucca elata*), and Torrey's yucca (*Yucca torreyi*) that are characteristic of the Chihuahuan Desert (NatureServe 2010a).

3.4.3 Environmental Consequences

Effects on vegetation resources would be significant if the species or habitats are adversely affected over relatively large areas. Effects would also be considered significant if disturbances cause substantial or permanent reductions in population size or distribution of a species.

The significance of effects on vegetation is based on the following:

- The importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
- The portion of the resource that would be affected relative to its occurrence in the region
- The sensitivity of the resource to proposed activities
- The duration of ecological ramifications.

3.4.3.1 Alternative 1: Proposed Action

Short- and long-term, negligible, direct and indirect, adverse effects on vegetation would occur from the Proposed Action due to vegetation removal, crushing, accidental spills, and temporary increases in turbidity and sedimentation. All maintenance and repair activities would occur within or adjacent to the existing footprint of tactical infrastructure.

Negligible to minor impacts on vegetation would occur from vegetation removal associated with vegetation control. Vegetation control would occur within existing footprints where vegetation is being maintained and outside of the existing footprints for road setbacks. Vegetation control

could include the selective removal of woody vegetation and could have the potential to result in conversion or degradation of habitat. Vegetation control could also result in habitat disturbance resulting in the establishment of different plant communities (including invasive species) in the controlled area.

Negligible to minor, direct adverse effects on vegetation, such as crushing, might occur when required vehicles and equipment access, park at, and maneuver around areas requiring maintenance. All maintenance activities are expected to occur within or adjacent to existing tactical infrastructure footprints; as such, these impacts would be negligible.

Degradation of plant communities would also occur if petroleum products or other hazardous materials were accidentally released during operation or storage of maintenance vehicles and other equipment. All regulatory requirements for handling and storage of fuels, oils, and other hazardous materials (such as the development of spill prevention plans) would be implemented.

Near- and in-water maintenance, such as bridge and road maintenance, and repair of damaged riprap, culverts, and other drainage structures and crossings, could result in direct and indirect impacts on aquatic plants and their habitat from increases in erosion, sedimentation, and turbidity. Impacts would include direct smothering of aquatic plants, degradation of habitat, and a decrease in sunlight. In addition, hazardous materials could be inadvertently released into aquatic habitat during maintenance and repair activities. These actions would temporarily degrade aquatic habitat and directly and indirectly affect aquatic plant species. However, maintenance and repair of roadways and of damaged riprap, culverts, and other drainage structures and crossings would reduce erosion, improve stream flow, and result in beneficial impacts on aquatic habitat and species. Under this alternative, a long-term, beneficial impact on erosion and sedimentation would occur from the periodic, scheduled inspections and maintenance of crossings and structures.

Adverse impacts on vegetation would be minimized by using appropriate BMPs (see **Appendix E**). The following are examples of BMPs that would be implemented with the Proposed Action to reduce impacts, as necessary:

- If vegetation must be removed, allow natural regeneration of native plants by cutting vegetation with hand tools, mowing, trimming, or using other removal methods that allow root systems to remain intact.
- Vegetation targeted for retention would be flagged to reduce the likelihood of being treated.
- The removal of mature trees providing shade or bank stabilization within the riparian area of any waterway during maintenance or repair activities would be avoided.
- A fire prevention and suppression plan would be developed and implemented for all maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.
- Herbicide and pesticide applications would occur under the supervision of a licensed applicator. A detailed log of the chemical used, amount applied, and specific location of application would be maintained.

- Control of riparian vegetation would not occur within 100 feet of aquatic habitats to provide a buffer area to protect the habitat from sedimentation.
- For all in-water work in streams, sediment barriers would be used to avoid downstream effects of turbidity and sedimentation.
- The perimeter of all new areas where vegetation control occurs would be clearly marked and disturbances would be confined to the marked areas.
- A fire prevention and suppression plan would be developed and implemented for all maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.

3.4.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, short- and long-term, minor to moderate, direct and indirect, adverse effects on vegetation would occur. CBP would continue current maintenance activities and tactical infrastructure would be maintained and repaired on an as-needed basis. There would be no centralized planning process for maintenance and repair, and, consequently, maintenance and repair of tactical infrastructure usually would be performed on resources that are in disrepair. Under this alternative, the lack of coordinated environmental staff support and centralized planning would result in the potential for unintended delays in complying with NEPA, the ESA, and other environmental requirements, which could lead to the eventual degradation of tactical infrastructure. Maintenance and repair under this alternative would result in impacts on vegetation, such as conversion and degradation of habitat and plant communities from vegetation removal; establishment of different plant communities (including invasive species); accidental release of petroleum products or other hazardous materials; trampling and crushing of vegetation while accessing the sites; and increased erosion, turbidity, and sedimentation, including the burial of aquatic plants. Under this alternative, vegetation-control activities would be conducted under a separate NEPA process.

By completing maintenance and repair work on an as-needed basis, the potential exists for increased impacts on vegetation. Without a centralized planning process, maintenance and repair specifications would not be established and standardized BMPs would not be implemented. For example, without a standardized BMP requiring that the footprint of the maintenance area be flagged or marked, vegetation immediately adjacent to the maintenance footprint could be impacted if maintenance activities went beyond that footprint. Thus, some vegetation adjacent to tactical infrastructure could be degraded or destroyed. Therefore, it is possible that greater impacts would occur under the No Action Alternative than the Proposed Action, as the potential for habitat disturbances would be greater due to a lack of a proactive approach to maintenance and repair.

3.5 TERRESTRIAL AND AQUATIC WILDLIFE RESOURCES

3.5.1 Definition of the Resource

This section provides a description of the wildlife and aquatic resources expected to occur within the region of analysis. Terrestrial wildlife resources include native or naturalized terrestrial animals and the habitats in which they exist. Aquatic wildlife resources include native or

naturalized aquatic animals and the habitats in which they exist. Species addressed in this section include those that are not listed as threatened or endangered by the Federal government. Federal threatened and endangered species are addressed in **Section 3.6**. Species listed by the state of New Mexico as sensitive, threatened or endangered, along with species listed by the BLM as sensitive, are addressed in **Appendix G**.

3.5.2 Affected Environment

Terrestrial Wildlife. An abundance of high-quality habitat for wildlife currently exists within the region of analysis. This vast area is capable of supporting hundreds of wildlife species, including mammals, birds, reptiles, and amphibians.

Mammals typically associated with the semidesert grasslands and plains grasslands of southwestern New Mexico include large-hoofed mammals such as southern mule deer (*Odocoileus hemionus fuliginatus*) and collared peccary (*Pecari tajacu*). Additional mammals include the black-tailed jackrabbit (*Lepus californicus*); spotted ground squirrel (*Spermophilus pilosoma*); hispid pocket mouse (*Perognathus hispidus*); Ord's, banner-tailed, and Merriam's kangaroo rats (*Dipodomys ordii*, *D. spectabilis*, and *D. merriami*); southern grasshopper mouse (*Onychomys torridus*); white-footed mouse (*Peromyscus leucopus*); and cotton rats (*Sigmodon hispidus*, *S. fluviventer*). Carnivores that might be encountered in the area include the coyote (*Canis latrans*) and badger (*Taxidea taxus*). Mammalian fauna associated with the Madrean sky island archipelago of southwestern New Mexico include the mountain lion (*Puma concolor*), white-nosed coati (*Nasua narica*), white-tailed deer (*Odocoileus virginianus*), Bailey's pocket mouse (*Chaetodipus baileyi*), yellow-nosed cotton rat (*Sigmodon ochrognathus*), and southern pocket gopher (*Thomomys umbrinus*). Mammals typical of Chihuahuan Desert scrub communities of south-central New Mexico include desert pocket gopher (*Geomys arenarius*), Botta's pocket gopher (*Thomomys bottae*), southern grasshopper mouse, Chihuahuan pocket mouse (*Chaetodipus eremicus*), desert shrew (*Notiosorex crawfordi*), and desert cottontail (*Sylvilagus audubonii*) (Brown 1994).

Birds common in the semidesert grasslands and plains grasslands of southwestern New Mexico include the mourning dove (*Zenaida macroura*), phainopepla (*Phainopepla nitens*), Swainson's hawk (*Buteo swainsoni*), greater roadrunner (*Geococcyx californianus*), burrowing owl (*Athene cunicularia*), northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), rufous-crowned sparrow (*Aimophila ruficeps*), western kingbird (*Tyrannus verticalis*), turkey vulture (*Cathartes aura*), black-tailed gnatcatcher (*Poliophtila melanura*), eastern meadowlark (*Sturnella magna*), cactus wren (*Campylorhynchus brunneicapillus*), and ash-throated flycatcher (*Myiarchus cinerascens*). Characteristic bird species of the Chihuahuan Desert scrub communities include the mourning dove, roadrunner, lesser nighthawk (*Chordeiles acutipennis*), Scott's oriole (*Icterus parisorum*), cactus wren, curve-billed thrasher (*Toxostoma curirostre*), and black-throated sparrow (*Amphispiza bilineata*) (Brown 1994). Bird species common to Madrean sky island archipelago include the band-tailed pigeon (*Columba fasciata*), Mexican jay (*Aphelocoma ultramarine*), black-throated gray warbler (*Dendroica nigrescens*), whiskered screech owl (*Otus trichopsis*), Abert's towhee (*Pipilo aberti*), curve-billed thrasher, bridled titmouse (*Parus wollweberi*), and bushtit (*Psaltiriparus minimus*) (Brown 1994).

Common species of amphibians and reptiles associated with the semidesert grasslands and plains grasslands include the ornate box turtle (*Terrapene ornata*), western hognose snake (*Heterodon nasicus*), western hooknose snake (*Gyalopion canum*), western rattlesnake (*Crotalus viridis*), desert grassland whiptail (*Cnemidophorus uniparens*), western green toad (*Bufo debilis*), and plains spadefoot (*Spea bombifrons*). Reptiles and amphibians associated with Madrean sky island archipelago include the rock rattlesnake (*Crotalus lepidus*), New Mexico ridge-nosed rattlesnake (*C. willardi obscurus*), green rat snake (*Elaphe triapsis*), bunchgrass lizard (*Sceloporus scalaris*), short-horned lizard (*Phrynosoma douglasii*), mountain skink (*Eumeces callicephalus*), red-spotted toad (*Bufo punctatus*), and Chiricahua leopard frog (*Rana chiricahuensis*). Reptiles and amphibians frequently associated with Chihuahuan Desert scrub communities include the roundtail horned lizard (*Phrynosoma modestum*), desert spiny lizard (*Sceloporus magister*), Couch's spadefoot (*Scaphiopus couchii*), red-spotted toad, striped whipsnake (*Masticophis taeniatus*), coachwhip (*M. flagellum*), and the western diamondback rattlesnake (*Crotalus atrox*) (Brown 1994, Degenhardt et al. 1996).

Aquatic Wildlife. Major river drainages in the region of analysis (going from west to east) include the, Gila, Mimbres, and Rio Grande (see **Section 3.8** for a description of surface water resources). Sixty-six species of native fish are known from New Mexico, although 11 are considered extirpated (Propst 1999). Common fish of the Rio Grande system include the red shiner (*Cyprinella lutrensis*), fathead minnow (*Pimephales promelas*), blue catfish (*Ictalurus furcatus*), and bluegill (*Lepomis macrochirus*). Only three fish species were native to the Mimbres River basin, including the beautiful shiner (*Cyprinella formosa*) which is considered extirpated (USFWS 1994a). The Rio Grande sucker (*Catostomus plebeius*) is common throughout the Mimbres River.

3.5.3 Environmental Consequences

Effects on wildlife and aquatic resources would be significant if the species or habitats are adversely affected over relatively large areas. Effects would also be considered significant if disturbances cause substantial or permanent reductions in population size or distribution of a species.

The significance of effects on wildlife is based on the following:

- The importance (i.e., legal commercial, recreational, ecological, or scientific) of the resource
- The portion of the resource that would be affected relative to its occurrence in the region
- The sensitivity of the resource to proposed activities
- The duration of ecological ramifications.

3.5.3.1 Alternative 1: Proposed Action

Short- and long-term, negligible, direct and indirect, adverse effects on wildlife would occur from the Proposed Action. All maintenance and repair activities would occur within or adjacent to the existing tactical infrastructure footprints. As such, maintenance and repair of tactical

infrastructure would result in temporary, negligible degradation of wildlife habitat and a small amount of permanent habitat loss.

Mechanical vegetation control, such as mowing and trimming, would likely cause larger mammals, reptiles, and birds, including breeding migratory birds, to relocate temporarily. Individuals of smaller, less-mobile species could inadvertently be harmed or killed by vegetation control activities. Vegetation control activities would occur within existing footprints of CBP tactical infrastructure, including roads. As such, most of the impacts on wildlife from vegetation control activities would be temporary. Vegetation control activities could include the selective removal of woody vegetation and could have the potential to result in conversion or degradation of habitat. In addition to the direct disturbance of habitat associated with vegetation removal, including the selective removal of woody plants, this activity could result in the establishment of invasive species in the controlled area. Adverse impacts on wildlife associated with vegetation control activities would be minimized by using appropriate BMPs (see **Appendix E**). Vegetation control activities would be kept to a minimum and would be temporary and intermittent in nature, reducing long-term impacts to wildlife habitat.

Localized degradation of habitat would also occur if petroleum products or other hazardous materials are accidentally released during operation or storage of maintenance vehicles and other equipment. All regulatory requirements for handling and storage of fuels, oils, and other hazardous materials (such as the development of spill prevention plans) would be implemented. Thus, habitat degradation resulting from accidental releases of hazardous materials would be negligible.

Some wildlife might be killed or injured during ground-disturbing activities or during transportation of equipment and personnel. Most ground-disturbing activities would occur within and adjacent to previously disturbed sites; therefore, the number of animals killed or injured during planned activities would be less than what would occur when new areas are disturbed. However, burrowing animals, such as the rodents and reptiles, could be impacted.

Near- and in-water bridge, road, and drainage structure maintenance and repair activities could result in direct and indirect impacts on aquatic species and their habitat from increases in erosion, sedimentation, and turbidity. Sedimentation can reduce the quantity and quality of spawning areas and influence stream productivity and food supply (e.g., aquatic insects) for both aquatic and terrestrial species. In addition, hazardous materials could be inadvertently released into aquatic habitat during maintenance and repair activities. These actions would temporarily degrade aquatic habitat and directly and indirectly affect aquatic species. BMPs would be implemented to minimize sedimentation and reduce the risk of the release of hazardous materials into aquatic systems (e.g., control of riparian vegetation would be avoided when possible to provide a buffer area to protect aquatic habitat from sedimentation). As a result of implementing these control measures, sedimentation and associated adverse effects on aquatic species would be negligible. In addition, road maintenance, repair of damaged riprap, culverts, and other drainage structures and crossings would reduce erosion, improve stream flow, and result in beneficial impacts on aquatic habitat and species. Under this alternative, a long-term, beneficial impact on erosion and sedimentation would occur from the periodic, scheduled inspections and maintenance of crossings and structures.

Temporary displacement of mobile wildlife from noise, night lighting, and other disturbances associated with the Proposed Action could occur more often than under the No Action Alternative because maintenance would be scheduled at regular intervals. However, BMPs would be implemented to minimize these adverse effects (e.g., if lights must be used at night, they would be limited to a maximum of 1.5 foot-candles and downshielded to avoid affecting bat species, such as the cave myotis).

Executive Order 13186 directs federal agencies to take actions to implement the Migratory Bird Treaty Act and contribute to the conservation and management of migratory birds and their habitats. BLM and USFWS entered into a MOU in 2010 to implement the Order. In the MOU, BLM agreed to evaluate at the project level, the effects of proposed actions on migratory birds focusing on Birds of Conservation Concern, priority habitats, and key risk factors. When conducting maintenance and repair activities on BLM land, CBP would be a partner to the MOU between BLM and USFWS. If measurable negative effects to migratory bird populations are identified, CBP is to implement measures to reduce take. As a result, while impacts to migratory birds could occur, the Proposed Action will not impact migratory birds at the species level.

Additionally, adverse impacts would be minimized by using appropriate BMPs (see **Appendix E**). The following are examples of BMPs that would be implemented with the Proposed Action to reduce impacts:

- Appropriately time vegetation control to avoid the migration, breeding, and nesting timeframe of migratory birds (February 1 through September 1). Herbicide treatments could occur throughout the year. When initial mechanical and chemical vegetation control must be implemented during February 1 through September 1, a survey for nesting migratory birds would be conducted immediately prior to the start of activities. If an active nest is found, a buffer zone would be established around the nest and no activities would occur within that zone until nestlings have fledged and abandoned the nest. For most nesting migratory birds a 35-foot buffer zone would be implemented. For state listed species and BLM sensitive species CBP will implement larger buffers, as appropriate.
- Ensure temporary light poles and other pole-like structures used for maintenance activities have anti-perch devices to discourage roosting by birds.
- Minimize animal collisions during maintenance and repair activities by not exceeding construction speed limits of 35 miles per hour (mph) on major unpaved roads (i.e., graded with ditches on both sides) and 25 mph on all other unpaved roads. During periods of decreased visibility (e.g., night, poor weather, curves), do not exceed speeds of 25 mph.
- To prevent entrapment of wildlife species, ensure excavated, steep-walled holes or trenches are either completely covered by plywood or metal caps at the close of each work day or provided with one or more escape ramps (at no greater than 1,000-foot intervals and sloped less than 45 degrees) constructed of earth fill or wooden planks.
- Each morning before the start of maintenance activities and before such holes or trenches are filled, ensure they are thoroughly inspected for trapped animals. Ensure that any animals discovered are allowed to escape voluntarily (by escape ramps or temporary

structures), without harassment, before maintenance activities resume; or are removed from the trench or hole by a qualified person and allowed to escape unimpeded.

3.5.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, CBP would continue current maintenance activities and short- and long-term, minor to moderate, direct and indirect, adverse effects on terrestrial and aquatic wildlife would occur. Tactical infrastructure would be maintained and repaired on an as-needed basis. There would be no centralized planning process for maintenance and repair, and, consequently, maintenance and repair of tactical infrastructure would usually be performed only on resources that are in disrepair. Under this alternative, the lack of coordinated environmental staff support and centralized planning would result in that would lead to the eventual degradation of tactical infrastructure. The No Action Alternative would result in greater impacts on wildlife than the Proposed Action because maintenance and repair activities would be reactionary. Under this alternative, impacts on wildlife, such as displacement of wildlife; habitat conversion and degradation from vegetation removal and the accidental release of petroleum products; crushing of smaller, less-mobile species resulting in death or injury; and disturbance from noise effects, night lighting, and temporary displacement of terrestrial species, would be expected.

By completing maintenance and repair work on an as-needed basis, the potential exists for increased impacts on wildlife species. Without a centralized planning process, maintenance and repair specifications would not be established and standardized BMPs might not be implemented (e.g., without a standardized BMP requiring that the footprint of the maintenance area be flagged or marked, wildlife habitat immediately adjacent to the maintenance footprint could be impacted if maintenance activities went beyond the footprint). In addition, maintenance and repair activities planned on an ad hoc basis without uniform application of centralized standards would likely lead to inconsistent outcomes and greater risk to environmental resources such as wildlife. For example, it might not allow the implementation of BMPs that require scheduling preventative maintenance around important seasons, such as the growing or active season when sensitive species might be vulnerable. Thus, some wildlife species and their habitat adjacent to tactical infrastructure could be degraded or destroyed. Therefore, it is possible that greater impacts would occur under the No Action Alternative than the Proposed Action, as the potential for habitat disturbances would be greater due to the lack of a proactive approach to maintenance and repair.

3.6 THREATENED AND ENDANGERED SPECIES

3.6.1 Definition of the Resource

Species listed as threatened or endangered under the ESA (i.e., federally listed species) that have the potential to be affected by implementation of the Proposed Action or No Action Alternative are discussed in this section. NatureServe elemental occurrence data were used to determine the presence of species within the region of analysis. An elemental occurrence is defined by NatureServe as an area of land or water where a species or natural community is or was present and has conservation value (NatureServe 2010b). These occurrence data require that a species is in appropriate habitat, at the appropriate time of the year, and is naturally occurring (NatureServe

2010b). This section presents those Federal-listed species that are known to occur or have the potential to occur within the region of analysis.

3.6.2 Affected Environment

The agencies that have primary responsibility for the conservation of plant and animal species in New Mexico are the USFWS and New Mexico Department of Game and Fish (NMDGF) of the New Mexico Energy, Minerals, and Natural Resources Department. These agencies maintain lists of plant and animal species that have been classified, or are potential candidates for classification, as threatened or endangered in the State of New Mexico. Listed species for Hidalgo, Grant, Doña Ana, and Luna counties were obtained through USFWS (New Mexico field office). Data on species’ occurrences and distributions were obtained from NatureServe (NatureServe 2010a), and NMDGF Biota Information System of New Mexico (NMDGF 2010). Seven threatened and endangered species have the potential to occur in the region of analysis and to be affected by the Proposed Action (see **Table 3-2**).

Table 3-2. Federally Listed Species Known to Occur within the Region of Analysis

Common Name	Scientific Name	Listing Status
AMPHIBIANS AND REPTILES		
Chiricahua leopard frog	<i>Lithobates chiricahuensis</i>	Threatened, critical habitat
New Mexico ridge-nosed rattlesnake	<i>Crotalus willardi obscurus</i>	Threatened, critical habitat
BIRDS		
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Threatened
Northern aplomado falcon	<i>Falco femoralis septentrionalis</i>	Endangered, 10 (j)*
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered, proposed critical habitat
MAMMALS		
Jaguar	<i>Panthera onca</i>	Endangered
Mexican long-nosed bat	<i>Leptonycteris nivalis</i>	Endangered
Lesser long-nosed bat	<i>Leptonycteris yerbabuenae</i>	Endangered

*Note: The northern aplomado falcon in New Mexico is an experimental population listed under section 10(j) of the ESA.

An additional 11 threatened or endangered species occur within the counties along the U.S./Mexico international border in New Mexico. These species would not be affected by the Proposed Action because they do not occur along the U.S./Mexico international border where tactical infrastructure is located, or because no activities would be conducted within or near habitat used by these species along or near the U.S./Mexico international border. These species include the Sneed pincushion cactus (*Coryphantha sneedii* var. *sneedii*), beautiful shiner (*Cyprinella formosa*), Chihuahua chub (*Gila nigrescens*), Gila chub (*Gila intermedia*), Gila topminnow (*Poeciliopsis occidentalis*), Gila trout (*Oncorhynchus gilae*), Rio Grande silvery minnow (*Hybognathus amarus*), loach minnow (*Tiagroga cobitis*), spikedace (*Meda fulgida*),

least tern (interior population) (*Stena antillarum*), and black-footed ferret (*Mustela nigripes*), and are not discussed further.

3.6.2.1 Terrestrial Threatened and Endangered Species

New Mexico Ridge-Nosed Rattlesnake. This species is a small (12 to 24 inches), montane, grayish-brown rattlesnake with a distinct ridge on the tip of its snout. The diet of the New Mexico ridge-nosed rattlesnake consists of a broad range of prey including small mammals, birds, lizards, arthropods, and other snakes. Reproduction and birthing periods generally occur between early August and mid-October, with the majority of births occurring in mid-September. This species is active during periods of moderate temperatures, both daily and seasonally. New Mexico ridge-nosed rattlesnakes are active from April to October. The greatest periods of activity coincide with the rainy season in the Animas Mountains (i.e., July to September) (USFWS 1985).

The New Mexico ridge-nosed rattlesnake occurs in three remaining mountain populations within the Madrean Archipelago: Animas (New Mexico), Peloncillo (New Mexico and Arizona), and Sierra San Luis (Mexico). Throughout these three ranges, the species is most commonly found in pine-oak or scrub-oak forests between 5,600 to 9,000 feet in elevation. Within these habitats, cool canyon bottoms with shaded rock outcrops or talus slopes are favored micro-habitats (Davis 2008). Deep, narrow canyons that provide cool, mesic conditions relative to surrounding habitats are especially important for the persistence of this species in its arid northern range (USFWS 1985). The distribution of this rattlesnake in the Animas Mountains is limited to four canyons (Bear, Indian, Spring, and West Fork) and their associated sideslopes. Data from an 18-year mark/recapture study indicated the Animas Mountain population contained approximately 530 individuals (Davis 2008). The Peloncillo population is thought to be much smaller with less than 30 specimens known (NMDGF 2008). NatureServe data indicate there are eight records of elemental occurrences of New Mexico ridge-nosed rattlesnakes in the region of analysis. These occurred within the boundaries of the Guadalupe Spring and Animas Peak USGS topographic quadrangle maps (NatureServe 2010a). The most recent record of an elemental occurrence in the region of analysis was in 1994 (NatureServe 2010a).

Natural threats to the New Mexico ridge-nosed rattlesnake include predation, starvation, and pathogenic-related diseases that remain poorly understood (USFWS 1985). Other threats, more important to the decline in population numbers, include over-collecting by the pet trade and the alteration of habitat by fire suppression, climate change, grazing, mining, and development (USFWS 1985).

Critical habitat has been designated for New Mexico ridge-nosed rattlesnake (43 FR 34476-34480); and occurs within the region of analysis. Critical habitat for the New Mexico ridge-nosed rattlesnake was designated in Bear, Spring, and Indian canyons in the Animas Mountains of Hidalgo County between 6,200 and 8,500 feet (43 FR 34479).

Mexican Spotted Owl. The Mexican spotted owl has large, dark eyes, an overall dark to chestnut brown coloring, whitish spots on the head and neck, and white mottling on the abdomen and breast (USFWS 1995). The Mexican spotted owl inhabits canyon and forest habitats across its range and is frequently associated with mature mixed-conifer, pine-oak, and riparian forests.

Owls are usually found in areas with some type of water source such as perennial streams, creeks, and springs. Home range calculations for a single owl average 1,600 acres, while a mating pair's home range averages 2,000 acres (USFWS 2004). Mexican spotted owls use a variety of habitats for foraging, including multi-layered forests with many potential patches. In areas within Arizona and New Mexico, forests used for roosting and nesting often contain mature or old-growth stands with complex structure. The breeding period for Mexican spotted owls is March to June (USFWS 1995).

The range of the Mexican spotted owl extends from the southern Rocky Mountains in Colorado and the Colorado Plateau in southern Utah southward through Arizona, New Mexico, and far western Texas, through the Sierra Madre Occidental and Oriental, to the mountains at the southern end of the Mexican Plateau. About 91 percent of known Mexican spotted owls existing in the United States between 1990 and 1993 occurred on land administered by the USFS (USFWS 1995). This species has been documented in all New Mexico counties except Curry, De Baca, Guadalupe, Harding, Lea, Quay, Roosevelt, and Union, which compose the eastern part of the state, and Luna County, which is situated in southern New Mexico (BLM 2007). This species is known to occur in the vicinity of Gray Ranch in the Animas Mountains, Hidalgo County (NatureServe 2010a, NMDGF 2010). Within the region of analysis, NatureServe provides records for approximately four elemental occurrences of the Mexican spotted owl within USGS topographic quadrangle maps Animas Peak and Clanton Draw (NatureServe 2010a). The most recent record of an elemental occurrence in the Action Area was in 1994 (NatureServe 2010a).

The primary threats to the Mexican spotted owl are even-aged timber harvest and the threat of catastrophic wildfire. Additional threats include development from oil, gas, and mining, and recreation (USFWS 1995).

Critical habitat for the Mexican spotted owl was amended on September 30, 2004, and includes 8.6 million acres in Arizona, Colorado, New Mexico, and Utah on Federal lands (69 FR 53182-53298). No portion of designated critical habitat occurs within the region of analysis.

Northern Aplomado Falcon. The northern aplomado falcon (*Falco femoralis septentrionalis*) is a medium-sized falcon, approximately 14 to 18 inches in length with a wingspan of 31 to 40 inches. Northern aplomado falcons occur in open terrain with scattered trees or shrubs. Nesting habitat includes shrubs and trees, in particular the soap tree yucca, that is greater than or equal to 5 feet in height. Historically, in the United States, this species was found along yucca-covered sand ridges on coastal prairies, riparian woodlands in open grasslands, and in desert grasslands that contained scattered mesquites and yucca (USFWS 1990).

The range of this species once extended from Trans-Pecos Texas, southern New Mexico, and southeastern Arizona to Chiapas and the northern Yucatan along the gulf coast of Mexico, and along the Pacific slope of Central America north of Nicaragua. In New Mexico, the historic range included grasslands and desert regions along the New Mexico/Mexico international border and north into the Rio Grande valley (USFWS 1990; Meyer and Williams 2005), and included all four counties within the Action Area. Natural recolonization from a population in Mexico was detected in Southern New Mexico in the 1990s; nesting was reported in Luna County in

2001; and numerous reports of northern aplomado falcons, including nesting pairs, have since been documented in southern New Mexico (Meyer and Williams 2005; NMDGF 2012).

In 2006, the Peregrine Fund, in cooperation with Federal and state agencies, initiated an effort to release captive-reared aplomado falcons into southern New Mexico as part of the non-essential experimental population designated in 2005. From 2006 to 2011, over 300 birds were released into southern New Mexico. Only a small number of released falcons were detected at or near release sites, indicating high mortality or dispersal rates. In 2013, the Peregrine Fund announced that it was discontinuing release efforts in New Mexico (NMDGF 2014).

This species is threatened by long-term drought, continued replacement of grassland communities with shrubs in Chihuahua Desert grasslands, large-scale conversion of grasslands to agriculture, and the increased presence of the great-homed owl (*Bubo virginianus*), which preys upon the aplomado falcon (USFWS 1990; 70 FR 6819). In contrast to these current threats, aplomado falcons appear to be relatively tolerant of human presence (DOD and USFWS 2007).

Southwestern Willow Flycatcher. The southwestern willow flycatcher is a small bird, typically less than 6 inches in length, with conspicuous light-colored wing bars (USFWS 2002b). This subspecies is one of four currently recognized willow flycatcher subspecies found in the United States. The southwestern willow flycatcher is strongly associated with riparian habitats, nesting along rivers, streams, or other wetlands that often include willow, cottonwood (*Populus* sp.), box elder, and saltcedar (*Tamarix chinensis*). In New Mexico, Russian olive (*Elaeagnus angustifolia*) is a major habitat component at high-elevation breeding sites. The breeding period for this species is April to September (USFWS 2002b).

The southwestern willow flycatcher breeding range extends from southern and central California to Arizona, southwestern New Mexico, southeastern Utah, and southern Nevada. Migrating southwestern willow flycatchers occur statewide in New Mexico (NMDGF 2010) and use a wider array of forest and shrub habitats than their breeding and wintering habitats, although riparian vegetation is thought to be preferred (Sogge et al. 1997). The southwestern willow flycatcher is currently known from the following drainages within New Mexico: Rio Grande, Gila, San Juan, upper Canadian, Zuni, San Francisco, and Mimbres (NMDGF 2008). In 2010, surveys were conducted for this species in 11 restoration sites along the Rio Grande River in Sierra and Dona Ana counties, New Mexico. A single restoration site, the Nemexus Siphon site, was within the Action Area. This site contained suitable habitat for this species; however, no individuals were observed at this location (TRC 2010). NatureServe data indicate there is a single record of elemental occurrence in the region of analysis. That record is from an observation along the Rio Grande River north of El Paso within the boundary of the Smelertown USGS topographic quadrangle map in 1946 (NatureServe 2010a).

This species is threatened by the loss and modification of habitat from dams and reservoirs, diversions and groundwater pumping, livestock grazing, recreation, fire, agricultural development, urbanization, and introduction of exotic species (USFWS 2002b). In addition, increased irrigated agriculture and livestock grazing have aided brown-headed cowbird (*Molothrus ater*) populations that, in turn, impact the southwestern willow flycatcher by parasitizing their nests. This subspecies currently occurs in small, fragmented subpopulations, which increases the risk of local extirpation (NatureServe 2010b).

USFWS has completed a final rule (78 FR 343) designating 1,227 stream miles and 84,569 hectares of southwestern willow flycatcher critical habitat, across several counties in New Mexico, Arizona, California, Utah, and Colorado. No portion of the final critical habitat occurs within the region of analysis.

Lesser long-nosed bat. The lesser long-nosed bat is a yellow-brown or cinnamon-gray bat, with a total head and body measurement of approximately 3 inches. The tongue measures approximately the same length as the body. This species also has a small nose leaf (USFWS 2001). Habitat for the species includes mainly desert scrub in the United States portion of its range. In Mexico, the species occurs in high elevation pine-oak and ponderosa pine forests with an altitudinal range of 1,600 to 11,500 feet. Within the United States, this species forages at night on nectar and pollen from columnar cacti and agaves with branched flower clusters (USFWS 2001). Considerable evidence exists for the interdependence of *Leptonycteris* bat species and certain agaves and cacti (USFWS 2001). During daylight, lesser long-nosed bats roost in caves or abandoned mines.

The species historically ranged from central Arizona and southwestern New Mexico through much of Mexico and into El Salvador (USFWS 2001). In New Mexico, this species is known to occur from the Animas, Peloncillo, and Big Hatchet mountains and adjacent valleys within southern Hidalgo County. Within the region of analysis the following roost sites have been documented, all within Hidalgo County: one roost site from the Peloncillo Mountains on the Arizona/New Mexico border; one roost site in the Big Hatchet Mountains; and two roosts in the Animas Mountains (USFWS 2007a, NMDGF 2008).

The decline of long-nosed bat populations is partially attributable to the excessive harvest of agaves in Mexico; the collection of saguaro and organ pipe cactus in the United States; and the conversion of habitat for agricultural uses, livestock grazing, woodcutting, and other development. These bats are particularly vulnerable to environmental stressors because many individuals use only a small number of communal roosts (USFWS 2001). In general, the overall number of lesser long-nosed bats has been stable or increasing in both the United States and Mexico (USFWS 2007a).

Mexican Long-Nosed Bat. The Mexican long-nosed bat (also known as the greater long-nosed bat) is a medium-sized bat, 3 to 4 inches long, that has a moderately long snout with a small triangular nose leaf at the tip. The species is colonial and usually roosts in caves and mines during the daytime. Occasionally, old buildings or sheds serve as night roosts for bats resting between feeding bouts. The use of roosts is driven by the availability of seasonally dependent forage opportunities. The Mexican long-nosed bat feeds on nectar and pollen of agave and cactus flowers, and sometimes soft fruit (USFWS 1994b). Agaves are currently the only known food source used by long-nosed bats in New Mexico (NMDGF 2008). Individual bats can travel as far as 25 miles per night between roosting and foraging areas (USFWS 1994b). In New Mexico, Mexican long-nosed bats use upper desert scrub and pine-oak woodlands in or near mountainous areas (NMDGF 2008).

The Mexican long-nosed bat is known from mid to high elevations (1,500 to 9,300 feet) throughout its range, which includes northern and central Mexico, southwestern Texas, and southwestern New Mexico (USFWS 1994b). In New Mexico, this species is known from Grant

and Hidalgo counties, where it has been captured in the Animas, Peloncillo, and Big Hatchet mountain ranges and associated valleys. Mexican long-nosed bats are present in New Mexico from mid-July to mid-October, as this period coincides with peak availability of flowering agave in the region (NMDGF 2008). Population estimates for the Mexican long-nosed bat are difficult to obtain due to the general lack of information on the species (USFWS 1994b). More than 5,000 long-nosed bats, consisting of both Mexican and lesser long-nosed bats, were counted in September 2005 at the Big Hatchet roost (NMDGF 2008). NatureServe data indicate there is one record of elemental occurrence of the Mexican long-nosed bat within the region of analysis. This occurred within the boundary of the Center Peak USGS topographic quadrangle map in 2003 (NatureServe 2010a).

Modification or destruction of roost sites and foraging habitat are probably the major threats. Other threats include pesticides, competition for roosts and nectar, natural catastrophes, disease, and predation (USFWS 1994b).

Jaguar. The jaguar is the largest species of cat native to the western hemisphere. It has a cinnamon-buff color with many black spots and a muscular, deep-chested body with relatively short, massive limbs. Its weight ranges widely from 90 to 300 pounds and its length is typically 7 feet from head to tail tip (USFWS 2000). Throughout their range, this species is most abundant near water in savannahs and forests in regions with a warm tropical climate, and is rarely found in extensive arid areas. However, jaguars have been documented in arid areas, including thornscrub, desertscrub, lowland desert, mesquite grassland, Madrean oak woodland, and pine-oak woodland communities of northwestern Mexico and the southwestern United States. Little is known about habitat preferences of jaguars in the northern reaches of their range. Jaguars hunt a wide variety of prey throughout their range, but are likely sustained by javelina (*Tayassu tajacu*) and mule deer (*Odocoileus hemionus*) in the southwestern United States (Seymour 1989). Factors that are thought to improve habitat suitability include low human density, proximity to water, abundant prey, and rugged terrain (Menke and Hayes 2003). Although jaguar detections over the past 15 years have primarily occurred in Madrean oak woodland communities, jaguars have also been documented in open mesquite grasslands and desert scrub/grasslands on the desert valley floor (McCain and Childs 2008).

The historic range of the jaguar included California, Arizona, New Mexico, and possibly Louisiana, south through Texas and into central South America. The current range includes central Mexico and into central South America as far south as northern Argentina. There are no known breeding populations in the United States (USFWS 2000). Although the greatest abundance of jaguars occurs in tropical environments of Mexico, the range of northern populations extends into southeastern Arizona and southwestern New Mexico. Individuals observed in Arizona and New Mexico are generally considered non-resident, young, dispersing transients. From 1996 to 2011, five, and possibly six, male jaguars have been reported in the United States (USFWS 2012). One adult male was observed and photographed on March 7, 1996, in the Peloncillo Mountains in New Mexico near the Arizona border. In February 2006, an adult male jaguar was observed and photographed in the Animas Mountains in Hidalgo County, New Mexico. The other observations were in Arizona. There are only three known records of females with cubs in the United States, the most recent occurring in 1919. The last report of a female jaguar in the United States was 1963 (McCain and Childs 2008). NatureServe data indicate there is one record of elemental occurrence of the jaguar in the region of analysis. This

occurred in 1996 within the boundary of the Skelton Canyon USGS topographic quadrangle map (NatureServe 2010a).

Habitat loss, fragmentation, and modification have contributed to jaguar population declines throughout much of the species' range. Roads can have direct impacts on jaguars and their habitat, including road-kill, disturbance, habitat fragmentation, change in prey numbers or distribution, and facilitating access for illegal hunting (McCain and Childs 2008).

3.6.2.2 Aquatic Threatened and Endangered Species

Chiricahua Leopard Frog. The Chiricahua leopard frog has a distinctive pattern on the rear of the thigh consisting of small, raised, cream-colored spots or tubercles on a dark background and often green coloration on the head and back (USFWS 2007b). The Chiricahua leopard frog is known to occur in cienegas, pools, livestock tanks, lakes, reservoirs, streams, and rivers at elevations of 13,300 to 8,900 feet (USFWS 2008). The species requires permanent or semi-permanent pools for breeding. The breeding season varies depending on elevation. At higher elevations (above 5,900 feet), the breeding season occurs between May and October, while at lower, warmer elevations (below 5,900 feet), the breeding season occurs from March through June (USFWS 2007b, Degenhardt et al. 1996). Overall frog abundance reaches its peak in August and September with the transformation of tadpoles to sub-adults, and is lowest from December through March (Degenhardt et al. 1996).

The Chiricahua leopard frog occurs in central and southeastern Arizona, west-central and southwestern New Mexico, and northeastern Sonora and western Chihuahua, Mexico. The range of the species is split into two geographically isolated populations. The northern populations are along the Mogollon Rim in Arizona and east into the mountains of west-central New Mexico. The southern populations are in southeastern Arizona, southwestern New Mexico, and Mexico. Previous research had suggested these two populations might be distinct; however, more recent work provides no evidence of multiple taxa within what is now considered to be the Chiricahua leopard frog (USFWS 2011). In New Mexico, the majority of populations occur north of Interstate- (I)-10 within the Gila and San Francisco basins. In 2007, there were 30 to 35 populations remaining in New Mexico, with less than 10 occurring south of I-10 (USFWS 2008). Chiricahua leopard frog populations are known from Grant and Hidalgo counties, specifically within the Animas Valley, Cloverdale, and Playas Lake hydrological areas (NatureServe 2010a, NMDGF 2010). This species could occur in and around cattle ponds and holding tanks throughout the southwestern corner of Hidalgo County, including sites in the region of analysis. NatureServe data indicate there are 17 records of elemental occurrences of the Chiricahua leopard frog in the region of analysis. These occurred within the boundaries of the Whitewater Mountains, Lang Canyon, Hilo Peak, Fitzpatrick's, Sentinel Butte, Guadalupe Spring, Clanton Draw, Center Peak, and Animas Peak USGS topographic quadrangle maps (NatureServe 2010a). The most recent record of an elemental occurrence in the region of analysis was in 1999 (NatureServe 2010a).

Threats to the Chiricahua leopard frog include predation and possibly competition by nonnative species, especially American bullfrogs, fish, and crayfish. Additional threats include the fungal disease chytridiomycosis, drought, degradation, and loss of habitat as a result of water diversions

and groundwater pumping, livestock management, catastrophic wildfire, mining, and development (USFWS 2007b).

The USFWS designated 39 critical habitat units within eight Recovery Units for the Chiricahua leopard frog in March 2012 (77 FR 16324–16424). One of the proposed critical habitat units, Peloncillo Mountains Recovery Unit, is within the region of analysis, composing 366 acres.

3.6.3 Environmental Consequences

The significance of effects on threatened and endangered species is based on the following:

- Permanent loss of occupied, critical, or other suitable habitat
- Temporary loss of critical habitat that adversely affects recolonization by threatened or endangered benthic resources
- Take (as defined under the ESA) of a threatened or endangered species.

3.6.3.1 Alternative 1: Proposed Action

In general, short- and long-term, direct and indirect effects on terrestrial and aquatic threatened and endangered species from the Proposed Action would be negligible. Adverse impacts on threatened and endangered species would be avoided and minimized by using appropriate BMPs (see **Appendix E**).

As justified in more detail as follows, CBP concludes that implementation of the Proposed Action would not adversely affect any threatened and endangered species or subspecies found within the region of analysis. In addition, CBP concludes that the Proposed Action would not adversely affect any critical habitat that occurs there. These determinations were based in part on the following factors.

- The Proposed Action involves the maintenance and repair of existing tactical infrastructure. Those activities would be conducted within and adjacent to the footprint of that infrastructure.
- CBP would use a centralized maintenance and repair planning process to ensure that program activities are appropriately planned and implemented.
- CBP would implement design standards and BMPs to avoid harming or harassing protected species and to minimize other direct and indirect adverse effects.
- When appropriate, surveys would be conducted prior to implementing maintenance and repair activities such as vegetation control within critical habitat or other suitable habitat.
- The program would result in no or very minor habitat degradation. Any additional direct and indirect impacts on threatened and endangered species would be negligible; therefore, any contribution to the cumulative adverse effects of future non-Federal activities in the region would be insignificant.

- CBP would seek approval or additional consultation from the USFWS for activities that have the potential to adversely affect protected species or adversely modify their critical habitat.

CBP has begun consultation with USFWS under Section 7 of the ESA regarding potential effects on listed species and designated critical habitat. Potential direct and indirect effects on federally listed species presented in this EA are based on currently available data. Once consultation has been completed, determinations from the USFWS would be addressed, as appropriate, in this EA.

Terrestrial Threatened and Endangered Species

New Mexico Ridge-Nosed Rattlesnake. Short-term, direct effects on the New Mexico ridge-nosed rattlesnake would be negligible. Potential direct impacts on this species include the risk of direct injury and mortality from maintenance activities. This species is limited to a very small area within the project area, and maintenance and repair within that area would be limited to within and immediately adjacent to existing tactical infrastructure. BMPs designed to minimize or avoid impacts on New Mexico ridge-nosed rattlesnakes would be implemented and the potential for effects would be discountable and any effects that might occur would be negligible. Maintenance and repair vehicles would not exceed a speed of 15 to 20 mph during periods of elevated roaming and foraging activities from July through August within defined New Mexico ridge-nosed rattlesnake occupied habitat, critical habitat, and suitable habitat (i.e., pine-oak woodlands at high elevations of 5,500 to 9,000 feet) in the Peloncillo and Animas mountains. If maintenance and repair activities cannot be avoided within the activity period, maintenance and repair vehicles would not exceed a speed of 15 to 20 mph during periods of elevated roaming and foraging activities from July through August within defined New Mexico ridge-nosed rattlesnake habitat.

Implementation of the Proposed Action would not result in direct, indirect, or cumulative effects that would appreciably diminish the value of primary consistent elements (PCEs) that are essential to conservation of the New Mexico ridge-nosed rattlesnake within this critical habitat unit. All maintenance and repair activities within critical habitat would occur within and immediately adjacent to the footprint of existing tactical infrastructure, and BMPs designed to avoid impacts on critical habitat of this species would be implemented. For example, all vegetation control activities should avoid suitable habitat, areas of known occurrences, and designated critical habitat for threatened and endangered species. If vegetation control is required within suitable habitat, areas of known occurrence, or designated critical habitat, a qualified biologist would conduct a survey for any potential threatened and endangered species and any PCEs that have been identified for that species. If a threatened or endangered species or PCE is observed within the project area, then further consultation with USFWS would be required; thus, implementation of the Proposed Action in New Mexico would have no effect on critical habitat of this species.

Avian Species. Short- and long-term, direct effects on the threatened and endangered avian species, including the Mexican spotted owl, northern aplomado falcon, and southwestern willow flycatcher, would be negligible. Potential direct impacts on threatened and endangered avian species include noise disturbances from increased human presence, injury or mortality from

collisions with maintenance vehicles, and habitat degradation from vegetation removal. As described in **Section 2.3**, maintenance and repair activities would occur infrequently. For example, inspections and routine maintenance of access roads would occur up to four times per year, and routine maintenance of other tactical infrastructure would occur less often. These maintenance activities would include trips by vehicles ranging in size from pickup trucks to heavy equipment such as dump trucks and road graders. Noise effects associated with maintenance activities are expected to occur at any given location for one to a few days in duration.

Noise levels from pickup trucks are anticipated to be similar to noise levels of most vehicles currently using the roadways. Noise levels from multiple pieces of heavy equipment, such as backhoes, construction trucks, and front-end loaders, are anticipated to increase ambient sound levels temporarily. The distance and levels at which noise is likely to disturb avian species is dependent on the sensitivity of individual species. For example, Delaney et al. (1999) indicated that spotted owls can be affected less by nearby, nonthreatening activity than other raptors. Spotted owls can be flushed from nests at noise levels greater than 46 A-weighted decibels (dBA) from ground-based activities. However, flush response decreases with distance. No flush response was detected at a distance of 250 feet or greater from the source during the non-nesting season and 2,690 feet or greater from the source during nesting season. Although not statistically significant, spotted owls were less likely to flush later in the season. While this could be an indication of experience or habituation to the noise, it could not be differentiated from other factors such as seasonal influences.

Noise and visual disturbance associated with maintenance and repair activities could disrupt breeding and foraging behaviors of threatened and endangered avian species. For example, such disturbances could cause adult Mexican spotted owls to flush from roosts, but is unlikely to result in adults leaving a nest. Because all maintenance activities would be conducted within or immediately adjacent to existing tactical infrastructure, and based on Delaney et al. (1999), it is likely that any nest within the audible range of maintenance and repair activities for existing tactical infrastructure would be occupied by owls and other avian species that are habituated to noise. In addition, BMPs would be implemented to avoid impacts during the nesting season. No maintenance and repair activities would be conducted within areas classified as protected activity centers of Mexican spotted owls during the nesting season.

Maintenance and repair activities could increase the potential for direct injury and mortality of threatened and endangered avian species. In general, birds are highly mobile and flush or relocate in response to disturbances and the potential for direct injury or mortality is negligible. There are species and seasonal periods when birds are more susceptible to collisions. With the exception of Mexican spotted owl protected activity centers, there might be occasions when maintenance and repair activities would be required within threatened and endangered avian species suitable and designated critical habitat during the nesting season. If maintenance and repair activities are necessary within these habitats during the nesting season, a qualified biologist would conduct a survey for threatened and endangered birds prior to initiating maintenance activities. If a threatened or endangered bird is present, a qualified biologist would survey for nests approximately once per week within 1,300 feet for Mexican spotted owl or 500 feet for southwestern willow flycatchers within the maintenance area for the duration of the activity. If an active nest is found, no maintenance would be conducted within 1,300 feet (for

Mexican spotted owl) or 300 feet (for southwestern willow flycatcher) of the nest until the young have fledged. In addition, all maintenance vehicles would be limited to a maximum speed of 35 mph on major unpaved roads (i.e., graded with ditches on both sides) and 25 mph on all other unpaved roads. Based on these considerations, the potential for injury to threatened and endangered avian species from striking a CBP maintenance vehicle is extremely unlikely.

Removal of vegetation could affect threatened and endangered avian species by reducing suitability of habitat if enough vegetation is removed so that it fragments the habitat and alters its structure. Vegetation removal would be limited to the minimum necessary to maintain drivable access roads and to maintain the functionality of other tactical infrastructure. This limited vegetation control would be conducted outside of the nesting season. In addition, shrubs or trees that fit the criteria for nesting substrate for the northern aplomado falcon will not be removed or disturbed.

There is no critical habitat designated for threatened and endangered avian species within or near the project area; therefore, the Proposed Action would have no effect on critical habitat for this species.

Jaguar. Short- and long-term, direct and indirect effects on jaguar would be negligible. Potential direct impacts on jaguar include the risk of direct injury and mortality from maintenance vehicles accessing tactical infrastructure and changes in behavior resulting from noise and other disturbances associated with human presence during maintenance and repair activities. Occurrences of jaguar in New Mexico are extremely rare. Between 1996 and 2007 there were only four jaguars observed in New Mexico and Arizona combined (USFWS 2007c).

Maintenance and repair activities would occur within or immediately adjacent to existing tactical infrastructure, and would result in no measureable degradation, modification, or habitat fragmentation of undisturbed areas where jaguar potentially occur. The presence of maintenance crews and equipment, and associated noise, could cause jaguar to move away from an area or otherwise modify their behavior. Because most repair and maintenance activities would be completed within an area in less than 1 day, and almost all would be completed within a few days, any displacement or other associated adverse effects would be temporary and minor. Additionally, because jaguars are so rare in the project area, the potential for an individual jaguar to encounter maintenance activities is extremely unlikely to occur.

Lesser Long-nosed and Mexican Long-Nosed Bat. Short- and long-term, direct effects on long-nosed bats from removal of forage plants (agave) or potential disturbances caused by maintenance and repair activities in close proximity to occupied roosts would be negligible. The potential direct impacts on these species include disruption of normal roosting and foraging behavior due to noise and lighting associated with maintenance and repair activities, and degradation of foraging habitat from vegetation removal. Based on the implementation of BMPs designed to avoid or reduce impacts on long-nosed bats, these impacts would be extremely unlikely to occur.

Noise from daytime maintenance activities could disturb bats roosting near the maintenance area. The distance at which noise is likely to disturb roosting bats is dependent on the sensitivity of the bat species and the type of roost structure. Because long-nosed bats roost in caves and

abandoned mine shafts, and CBP would not conduct maintenance activities within or at the entrance to caves or mineshafts, noise from daytime maintenance activities would not disturb roosting bats.

Maintenance activities that occur at night have the potential to interfere with a bat's ability to locate and find food (Schaub et al. 2008), and bats might avoid areas where maintenance noise is present. Maintenance and security lighting have the potential to impact bat behavior, altering commuting routes to foraging habitat (Stone et al. 2009). However, work at night within 5 miles of any known roost sites of long-nosed bats would be minimized from mid-April through mid-September. If night lighting is unavoidable, light would shine directly onto the work area to ensure worker safety and efficiency, and light would not exceed 1.5 foot-candles in long-nosed bat habitat.

Considerable evidence exists for the interdependence of *Leptonycteris* bat species and certain agaves and cacti (USFWS 2001). To avoid affecting the availability of these important forage species, removal of these plants within the range of long-nosed bats would be limited to the minimum necessary amount to maintain drivable access roads and functionality of other tactical infrastructure. Prior to conducting any maintenance or repair activity outside of the existing disturbed footprint of tactical infrastructure within the range of these species, a qualified biologist would conduct a survey to identify and flag all agave to be avoided. In addition, CBP would comply with all requirements of land management agencies for the protection and replacement of agave.

Aquatic Threatened and Endangered Species

Chiricahua Leopard Frog. Short-term, direct and indirect effects on Chiricahua leopard frogs would be negligible to minor. Potential direct impacts on this species include habitat degradation and the risk of direct injury or mortality from maintenance activities. Potential indirect impacts on this species include increased sedimentation, introduction of nonnative invasive species, and the spread of the fungal disease chytridiomycosis. Based on the implementation of BMPs designed to avoid or reduce impacts on Chiricahua leopard frogs, these impacts would be extremely unlikely to occur.

Maintenance of roads, culverts, and low water points would occur within or immediately adjacent to existing tactical infrastructure. To avoid affecting habitat for this species, in-water work (e.g., clearing, repairing, and replacing culverts) within critical or other suitable habitat of this species will occur during period of low or no flow. In addition, that work would be designed and implemented so that the hydrology of streams, ponds, and other habitat is not altered. By conducting in-water maintenance and repair activities during periods of low flow and ensuring that the hydrology of their habitat is not altered, maintenance and repair work would have negligible to minor, direct, adverse effects on the habitat of Chiricahua leopard frogs. Conducting work during periods of low flow and monitoring for the presence of this species during maintenance activities would reduce but not eliminate the possibility that Chiricahua leopard frogs would be harmed during maintenance and repair activities.

Direct injury, mortality, or behavioral changes could occur if adult Chiricahua leopard frogs disperse into areas being maintained or repaired. To minimize the possibility that Chiricahua

leopard frogs are harmed, in-water work within Chiricahua leopard frog critical habitat would be conducted during the active season (May through September) so that frogs can escape to the best of their ability. A qualified biologist would monitor ground-disturbing maintenance activities and use of heavy equipment to be conducted in vegetated or undisturbed areas. Monitoring would occur prior to and during activities located within one mile overland of critical habitat, 3 miles downstream of that habitat along ephemeral drainages, and 5 miles downstream of that habitat along perennial streams. If a frog is found in the project area and is in danger of being harmed, work would cease in the area until either the qualified biological monitor can safely move the individual to a nearby location or the frog moves away on its own.

By conducting in-water maintenance and repair activities during specific periods and ensuring that the hydrology of their habitat is not altered, maintenance and repair work would have negligible to minor, direct, adverse effects on the habitat of Chiricahua leopard frogs. Conducting work during those periods and monitoring for the presence of these species during maintenance activities would reduce but not eliminate the possibility that Chiricahua leopard frogs would be harmed during maintenance and repair activities.

Predation by nonnative species including catfish (*Ictalurus* spp.), American bullfrogs (*Lithobates catesbeianus*), and others has been identified as one of the primary threats to the Chiricahua leopard frog. In addition, population declines and extirpation of amphibian populations associated with chytridiomycosis have been documented in New Mexico (USFWS 2007b). Maintenance activities that occur in areas where nonnative invasive species and chytridiomycosis are known to occur can provide a catalyst for the spread and introduction of these into sensitive, less-disturbed areas. To prevent the spread of amphibian diseases among drainages via water or mud on maintenance vehicles and equipment, all maintenance work within Chiricahua leopard frog critical habitat shall conform to amphibian disease prevention protocols as described in the recovery plans for these species (USFWS 2002a, 2007b). Equipment would either be disinfected between uses at different sites or rinsed and air dried.

Maintenance activities could alter the quality of surface water within the maintenance area and downstream. However, impacts on water quality would be localized and temporary and BMPs would be implemented to reduce sedimentation and runoff from roads and other infrastructure and minimize other potential indirect effects on this species. Control of riparian vegetation would not occur within 100 feet of aquatic habitats to provide a buffer area to protect the habitat from sedimentation. To minimize impacts from habitat degradation due to sedimentation and a reduction of water quality and quantity, a site-specific Storm Water Pollution Prevention Plan and a spill protection plan would be prepared and regulatory approval would be sought as required, for maintenance and repair activities that could result in sedimentation and that occur within 0.3 mile of suitable habitat in the range of this species. This would include, but is not limited to, placing straw bale type sediment traps at the inlet of ponds or stock tanks and upstream of drainages known to be occupied by the species or within critical habitat of the species. General BMPs listed in **Appendix E** to protect water resources would also be implemented.

By implementing BMPs to reduce sedimentation and other indirect effects on amphibian habitat, avoiding the spread of nonnative invasive species and the fungal disease chytridiomycosis, and

conducting regularly scheduled inspection and maintenance, the potential for adverse indirect effects on Chiricahua leopard frogs would be negligible.

Critical habitat for the Chiricahua leopard frog has been designated for 39 units, one of which is within the region of analysis. This unit includes several tanks, pools, ponds, and dispersal habitat such as perennial, ephemeral, or intermittent drainages. Proposed critical habitat extends for 20 feet beyond the high water line or boundary of the riparian and upland vegetation of each pond, tank, or spring, and also extends 328 feet upstream of that aquatic habitat. Proposed critical habitat also extends 328 feet on either side of most drainages included as dispersal or other habitat.

The Proposed Action would not result in direct, indirect, or cumulative effects that would appreciably diminish the value of PCEs within this critical habitat unit, or any other Chiricahua leopard frog habitat that could be designated as critical. Most program activities within critical habitat would occur within the footprint of existing tactical infrastructure, and BMPs designed to avoid impacts on critical habitat of this species would be implemented. For example, any in-water work (e.g., clearing, repairing, and replacing culverts) within critical or other suitable habitat of this species will occur during periods of low or no flow. In addition, that work would be designed and implemented so that the hydrology of streams, ponds, and other habitat is not altered. Riparian vegetation within 100 feet of critical habitat would not be controlled, use of herbicides within critical habitat would not occur without approval from the USFWS, and vegetation control would not occur in critical habitat without further consultation with USFWS. Use of herbicides within critical habitat would not be allowed unless approved by the USFWS.

3.6.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, CBP would continue current maintenance activities and short- and long-term, minor to moderate, direct and indirect, adverse effects on threatened and endangered species would occur. Tactical infrastructure would be maintained and repaired on an as-needed basis. There would be no centralized planning process for maintenance and repair. Therefore, maintenance and repair of tactical infrastructure would be performed only on resources in disrepair. The lack of coordinated environmental staff support and formalized planning under this alternative increases the potential for unintended delays in complying with NEPA, the ESA, and other environmental requirements. Implementation of this alternative would result in impacts on threatened and endangered species, including conversion and degradation of habitat from vegetation removal, displacement of wildlife; including threatened and endangered wildlife; accidental release of petroleum products or other hazardous materials; incidental trampling and crushing while accessing the sites; and increased erosion, turbidity, and sedimentation. Under this alternative, vegetation control activities would be conducted under a separate NEPA process.

By completing maintenance and repair work on an as-needed basis, the potential exists for increased impacts on threatened and endangered species. Without a centralized planning process, maintenance and repair specifications would not be established and standardized BMPs might not be implemented. For example, without a standardized BMP requiring that the footprint of the maintenance area be flagged or marked, habitat for threatened and endangered species immediately adjacent to the maintenance footprint could be impacted if maintenance

activities went beyond the footprint. In addition, without a centralized planning process, there would be no way to determine if threatened and endangered species or their habitat occurred within the maintenance area, and there would be no mechanism to determine if species-specific BMPs would be required for maintenance and repair activities. Thus, some threatened and endangered species and habitat adjacent to tactical infrastructure could be degraded or destroyed. Therefore, it is possible that greater impacts would occur under the No Action Alternative than the Proposed Action, as the potential for habitat disturbances would be greater due to a lack of a proactive approach to maintenance and repair.

3.7 HYDROLOGY AND GROUNDWATER

3.7.1 Definition of the Resource

Evaluation of hydrology requires a study of the occurrence, distribution, and movement of water, and its relationship with the environment. Many factors affect the hydrology of a region, including natural precipitation and evaporation rates and outside influences such as groundwater withdrawals. Groundwater is a subsurface hydrologic resource that can recharge, or be recharged by, surface water. It is used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of its depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations.

3.7.2 Affected Environment

Climate and hydrology. Two ecoregions are found in the region of analysis, the Madrean Archipelago Ecoregion and the Chihuahuan Deserts Ecoregion. The Madrean Archipelago Ecoregion is also known as the Sky Islands (USEPA 2007, USGS 2010a.) This area has dramatic gradients in topography, temperature, and precipitation, ranging from hot, semiarid plains at lower elevations, to a cool, wet, climate at higher elevations. The Madrean Archipelago Ecoregion also has a biannual precipitation regime, characterized by winter rainfall and summer thunderstorms (USGS 2010a). It is influenced by monsoons from the south, with 10 to 20 inches of rainfall a year, and annual evaporation rates of approximately 80 to 110 inches with 0.2 to 5 inches of runoff (USGS 1995a, Griffith et al. 2006).

The Chihuahua Desert Ecoregion differs from other hot deserts, such as the Sonoran, because it is located at higher elevations and has summer dominated rainfall as opposed to a biannual precipitation regime. It has broad basins and valleys, with isolated mesas and mountains (USGS 2010b). Some areas of the Chihuahua are the hottest and most arid regions in the state, with low available moisture and high evapotranspiration rates, while at higher elevations there is somewhat higher annual precipitation (Griffith et al. 2006). The Chihuahuan Desert might have 0 to 20 inches of rainfall yearly, but averages 10 inches, primarily from summer rains, with 0 to 1 inches of runoff and 80 to 110 inches of evaporation annually (USGS 1995b, USGS 2010b).

Groundwater. The aquifers in the region of analysis are part of the Rio Grande aquifer system. This system consists of a network of hydraulically interconnected aquifers in basin-fill deposits located along the Rio Grande Valley and nearby valleys (USGS 1995b). Recharge primarily originates from rainfall or snowmelt in the mountainous areas around the basins, which percolates downward through streambeds or porous rock formations. Precipitation that falls in

the valleys is generally lost to evaporation and transpiration, and little water percolates to a depth sufficient to recharge the aquifers. Irrigation-return is an important component of recharge in agricultural areas, although most of the irrigation water originated in the Rio Grande River or aquifer to begin with. Groundwater discharges from the system include evapotranspiration, withdrawal from wells and drains, discharge to stream, and underflow, although pumping wells are the primary means of discharge. In the southern part of the Rio Grande aquifer system, precipitation ranges from 14 to less than 4 inches per year, and potential evaporation ranges from 80 to more than 100 inches per year (USGS 1995b).

Approximately 90 percent of the population of New Mexico relies on groundwater for drinking water. Water quality is typically considered good, although there are incidents of point source and nonpoint source contamination. There are also areas where natural contaminants such as uranium, radon, and fluoride have entered domestic water supplies, and the water must be treated before use (NMED 2010a).

Several groundwater basins are traversed by the region of analysis, the largest being the Mimbres Basin and the Lower Rio Grande Basin (NMSE 2010). The Mimbres Basin has an area of 5,090 square miles, and includes the watershed of its only perennial stream, the Mimbres River (Hawley et al. 2000). The Mimbres Basin is within an extensively developed area, and water demands include municipal, industrial, and agricultural uses. Groundwater recharge occurs from perennial and intermittent streams, deep percolation of precipitation, and by mountain front recharge. Smaller amounts of recharge to the Mimbres Basin system are contributed by precipitation-runoff from the Cooke's Range and the Florida Mountains. Total dissolved solids are the lowest in the northern half of the Mimbres Basin and increase to the south, with the highest levels in the portion of the basin across the border in Mexico. The groundwater has low alkali hazard and medium salinity hazard for irrigation purposes in the northern part of the basin, but both the alkali and salinity hazards increase in the southern Mimbres Basin (Hawley et al. 2000). Earth fissuring and land subsidence has occurred in several locations in the basin, and it is thought to be associated with excessive groundwater withdrawal (Contaldo 1991). The Lower Rio Grande Basin is in one of New Mexico's principal agricultural regions, but there is extensive population growth also occurring in urban areas within this basin. Additionally, local crops that are currently grown, such as pecans, require more water per acre than historical crops such as cotton, leading to an increased demand for water. There are approximately seven wastewater treatment plants in the Lower Rio Grande Basin (NMSE 2006). The primary groundwater quality issue in the Lower Rio Grande Basin is increased salinity, which reduces potable water supplies, deteriorates soil quality, and leads to smaller crop yields (NMED 2010b).

3.7.3 Environmental Consequences

The Proposed Action would be considered to cause a significant adverse impact on hydrology or groundwater if it were to affect water quality substantially; reduce water availability or supply to existing users substantially; threaten or damage hydrologic characteristics; or violate established Federal, state, or local laws and regulations.

3.7.3.1 Alternative 1: Proposed Action

Climate and hydrology. No impacts on climate and hydrology with respect to the ecoregions or precipitation regime would be anticipated. Climate and hydrologic cycles are large-scale processes that affect local areas; however, a significant contribution of GHG emissions or alteration to the existing topography, vegetation, or precipitation regime would be required to modify climate or hydrology.

Groundwater. Short-term, negligible to minor, indirect, adverse impacts could occur on groundwater from vegetation control and debris removal, which could cause the deposition of fill materials or increased erosion into groundwater recharge areas. Long-term, negligible to minor, indirect, beneficial impacts on groundwater could occur from a decrease in erosion because roadways would be properly maintained, which would reduce the effects incurred from negligence, such as washout and long-term sedimentation. No adverse impacts on groundwater would be expected from the use of existing approved equipment storage areas.

No impacts on groundwater would be expected from maintenance and repair of existing FC-1 (paved) and FC-2 (all-weather) roads if standard BMPs, such as spill prevention measures, erosion and sediment controls, and proper equipment maintenance are implemented (see **Appendix E**). Maintenance and repair of FC-3 (graded earth) and FC-4 (two-track) roads could lead to short-term, minor, adverse impacts on groundwater during maintenance and repair activities because grading and other ground-disturbing activities would result in erosion and sedimentation. In addition, maintenance and repair of FC-4 roads could require the removal of vegetation and rock, which could alter the flow of water and percolation of precipitation into the ground, resulting in a long-term, negligible to minor, adverse impact on groundwater recharge.

Long-term, minor, beneficial impacts on groundwater would occur through properly maintained roads, which would reduce the effects incurred from neglected maintenance, such as washout and long-term sedimentation.

Along graded earth and sand roads, rutting can occur, which is exacerbated by rain events that erode the surface further. Unmanaged storm water flow also causes general erosion to occur, washing out complete sections of road and, in many instances, making roads impassable. Maintenance and repair of the existing roads would have short- and long-term, minor to moderate, beneficial impacts on groundwater by minimizing erosion of potentially contaminated (e.g., oils, metals) road material into groundwater recharge areas. Improper maintenance could result in short-term, negligible to minor, direct and indirect, adverse impacts on groundwater by increasing erosion or introducing fill material into groundwater recharge areas. A poorly regraded surface quite often results in rapid deterioration of the surface. The graded earthen roads should be slightly crowned and absent of windrows in the gutter line to avoid ponding and channeling within the road during rain events. Grading with the use of commercial grading equipment is proposed to restore an adequate surface to FC-3 (graded earth) roads. USBP sector personnel and contract support personnel well versed in grading techniques would be employed for such activity. The addition of material to these roads to achieve the proposed objective would be kept to a minimum. Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues. Maintenance and repair of the existing road tactical infrastructure would be in

accordance with proven maintenance and repair standards. All necessary erosion-control BMPs would be adopted to ensure stabilization of the project areas. All of the standards CBP is adopting are developed based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resource agencies.

Control of vegetation within the road setback could result in short- to long-term, negligible to minor adverse impacts on groundwater by increasing erosion into groundwater recharge areas. In areas deemed too difficult to mow, such as under guardrails, within riprap, and immediately adjacent to bodies of water within the proposed setbacks, the use of herbicides might occur. It is proposed that terrestrial and aquatic herbicide applications would occur with products approved by the USEPA and relevant Federal land management agency, where appropriate. The use of herbicides has the potential for long-term, minor, direct, adverse effects on groundwater if spills were to occur. All use of herbicides would be performed in accordance with label requirements by certified USBP sector or contract support personnel, and would not be applied in, or immediately adjacent to, BLM WSAs. Herbicide use would follow an integrated approach that uses the least intensive approach first and only progresses in intensity if necessary.

3.7.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, short- and long-term, minor to moderate, direct and indirect, adverse impacts on hydrology and groundwater would be anticipated because preventative measures would not be implemented to manage maintenance and repair prior to these activities becoming dire. Therefore, degrading infrastructure, particularly eroding roads, might lead to increased sediments, nutrients, and contaminants in wetlands, streams, and other groundwater recharge areas, and blocked drainage structures could increase flood risk. Impacts on hydrology and groundwater under the No Action Alternative would be anticipated to be greater than impacts for the Proposed Action. The potential for the introduction of contaminants in groundwater recharge areas could be greater under the No Action Alternative if BMPs cannot be implemented during ad hoc/emergency repair activities. Changes in hydrology from clogged drainage structures could occur, which could reduce the potential for groundwater recharge in the area.

3.8 SURFACE WATERS AND WATERS OF THE UNITED STATES

3.8.1 Definition of the Resource

Surface water resources generally consist of wetlands, lakes, rivers, and streams. All of these surface water components contribute to the economic, ecological, recreational, and human health of a community.

Waters of the United States are defined within the CWA, and jurisdiction is addressed by the USEPA and the USACE. These agencies assert jurisdiction over traditional navigable waters and their relatively permanent tributaries, and the wetlands that are adjacent to these waters (USEPA 2010a).

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States (USEPA 2010b), with the objective of restoration and maintenance of chemical, physical, and biological integrity of the Nation's waters (USEPA 2010a). To achieve this objective several goals were enacted, including (1) eliminate discharge of pollutants into navigable waters by 1985; (2) achieve water quality that provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water by 1983; (3) prohibit the discharge of toxic pollutants in toxic amounts; (4) provide Federal financial assistance to construct publicly owned waste treatment works; (5) develop and implement the national policy that areawide waste treatment management planning processes ensure adequate control of sources of pollutants in each state; (6) enforce the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into navigable waters, waters of the contiguous zone, and the oceans; and (7) establish the national policy that programs be developed and implemented in an expeditious manner to enable the goals to be met through the control of both point and nonpoint sources of pollution.

The USACE regulates the discharge of dredged and fill material (e.g., concrete, riprap, soil, cement block, gravel, sand) into waters of the United States including adjacent wetlands under Section 404 of the CWA (USEPA 2010b) and work on structures in or affecting navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 (USEPA 2010c).

Wetlands and riparian habitats are ecologically important communities that provide many benefits for people, and fish and wildlife. They provide key habitat for a wide array of plant and animal species, including resident and migrating birds, amphibian and fish species, mammals, and insects. Vegetation production and diversity are usually very high in and around these sites, with many plant species adapted only to these unique environments. In addition, wetlands and riparian zones provide a variety of hydrologic functions vital to ecosystem integrity. They protect and improve water quality by storing floodwaters, recharging groundwater, and filtering out nutrients and chemicals (USEPA 2001a). Development and conversion of wetlands and riparian zones affects wildlife diversity, carrying capacity, and hydrologic regime. More than 220 million acres of wetlands are estimated to have existed in the lower 48 states in the 1600s. More than half of those wetland acres have been drained or converted to other uses, with the most impacts occurring in the 1950s to 1970s. Approximately 60,000 acres of wetlands are still lost annually, primarily from conversion for agriculture and other development purposes (USEPA 2001b).

Wetlands are a protected resource under EO 11990, *Protection of Wetlands*, issued in 1977 "to avoid to the extent possible the short- and long-term, adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." Wetlands have been defined by agencies responsible for their management. The term "wetland," used herein, is defined using USACE conventions. The USACE has jurisdiction to protect wetlands under Section 404 of the CWA using the following definition:

...areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do

support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3[b]).

Three diagnostic characteristics must be met to classify an area a wetland: (1) more than 50 percent of the dominant vegetation species present must be classified as obligate (species that are found greater than 99 percent of the time in wetlands), facultative wetland (species that are found 67 to 99 percent of the time in wetlands), or facultative (species that are found 34 to 66 percent of the time in wetlands); (2) the soils must be classified as hydric; and (3) the area is either permanently or seasonally inundated, or saturated to the surface at some time during the growing season of the prevalent vegetation (USACE 1987).

Wetlands are protected as a subset of “the waters of the United States” under Section 404 of the CWA. The term “waters of the United States” has a broad meaning under the CWA and incorporates deepwater aquatic habitats and special aquatic habitats, including wetlands. Section 404 of the CWA authorizes the USACE to issue permits for the discharge of dredged or fill materials into the waters of the United States, including wetlands. In addition, Section 404 of the CWA also grants states with sufficient resources the right to assume these responsibilities. Section 401 of the CWA gives the state board and regional boards the authority to regulate through water quality certification any proposed federally permitted activity that could result in a discharge to water bodies, including wetlands. The state may issue certification, with or without conditions, or deny certification for activities that might result in a discharge to water bodies (USEPA 2010b).

3.8.2 Affected Environment

3.8.2.1 Surface Waters

The watersheds in southern New Mexico within the region of analysis include the following from west to east: San Bernardino Valley, Cloverdale, Playas Lake, Mimbres, El Paso-Las Cruces, Tularosa Valley, Salt Basin, Upper Pecos-Black, Lower Pecos-Red Bluff Reservoir, and Landreth-Monument Draws (USEPA 2012a). A synopsis of each watershed is provided in **Table 3-3**.

3.8.2.2 Wetlands

Wetlands cover less than one percent of New Mexico, with most wetlands in the eastern and northern areas. The state has lost about one-third of its original wetlands, primarily due to agricultural conversion, irrigation diversions, overgrazing, and urbanization. Mining, clear cutting, road construction, water regulation, and invasive plants have also contributed to wetland loss (USGS 1996).

The wetlands in the region of analysis occur primarily within riparian zones associated with the Rio Grande and Mimbres rivers. Playa lakes, springs, cienegas, and arroyos are found throughout the region (USACE 1994b). Playa lakes are seasonally flooded depressions in alkali flats, and are considered lacustrine or lake-like habitats. Springs and seeps are found along the major rivers, and cienegas are wet flats or valleys formed by multiple springs, and are found in the southeast and south-central regions.

Table 3-3. Watersheds within the Region of Analysis

Watershed	HUC	Size	Major Waterbodies	On USEPA 303 (d) list?	TMDLs Established?
San Bernardino Valley	15080302	426 square miles	Black Draw	No	No
Cloverdale	15080303	462 square miles	No major waterbodies, contains smaller streams such as Cloverdale Creek	No	No
Playas Lake	13030201	1,580 square miles	No major waterbodies, contains playa lakes	No	No
Mimbres	13030202	4,500 square miles	Mimbres River	Yes. Impaired for fecal coliforms, eutrophication, and elevated temperatures for the Mimbres River. Eutrophication, low dissolved oxygen, and mercury for the Bear Canyon Reservoir	No
El Paso-Las Cruces	13030102	2,392 square miles	Rio Grande River	Yes. Impaired for <i>E. Coli</i> .	No
Tularosa Valley	13050003	6,750 square miles	Three Rivers	Yes. Impaired for <i>E. Coli</i> .	No
Salt Basin	13050004	2,400 square miles	Sacramento River	No	No
Upper Pecos-Black	13060011	4,397 square miles	Pecos River	Yes. Impaired for boron, dissolved oxygen, and PCBs in fish tissue	No
Lower Pecos-Red Bluff Reservoir	13070001	4,422 square miles	Pecos River	Yes. Impaired for boron, dissolved oxygen, and PCBs in fish tissue	No
Landreth-Monument Draws	13070007	4,293 square miles	No major waterbodies, mostly perennial streams	No	No

Sources: USGS 2010c, USEPA 2010d, NRCS undated a, TSHA 2011, NRCS 2011, NRCS undated b

Key: HUC = Hydrologic Unit Code

Cienegas can be palustrine forested or palustrine emergent, which includes various small plants that grow up and out of the water. Palustrine habitats are small permanent or intermittent water bodies that are less than 20 acres in size, which can include marshes, swamps, bogs, and fens. Dewatering, channelization, and land conversion, particularly in the Rio Grande area, have greatly reduced the area of some of these wetland habitats. Water tables have been lowered and areas that were formerly perennial have become ephemeral or nonexistent (NMDGF 2006).

3.8.3 Environmental Consequences

3.8.3.1 Alternative 1: Proposed Action

Short-term, negligible to moderate, indirect, adverse impacts could occur from vegetation control and debris removal and bridge repair, which could cause the deposition of fill materials or increased sedimentation into wetlands, arroyos, or other surface water or drainage features. However, maintenance and repair of tactical infrastructure would be conducted in such a manner as to have negligible impacts on wetlands, waters, and floodplain resources to the maximum extent practical. Erosion-control BMPs would be adopted to maintain runoff on site and would minimize the potential for adverse effects on downstream water quality. Pertinent local, state, and Federal permits would be obtained for any work, including work that could occur in jurisdictional drainages, waterways, or wetlands. CBP is consulting with the USACE Albuquerque District to minimize wetland impacts and identify potential avoidance, minimization, and conservation measures. Maintenance and repair of the existing road tactical infrastructure would be in accordance with proven maintenance and repair standards. All of the standards CBP would adopt are developed based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resource agencies. No impacts on surface water resources would be expected from maintenance and repair of lighting and electrical systems, or towers.

Maintenance of FC-3 (graded earth), FC-4 (two-track), and FC-5 (sand) roads would minimize erosion and deposition of potentially contaminated (e.g., oils, metals) road material into wetlands, surface waters, arroyos, and other drainage features. When subjected to heavier traffic, rutting occurs, which in turn is exacerbated by rain events that further erode the surface. Unmanaged storm water flow also causes general erosion to occur, washing out complete sections of road and in many instances making roads impassable. The roads are slightly crowned and absent of windrows in the gutter line to avoid ponding and channeling within the road during rain events. Grading with the use of commercial grading equipment is proposed to restore an adequate surface. USBP sector personnel and contract support personnel well versed in grading techniques would be employed for such activity. The addition of material to these roads to achieve the proposed objective would be kept to a minimum. Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues.

In addition, bridges would be inspected on a routine basis and their structural integrity maintained. Short-term, minor to moderate, adverse impacts would occur on surface water resources from bridge maintenance and repair, depending on the extent of required work.

Mowing and vegetation control within the road setback could result in increased erosion into wetlands, surface waters, arroyos, and other drainage areas. In areas deemed too difficult to mow, such as under guardrails, within riprap, and immediately adjacent to bodies of water within the proposed setbacks, the use of herbicides might occur. It is proposed that terrestrial and aquatic herbicide applications would be made with products approved by the USEPA and relevant Federal land management agency (where appropriate). The use of herbicides would result in long-term, minor, direct, adverse effects on surface water resources, if spills were to occur. All use of herbicides would be performed in accordance with label requirements by certified USBP sector or contract support personnel, and would not be applied in, or immediately adjacent to, BLM WSAs. Herbicide use would follow an integrated approach that uses the least intensive approach first and only progresses in intensity, if necessary.

3.8.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, there is a potential for short- and long-term, minor to major, direct and indirect adverse impacts on surface waters. The No Action Alternative would result in greater impacts on surface waters than the Proposed Action because a proactive approach to maintenance and repair would not occur, and therefore, reactive maintenance and repair activities would occur when a problem has arisen. For example, degrading infrastructure, particularly eroding roads, could lead to increased sediments, nutrients, and contaminants in wetlands, streams, arroyos, and other water-related features, and blocked drainage structures could increase flood risk. In addition, it is likely that not all BMPs would be implemented during emergency repair activities, which could result in adverse impacts on surface waters.

3.9 FLOODPLAINS

3.9.1 Definition of the Resource

Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters that are periodically inundated. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and support of a diversity of plants and animals. Floodplains provide a broad area to spread out and temporarily store floodwaters. This reduces flood peaks and velocities and the potential for erosion. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body (FEMA 1994). Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated by Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event in a given year (FEMA 1994). Certain facilities inherently pose too great a risk to be in either the 100- or 500-year floodplain, such as hospitals, schools, or storage buildings for irreplaceable records. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety. EO 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur within a floodplain. This determination typically involves consultation of appropriate FEMA Flood Insurance Rate Maps, which contain enough general information to determine the relationship of the project area to

nearby floodplains. EO 11988 directs Federal agencies to avoid floodplains unless the agency determines that there is no practicable alternative. Where the only practicable alternative is to site in a floodplain, a specific step-by-step process must be followed to comply with EO 11988 outlined in the FEMA document *Further Advice on EO 11988 Floodplain Management*.

3.9.2 Affected Environment

Much of the region of analysis is unmapped by FEMA, but several unnamed draws and washes, Wamels Draw, and the Rio Grande River are shown as having 100-year floodplains (FEMA 2010).

3.9.3 Environmental Consequences

3.9.3.1 Alternative 1: Proposed Action

Short-term, negligible to minor, indirect, adverse impacts and short- and long-term, minor, direct, beneficial impacts on floodplains would be anticipated from implementing the Proposed Action. Short-term, negligible to minor, indirect impacts could occur on floodplain areas from vegetation control and debris removal, which could cause increased sedimentation into floodplains and drainage structures. However, clearing blocked drainage structures of debris and fill materials would result in short- and long-term, direct and indirect, beneficial impacts on floodplains by improving conveyance of floodwaters. BMPs would also be implemented to minimize impacts on floodplains. No adverse impacts on floodplains from maintenance of bridges, lighting and electrical systems, towers, or the use of existing approved equipment storage areas would be expected because maintenance of these systems would not lead to an increase in sedimentation or erosion.

No impacts on floodplains would be expected from routine repair and maintenance of existing FC-1 (paved) and FC-2 (all-weather) roads if standard BMPs are implemented and any necessary local, state, or Federal permitting requirements are met. The majority of proposed maintenance and repair activities are planned for FC-3 (graded earth) and FC-4 (two-track) roads. Because of their lack of formal construction design, FC-3 (graded earth) and FC-4 (two-track) roadways are subject to the greatest deterioration if left unmaintained.

Proper maintenance of existing FC-3 (graded earth) and FC-5 (sand) roads would have short- and long-term, minor to moderate, beneficial impacts on floodplains by minimizing erosion of road material into floodplain areas. When subjected to heavier traffic, rutting occurs, which is exacerbated by rain events that further erode the surface. Unmanaged storm water flow also causes general erosion to occur, washing out complete sections of road and in many instances making roads impassable. The road should be slightly crowned and absent of windrows in the gutter line to avoid ponding and channeling within the road during rain events. Grading with the use of commercial grading equipment is proposed to restore an adequate surface to FC-3 (graded earth) roads. USBP sector personnel and contract support personnel well versed in grading techniques would be employed for such activity. The addition of material to these roads to achieve the proposed objective would be kept to a minimum. Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues.

Proper maintenance of existing FC-4 (two-track) roads would have short- and long-term, minor, direct, beneficial impacts on floodplains by minimizing erosion of road material into floodplain areas. Installation of culverts could cause long-term, minor, direct, adverse impacts on floodplains by creating restrictions to water flow and potentially increasing flood risk. Proper sizing of culverts would reduce this potential impact. Two-track roads have no crown, and generally do not have any improved drainage features or ditches, although culverts and low water crossings could be installed where continuous erosion issues occur. Installation of properly sized culverts and cleaning blocked drainage structures could have short- and long-term, direct and indirect, beneficial impacts by decreasing restrictions and improving conveyance of floodwaters.

Controlling vegetation within the road setback could result in short- to long-term, negligible to minor, adverse impacts on floodplains by increasing erosion into floodplain areas. In areas deemed too difficult to mow, such as under guardrails, within riprap, and immediately adjacent to bodies of water within the proposed setbacks, the use of herbicides could occur. Terrestrial and aquatic herbicide applications would be made with products approved by the USEPA and relevant Federal land management agency (where appropriate). All use of herbicides would be performed in accordance with label requirements by certified USBP sector or contract support personnel, and would not be applied in, or immediately adjacent to, BLM WSAs. Herbicide use would follow an integrated approach that uses the least intensive approach first and only progresses in intensity if necessary. Short-term, negligible to minor, adverse impacts on floodplains would be expected from the use of herbicides, as the decrease in vegetation in the floodplain could allow for easier conveyance of floodwaters within the floodplain and increase the velocity and volume of storm water flow until native vegetation has been reestablished. Impacts on herbicides on water quality are discussed in **Section 3.8**.

All necessary erosion-control BMPs (see **Appendix E**) would be adopted to ensure stabilization of the project areas. Pertinent local, state, and Federal permits would be obtained for any work, including work that occurs in floodplains. The maintenance and repair of tactical infrastructure would be conducted in such a manner as to have negligible impacts on floodplains to the maximum extent practical. CBP is consulting with the USACE Albuquerque District to minimize floodplain impacts and identify potential avoidance, minimization, and conservation measures. Maintenance and repair of the existing road tactical infrastructure would be in accordance with proven maintenance and repair standards. All of the standards CBP is adopting are developed based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resource agencies.

3.9.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, there is a potential for short- and long-term, minor to moderate, direct and indirect, adverse impacts on floodplains. Degrading infrastructure, particularly eroding roads, could lead to increased sediments and other fill materials in the floodplain, and blocked drainage structures impair flow, which could increase flood risk. This approach would result in greater impacts on floodplains than the Proposed Action because a proactive approach to maintenance and repair would not occur. Reactive maintenance and repair activities would be coordinated once an issue arises. For example, instead of clearing blocked drainage structures periodically of debris, the drainage structures could be cleared when flooding

occurs and it becomes a necessity to maintain the structure. Thus, structures generally not impacted by floodwaters could be affected under the No Action Alternative if the blockage of the drainage structure is not detected or attended to in a timely manner. The No Action Alternative does not guarantee that all BMPs would be implemented during emergency repair activities.

3.10 AIR QUALITY

3.10.1 Definition of the Resource

In accordance with Federal CAA requirements, the air quality in a given region or area is measured by the concentration of criteria pollutants in the atmosphere. The air quality in a region is a result not only of the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological “air basin,” and the prevailing meteorological conditions.

Ambient Air Quality Standards. Under the CAA, the USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O₃), which is measured as volatile organic compounds (VOCs) and nitrogen oxides (NO_x); carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM₁₀] and particulate matter equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb) (40 CFR Part 50). The CAA also gives the authority to states to establish air quality rules and regulations. **Table 3-4** presents the USEPA NAAQS.

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

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

Table 3-4. National Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standard	Secondary Standard
		Federal	
CO	8-hour ⁽¹⁾	9 ppm (10 mg/m ³)	None
	1-hour ⁽¹⁾	35 ppm (40 mg/m ³)	None
Pb	Rolling 3-Month Average ⁽²⁾	0.15 µg/m ³ ⁽³⁾	Same as Primary
NO ₂	Annual ⁽⁴⁾	53 ppb ⁽⁵⁾	Same as Primary
	1-hour ⁽⁶⁾	100 ppb	None
PM ₁₀	24-hour ⁽⁷⁾	150 µg/m ³	Same as Primary
PM _{2.5}	Annual ⁽⁸⁾	12 µg/m ³	15 µg/m ³
	24-hour ⁽⁶⁾	35 µg/m ³	Same as Primary
O ₃	8-hour ⁽⁹⁾	0.075 ppm ⁽¹⁰⁾	Same as Primary
SO ₂	1-hour ⁽¹¹⁾	75 ppb ⁽¹²⁾	None
	3-hour	None	0.5 ppm

Source: USEPA 2012b

Notes: Parenthetical values are approximate equivalent concentrations.

1. Not to be exceeded more than once per year.
2. Not to be exceeded.
3. Final rule signed October 15, 2008. The 1978 standard for Pb (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. The USEPA designated areas for the new 2008 standard on 8 November 2011.
4. Annual mean.
5. The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of cleaner comparison to the 1-hour standard.
6. 98th percentile, averaged over 3 years.
7. Not to be exceeded more than once per year on average over 3 years.
8. Annual mean, averaged over 3 years.
9. Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.
10. Final rule signed 12 March 2008. The 1997 O₃ standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, USEPA revoked the 1-hour O₃ standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard (“anti-backsliding”). The 1-hour O₃ standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.
11. 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
12. Final rule signed on 2 June 2010. The 1971 annual (0.3 ppm) and 24-hour (0.14 ppm) SO₂ standards were revoked in that same rulemaking. However, these standards remain in effect until 1 year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Key: ppm = parts per million; ppb = parts per billion; mg/m³ = milligrams per cubic meter; µg/m³ = micrograms per cubic meter; SO₂ = sulfur dioxide

Federal Prevention of Significant Deterioration. Federal Prevention of Significant Deterioration (PSD) regulations apply in attainment areas to a major stationary source, (i.e., source with the potential to emit of 250 tons per year [tpy] of any regulated pollutant) and significant modifications to major stationary source, (e.g., change that adds 10 to 40 tpy to the

major stationary source's potential to emit depending on the pollutant). Additional PSD major source and significant modification thresholds apply for GHGs, as discussed below. PSD permitting can also apply to a proposed project if all three of the following conditions exist:

(1) the proposed project is a modification with a net emissions increase to an existing PSD major source, (2) the proposed project is within 10 kilometers of national parks or wilderness areas, (i.e., Class I Areas), and (3) regulated stationary source pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) or more (40 CFR 52.21[b][23][iii]). A Class I area includes national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. PSD regulations also define ambient air increments, limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's Class designation (40 CFR 52.21[c]).

Title V and Other CAA Requirements. Title V of the CAA Amendments of 1990 requires states and local agencies to permit major stationary sources. A Title V major stationary source has the potential to emit regulated air pollutants and hazardous air pollutants (HAPs) at levels equal to or greater than Major Source Thresholds. Major Source Thresholds vary depending on the attainment status of an ACQR. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality.

Section 112 of the CAA lists HAPs and identifies stationary source categories that are subject to emissions control or work practice requirements. Section 111 of the CAA lists stationary source categories that are subject to new source performance standards if the applicable equipment is constructed, reconstructed, or modified after specified dates.

Greenhouse Gas Emissions. GHGs are gaseous emissions that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The most common GHGs emitted from human activities include CO₂, methane, and nitrous oxide. GHGs are mainly produced by the burning of fossil fuels and through industrial and biological processes. On September 22, 2009, the USEPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on CO₂ and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of CO₂ equivalent emissions per year but excludes mobile source emissions. The regulation of GHG emissions under the PSD and Title V permitting programs was initiated by a USEPA rulemaking issued on June 3, 2010 known as the GHG Tailoring Rule (75 FR 31514). GHG emissions thresholds for the permitting of stationary sources are an increase of 75,000 tpy of CO₂ for a new source or a modification of an existing minor source. The 100,000 tpy of CO₂ threshold defines a major GHG source for both construction (PSD) and operating (Title V) permitting, respectively.

EO 13514 was signed in October 2009 and requires agencies to set goals for reducing GHG emissions. One requirement within EO 13514 is the development and implementation of an agency Strategic Sustainability Performance Plan (SSPP) that prioritizes agency actions based on lifecycle return on investment. Each SSPP is required to identify, among other things, "agency activities, policies, plans, procedures, and practices" and "specific agency goals, a schedule,

milestones, and approaches for achieving results, and quantifiable metrics” relevant to the implementation of EO 13514. The DHS’s SSPP was originally released to the public in June 2010 and is updated annually. This implementation plan describes specific actions that the DHS will take to achieve its individual GHG reduction targets, reduce long-term costs, and meet the full range of goals of the EO. All SSPPs segregate GHG emissions into three categories: Scope 1, Scope 2, and Scope 3 emissions. Scope 1 GHG emissions are those directly occurring from sources that are owned or managed by the agency. Scope 2 emissions are indirect emissions generated in the production of electricity, heat, or steam purchased by the agency. Scope 3 emissions are other indirect GHG emissions that result from agency activities but from sources that are not owned or directly managed by the agency. The GHG goals in the DHS SSPP include reducing Scope 1 and Scope 2 GHG emissions by 25.3 percent by 2020, relative to Fiscal Year (FY) 2008 emissions, and reducing Scope 3 GHGs by 7.2 percent by 2020, relative to FY 2008 emissions.

3.10.2 Affected Environment

The tactical infrastructure along the U.S./Mexico international border in New Mexico is within two AQCRs. Grant, Hidalgo, and Luna counties are within the New Mexico-Southern Border Intrastate AQCR. Doña Ana, Otero, and Sierra counties are within the El Paso-Las Cruces-Alamogordo Interstate AQCR. Otero and Sierra counties are outside of the region of analysis. In addition, the El Paso-Las Cruces-Alamogordo Interstate AQCR includes El Paso and Hudspeth counties, Texas. **Table 3-5** shows the county, state, AQCR, and attainment status for the region of analysis.

Table 3-5. Air Quality Control Regions and Attainment Status by Sector

County	AQCR	Attainment Status
Grant; Hidalgo; Luna	New Mexico-Southern Border Intrastate	Unclassifiable/Attainment for all criteria pollutants
Doña Ana; Otero; Sierra	El Paso-Las Cruces-Alamogordo Interstate	Marginal nonattainment for O ₃ (1-hour standard) in portions of Doña Ana County Moderate nonattainment for PM ₁₀ in Doña Ana County Unclassifiable/Attainment for all other criteria pollutants

Sources: USEPA 2010f, USEPA 2010e

The New Mexico Environmental Department (NMED) oversees the implementation of the Federal CAA in the State of New Mexico. The air quality in Doña Ana has been characterized by the USEPA as a Federal moderate nonattainment area for PM₁₀. The El Paso-Las Cruces-Alamogordo Interstate AQCR has been designated by the USEPA as unclassified/attainment for all other criteria pollutants. The New Mexico-Southern Border Intrastate AQCR has been designated by the USEPA as unclassified/attainment for all criteria pollutants (USEPA 2010f, USEPA 2010e).

3.10.3 Environmental Consequences

The environmental consequences to local and regional air quality conditions near a proposed Federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Specifically, the impact in NAAQS “attainment” areas would be considered significant if the net increases in pollutant emissions from the Federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Expose sensitive receptors to substantially increased pollutant concentrations
- Exceed any Evaluation Criteria established by an SIP or permit limitations/requirements
- Emissions representing an increase of 100 tpy for any attainment criteria pollutant (NO_x, VOCs, CO, PM₁₀, PM_{2.5}, and sulfur dioxide [SO₂]), unless the proposed activity qualifies for an exemption under the Federal General Conformity Rule.

Although the 100 tpy threshold is not a regulatory driven threshold, it is being applied as a conservative measure of significance in attainment areas. The rationale for this conservative threshold is that it is consistent with the highest General Conformity *de minimis* levels for nonattainment areas and maintenance areas. In addition, it is consistent with Federal stationary source major source thresholds for Title V permitting which formed the basis for the nonattainment *de minimis* levels.

Effects on air quality in NAAQS “nonattainment” areas are considered significant if the net changes in project-related pollutant emissions result in any of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Increase the frequency or severity of a violation of any ambient air quality standard
- Delay the attainment of any standard or other milestone contained in the SIP or permit limitations.

The Federal *de minimis* threshold emissions rates were established by the USEPA in the General Conformity Rule to focus analysis requirements on those Federal actions with the potential to substantially affect air quality. **Table 3-6** presents these thresholds, by regulated pollutant. As shown in **Table 3-6**, *de minimis* thresholds vary depending on the severity of the nonattainment area classification.

With respect to the General Conformity Rule, effects on air quality would be considered significant if the proposed Federal action would result in an increase of a nonattainment or maintenance area’s emissions inventory above the *de minimis* threshold levels established in 40 CFR 93.153(b) for individual nonattainment pollutants or for pollutants for which the area has been redesignated as a maintenance area. Certain Federal actions are exempt under 40 CFR 93.153(c) from a general conformity determination.

In addition to the *de minimis* emissions thresholds, Federal PSD regulations define air pollutant emissions to be significant if the source is within 10 kilometers of any Class I area, and

stationary source emissions would cause an increase in the concentration of any regulated pollutant in the Class I area of 1 µg/m³ or more (40 CFR 52.21[b][23][iii]).

3.10.3.1 Alternative 1: Proposed Action

The Proposed Action would only generate temporary air pollutant emissions. The maintenance and repair activities associated with the Proposed Action would generate air pollutant emissions because of grading, filling, compacting, trenching, and other maintenance and repair activities, but these emissions would be temporary and would not be expected to generate any offsite effects. The Proposed Action would not result in a net increase in personnel or commuter vehicles. Therefore, the emissions associated with the Proposed Action from existing personnel and commuter vehicles would not result in an adverse impact on local or regional air quality.

Table 3-6. Conformity *de minimis* Emissions Thresholds

Pollutant	Status	Classification	<i>de minimis</i> Limit (tpy)
O ₃ (measured as NO _x or VOCs)	Nonattainment	Extreme	10
		Severe	25
		Serious	50
		Moderate/marginal (inside ozone transport region)	50 (VOCs)/100 (NO _x)
		All others	100
Maintenance	Inside ozone transport region	50 (VOCs)/100 (NO _x)	
	Outside ozone transport region	100	
CO	Nonattainment/maintenance	All	100
PM ₁₀	Nonattainment/maintenance	Serious	70
		Moderate	100
		Not Applicable	100
PM _{2.5} (measured directly, as SO ₂ , or as NO _x)	Nonattainment/maintenance	All	100
SO ₂	Nonattainment/maintenance	All	100
NO _x	Nonattainment/maintenance	All	100

Source: 40 CFR 93.153

Maintenance and repair activities would result in short-term emissions of criteria pollutants as combustion products from construction equipment. Emissions of all criteria pollutants would result from construction activities including combustion of fuels from on-road haul trucks transporting materials and construction commuter emissions.

Fugitive dust emissions would be greatest during initial site-preparation activities and would vary from day to day depending on the type of maintenance and repair, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from

maintenance and repair activities is proportional to the area of land being worked and the level of activity.

Appropriate BMPs and mitigation measures would be adopted to reduce fugitive dust and other emissions to the greatest extent possible (see **Appendix E**). All of the standards developed are based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resource agencies.

For the purpose of analysis in this EA, the total mileage of roadways currently used by CBP was obtained to estimate air emissions associated with the Proposed Action. The exact road mileage maintained and repaired by CBP within New Mexico could change over time to accommodate CBP needs (e.g., illegal border activity has shifted to another area requiring USBP agents to use different roadways). Therefore, the miles of roads associated with the Proposed Action should be considered somewhat flexible and not constrained by a quantifiable number. It is estimated that every 3 months approximately 5 percent of roadways analyzed in this EA would be graded, for a total of 20 percent of roadways graded annually. All other portions of the tactical infrastructure analyzed in this EA would require other routine maintenance and repair activities such as filling potholes, vegetative management, soil stabilization measures, and minor repairs. **Table 3-7** describes the approximate mileage and acreage that would be graded annually in the El Paso Sector.

Table 3-7. Approximate Tactical Infrastructure Maintenance and Repair Area That Would Be Graded Annually In the El Paso Sector in New Mexico

Sector	Total Sector Road Mileage	Mileage Under Consideration in this EA	Mileage Included in Air Quality Analysis	Area Included in Air Quality Analysis (acres)
El Paso	520	200	55	133

Assumptions:

1. Only 20 percent of all mileage considered in this EA would be graded. The remaining portions would only include other routine maintenance and repair activities.
2. Area of land disturbance considered in this air quality analysis assumes the width of disturbance would be 20 feet multiplied by the length.

Note: El Paso Sector Example: Mileage Included in Air Quality Analysis 55 miles x 5,280 feet/mile x 20 feet wide/ 43,560 ft²/acre = 133.33 acres

Under the General Conformity rule, a number of different Federal activities are exempt. The exemption under 40 CFR 93.153(c)(iv) of the General Conformity rules states, “routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities” are exempt from General Conformity. All proposed activities associated with the Proposed Action would include routine maintenance and repair activities and are considered to be exempt under the General Conformity rule. If any future actions would require constructing new road networks, significant upgrades to existing roadways, expanding roads or drainages, or installing new mission-support equipment, these actions would require separate NEPA analysis.

Within the El Paso-Las Cruces-Alamogordo Interstate AQCR, Doña Ana County has been characterized by the USEPA as a Federal moderate nonattainment area for PM₁₀; (USEPA 2010f, USEPA 2010g), General Conformity Rule requirements are applicable to those activities not qualifying for exemption. The Proposed Action would generate emissions well below *de minimis* levels for all criteria pollutants. All emissions would be short-term. In addition, activities planned would qualify for exemption under the General Conformity Rule. Therefore, the maintenance and repair activities associated with the Proposed Action would not have major effects on regional or local air quality.

Greenhouse Gas Emissions

The Proposed Action would contribute directly to emissions of GHGs from the combustion of fossil fuels from maintenance and repair activities and commuting of support personnel. CO₂ accounts for 92 percent of all GHG emissions; electric utilities are the primary source of anthropogenic CO₂, followed by transportation.

The U.S. Energy Information Administration (EIA) estimates that in 2008, gross CO₂ emissions in the State of New Mexico were 56.2 million metric tons of CO₂ equivalents (EIA 2010). Planned annual maintenance and repair activities would emit approximately 226.8 metric tons of CO₂. Total annual CO₂ emissions from the Proposed Action would be 0.0004 percent of the New Mexico state CO₂ emissions. Therefore, the Proposed Action would represent a negligible contribution towards statewide GHG inventories.

3.10.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, tactical infrastructure maintenance and repair activities along the U.S./Mexico international border in New Mexico would continue. Tactical infrastructure would be maintained and repaired on an as-needed basis and short- and long-term, negligible to minor, adverse impacts on air quality would be anticipated from emissions associated with combustion of fossil fuels, particulate matter, and fugitive dust emissions. The No Action Alternative would be expected to result in greater impacts on air quality than the Proposed Action because a proactive approach to maintenance and repair would not occur, and reactive maintenance could entail a more spatially and temporally concentrated use of construction equipment. In addition, the No Action Alternative does not guarantee that all BMPs would be implemented during emergency repair activities, such as the wetting of soil to minimize fugitive dust emissions.

3.11 NOISE

3.11.1 Definition of the Resource

Sound is defined as a particular auditory effect produced by a given source, for example the sound of rain on a rooftop. Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory effect. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or

generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. How an individual responds to the sound source will determine if the sound is viewed as music to one’s ears or as annoying noise. Affected receptors are specific (e.g., schools, churches, or hospitals) or broad (e.g., nature preserves or designated districts) areas in which occasional or persistent sensitivity to noise above ambient levels exists.

Noise Metrics and Regulations. Although human response to noise varies, measurements can be calculated with instruments that record instantaneous sound levels in decibels. A-weighted decibel (dBA) is used to characterize sound levels that can be sensed by the human ear. “A-weighted” denotes the adjustment of the frequency range to what the average human ear can sense when experiencing an audible event. The threshold of audibility is generally within the range of 10 to 25 dBA for normal hearing. The threshold of pain occurs at the upper boundary of audibility, which is normally in the region of 135 dBA (USEPA 1981a). **Table 3-8** compares common sounds and shows how they rank in terms of the effects on hearing. As shown, a whisper is normally 30 dBA and considered to be very quiet while an air conditioning unit 20 feet away is considered an intrusive noise at 60 dBA. Noise levels can become annoying at 80 dBA and very annoying at 90 dBA. To the human ear, each 10 dBA increase seems twice as loud (USEPA 1981b).

Table 3-8. Sound Levels and Human Response

Noise Level (dBA)	Common Sounds	Effect
10	Just audible	Negligible*
30	Soft whisper (15 feet)	Very quiet
50	Light auto traffic (100 feet)	Quiet
60	Air conditioning unit (20 feet)	Intrusive
70	Noisy restaurant or freeway traffic	Telephone use difficult
80	Alarm clock (2 feet)	Annoying
90	Heavy truck (50 feet) or city traffic	Very annoying; Hearing damage (8 hours)
100	Garbage truck	Very annoying*
110	Pile drivers	Strained vocal effort*
120	Jet takeoff (200 feet) or auto horn (3 feet)	Maximum vocal effort
140	Carrier deck jet operation	Painfully loud

Source: USEPA 1981b, *HDR extrapolation

Under the Noise Control Act of 1972, OSHA established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed to is 115 dBA and exposure to this level must not exceed 15 minutes within an 8-hour period. The standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that would reduce sound levels to acceptable limits.

Construction Sound Levels. Maintenance and repair work can cause an increase in sound that is well above the ambient level. A variety of sounds are emitted from loaders, trucks, saws, and other work equipment. **Table 3-9** lists noise levels associated with common types of equipment.

Table 3-9. Predicted Noise Levels for Maintenance and Repair Equipment

Equipment	Predicted Noise Level at 50 feet (dBA)
Bulldozer	80
Grader	80–93
Truck	83–94
Roller	73–75
Backhoe	72–93
Jackhammer	81–98
Concrete mixer	74–88
Welding generator	71–82
Paver	86–88

Source: USEPA 1971

3.11.2 Affected Environment

The land within the region of analysis is characterized by desert and mountain landscapes. Property uses along the U.S./Mexico international border include public lands, national forest, and farm/ranch land. The proposed maintenance and repair of tactical infrastructure is adjacent to both urban/mixed use areas and rural/undeveloped areas. The areas north of the U.S./Mexico international border are largely rural/undeveloped areas. Prominent sources of noise in these areas are most likely from vehicle traffic and agricultural equipment. The closest populations on the United States side of the U.S./Mexico international border is the City Sunland Park.

In addition to vehicle and industry noise, natural sources of noise also occur within the region of analysis. In New Mexico, natural noises include sounds generated by high winds, weather conditions such as thunder and rain, and water flows. In addition, wildlife such as avian species, amphibians, and insects are a source of natural noise within the region of analysis. The areas south of the region of analysis in Mexico include the cities of Puerto Palomas and Puerto de Anapra, which are urban/mixed use areas. Prominent sources of noise in these areas are most likely from vehicle traffic and local industry. The closest populations in Mexico are approximately 50 feet from the region of analysis. Areas outside of the urban centers in Mexico are largely rural/undeveloped. Prominent sources of noise in these areas are most likely from vehicle traffic and agricultural equipment.

3.11.3 Environmental Consequences

Noise impact analyses typically evaluate potential changes to the existing noise environment that would result from implementation of a proposed action. Potential changes in the acoustical environment can be beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels or reduce the ambient sound level), negligible (i.e., if the total number

of sensitive receptors exposed to unacceptable noise levels is essentially unchanged), or adverse (i.e., if they result in increased sound exposure to unacceptable noise levels or ultimately increase the ambient sound level). Projected noise effects were evaluated qualitatively for the alternatives considered.

3.11.3.1 Alternative 1: Proposed Action

Maintenance and repair of tactical infrastructure would occur sporadically along the U.S./Mexico international border. Long-term, periodic, negligible to minor, adverse effects on the ambient noise environment would occur.

The specific noise levels and effects would vary depending on the location, type, and quantity of maintenance or repair being performed, and the distance from the source of the noise to sensitive populations. Maintenance and repair activities usually involve the use of more than one piece of equipment simultaneously (e.g., paver and haul truck). To predict how maintenance and repair activities would impact populations, noise from probable maintenance and repair activities was estimated. The cumulative noise from a paver and haul truck was estimated to determine the total impact of noise from maintenance and repair activities at a given distance. As stated in **Section 3.11.2**, the nearest populations vary depending on location; however, the majority of area considered in this EA is sparsely populated or uninhabited. Examples of expected cumulative maintenance and repair noise during daytime hours at specified distances are shown in **Table 3-10**. These sound levels were predicted at 50, 300, 500, 1,000, and 3,000 feet from the source of the noise.

Table 3-10. Predicted Noise Levels from Maintenance and Repair Activities

Distance from Noise Source	Predicted Noise Level
50 feet	92 dBA
300 feet	76 dBA
500 feet	72 dBA
1,000 feet	66 dBA
3,000 feet	56 dBA

The noise from equipment used for maintenance and repair activities would be localized, short-term, and intermittent during machinery operations. The proposed maintenance and repair activities would be expected to result in noise levels comparable to those indicated in **Table 3-10**. Noise levels of up to 92 dBA would occur in the areas where maintenance and repair activities were occurring for the duration of those activities during normal working hours (i.e., approximately 7:00 a.m. to 5:00 p.m., depending on local ordinances).

3.11.3.2 Alternative 2: No Action Alternative

Impacts on noise from the No Action Alternative would be similar to those described for the Proposed Action (see **Section 3.11.3.1**); however, it can be reasonably anticipated that the maintenance and repair activities would occur less frequently, and in fewer locations along the

U.S./Mexico international border in New Mexico. For this reason, populations within 1,000 feet of the proposed maintenance and repair activities would have the potential to experience less of a long-term, adverse effect than that described for the Proposed Action. However, short-term impacts on noise from implementing the No Action Alternative could be greater than the Proposed Action because it is possible that the reactive activities would occur on a larger scale (e.g., filling a pothole versus paving a road). Therefore, short-term impacts on noise from implementing the No Action Alternative would be expected to be greater than the Proposed Action, but long-term impacts would be less than the Proposed Action.

3.12 CULTURAL RESOURCES

3.12.1 Definition of the Resource

“Cultural resources” is an umbrella term for many heritage-related resources defined in several Federal laws and EOs, including the NHPA, the Archeological and Historic Preservation Act, the American Indian Religious Freedom Act, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act (NAGPRA). The NHPA focuses on cultural resources such as prehistoric and historic sites, buildings and structures, districts, or other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or other reasons. Such resources might provide insight into the cultural practices of previous civilizations or retain cultural and religious significance to modern groups. Resources judged important under criteria established in the NHPA are considered eligible for listing in the National Register of Historic Places (NRHP). These resources are termed “historic properties” and are protected under the NHPA.

NAGPRA requires consultation with culturally affiliated Native American tribes for the disposition of Native American human remains, burial goods, and cultural items recovered from federally owned or managed lands. Typically, cultural resources are subdivided into archaeological sites (prehistoric or historic sites containing physical evidence of human activity but no standing structures); architectural sites (buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); and sites of traditional, religious, or cultural significance to Native American tribes.

Archaeological resources comprise areas where human activity has measurably altered the earth or deposits of physical remains are found (i.e., artifacts). Architectural resources include standing buildings, bridges, dams, and other structures of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP. More recent structures, such as Cold War-era resources, might warrant protection if they are of exceptional importance or have the potential to gain significance in the future. Resources of traditional, religious, or cultural significance to Native American tribes can include archaeological resources, sacred sites, structures, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans consider essential for the preservation of their traditional culture.

3.12.2 Affected Environment

3.12.2.1 Regional Prehistory

The time during which the New World was first inhabited by humans is known as the Paleo-Indian Period. The earliest well-established occupations in North America are associated with fluted projectile points and date to around 10,000 B.C. In the western United States, Paleo-Indians are believed to have been highly mobile big game hunters. The Paleo-Indian Period is followed by the Archaic Period (c. 8500 B.C.–A.D. 200) (Cordell 1984, Fagan 2005). These periods are characterized by a shift to broad-spectrum hunting and gathering, including the exploitation of wild plants and small mammals. The Archaic Period is also characterized by the introduction of ground stone tools to process plants and the spread of the atlatl, or spearthrower, which extended the distance and velocity that a spear could be thrown.

The late prehistoric period is characterized by ceramic production, horticulture or agriculture, and increased sedentism. Archaeologists recognize three major and two minor cultural traditions in the Southwest at this time (Cordell 1984). One of these traditions extends near or across the U.S./Mexico international border in New Mexico. The Mogollon tradition (250 B.C.–A.D. 1450) extends from southeast Arizona across southern New Mexico and into the westernmost portion of Texas. It is characterized by red and brown scraped-and-polished pottery, equal dependence on hunting and agriculture, round pithouse and rectangular dwellings, large ceremonial structures formally similar to houses, and inhumation. Several regional variants are recognized, including the Mimbres of southwest New Mexico, who are well-known for the black-on-white pottery that they decorated with figurative designs (Fagan 2005).

3.12.2.2 Regional History

New Mexico was first explored during Coronado's 1540 to 1542 expedition. In 1598, New Mexico was declared a province of New Spain and the first colony of San Juan de Caballeros was established. Santa Fe was founded 10 years later.

On September 27, 1821, Spain recognized the independence of Mexico. This new country included what is today California, Arizona, New Mexico, and Texas. The Treaty of Guadalupe Hidalgo, which was signed on February 2, 1848, ended the Mexican-American War of 1846 to 1848. The treaty ceded California and much of modern-day Arizona and New Mexico to the United States. The remaining, southernmost portions of modern-day Arizona and New Mexico were ceded to the United States under the Gadsden Purchase, which was ratified by the Senate on April 25, 1854. The modern U.S./Mexico international border was fully established at this time. New Mexico became the 47th state on January 6, 1912.

3.12.2.3 Known Cultural Resources

In May 2010, HDR prepared a "Summary of Cultural Resources Management Reports from the Construction of Tactical Infrastructure, U.S.-Mexico International Border, California, Arizona, New Mexico, and Texas" (Church and Hokanson 2010). According to this study, 979.1 miles have been surveyed for cultural resources along the U.S./Mexico international border. A total of

458 archaeological sites, 164 historic structures, and 1 historic district were identified during these surveys.

A total of 233.1 miles was surveyed for cultural resources along the New Mexico border as part of the Joint Task Force Six program. Another 90 miles of fence and roads and 21.2 acres of construction staging area were surveyed as part of the Vehicle Fence 300 and Pedestrian Fence 225 programs. A total of 323.1 miles has, therefore, been surveyed to date along the New Mexico border. These surveys identified 202 cultural resources, 10 of which are border monuments. Data recovery or extensive subsurface testing was conducted at 12 sites.

3.12.3 Environmental Consequences

Adverse effects on cultural resources can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

Ground-disturbing activities associated with the implementation of the Proposed Action constitute the most relevant potential impacts on cultural resources.

3.12.3.1 Alternative 1: Proposed Action

Under the Proposed Action, ground-disturbing activities would be confined to the existing footprint of the tactical infrastructure. As a result, most of these activities have negligible or no potential to impact cultural resources. The exception is the grading of roads that have not been previously graded. This activity has the potential to have long-term, minor, adverse impacts on archaeological sites that intersect the roads. Consultation with the New Mexico SHPO would take place prior to the grading of roads that have not been previously graded. Archaeological surveys of these roads may be required prior to ground-disturbing activities. If previously documented or newly discovered archaeological sites intersect the roads, mitigation measures (including avoidance of the sites) would be implemented. The Proposed Action would therefore have minor, adverse effects on cultural resources.

Maintenance and repair activities under the Proposed Action would be covered by a PA between CBP, ACHP, SHPOs, and Federal agencies and/or federally recognized tribes that own or manage land along the U.S./Mexico international border. The specific activities covered by the agreement would be defined in the PA. According to a draft of the PA, which is being developed in consultation with the potential signatories listed above, CBP is required to determine if all of the actions within the scope of an activity or project are included in the terms and conditions set forth in the PA. If so, CBP is required to document this determination in the project file. CBP can then proceed with the activity or project without further Section 106 review. If the activity or project is not composed entirely of the actions listed in the PA, CBP would be required to follow the standard Section 106 review process for the activities that are not listed. In other words, CBP is required to comply with Section 106 of the NHPA of 1966, as amended, and its

implementing regulations (36 CFR 800) before conducting maintenance and repair activities. The standard Section 106 review process also would be followed prior to execution of the PA. After the PA has been executed, standard Section 106 review would be followed prior to any maintenance and repair activities occurring on the land of agencies that are not signatories to the PA.

The potential exists for the unanticipated discovery of cultural resources or human remains during the maintenance and repair of tactical infrastructure. Consequently, CBP would develop appropriate measures that detail crew member responsibilities for reporting in the event of a discovery during maintenance and repair activities. These measures would also include mitigation procedures to be implemented in the event of a significant unanticipated find. If human remains are discovered, CBP would adhere to the stipulations of Public Resources Code Section 5097.98 and Health and Safety Code 7050 and stop work within 50 feet of the discovery. CBP would then contact the county coroner and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in archaeology or history to determine the significance of the discovery. If appropriate, CBP would also adhere to NAGPRA and its implementing regulations (43 CFR 19). Depending on the recommendations of the coroner or the archaeologist, CBP would consult with the county to establish additional mitigation procedures. Potential mitigation procedures for unanticipated discoveries include avoidance, documentation, excavation, and curation. As a result, potential impacts on cultural resources discovered during the maintenance and repair of tactical infrastructure would be minor.

3.12.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, maintenance and repair would take place on an ad hoc basis. There would be no systematic program to maintain and repair tactical infrastructure. As a result, tactical infrastructure could degrade to the point that emergency repairs would be required, which could result in ground-disturbing activities outside the existing footprint of the tactical infrastructure. Ground-disturbing activities outside of the existing footprint could disturb previously unidentified cultural resources. The No Action Alternative therefore has the potential to impact historic properties and have an adverse effect on cultural resources. The No Action Alternative does not guarantee that BMPs would be implemented during emergency repair activities.

Under the No Action Agreement, maintenance and repair activities would be covered by a PA as described in **Section 3.12.3.1**. Unanticipated find procedures under the No Action Alternative would be identical to those of the Proposed Action.

3.13 ROADWAYS AND TRAFFIC

3.13.1 Definition of the Resource

The transportation resource is defined as the system of roadways and highways that are within or near the region of analysis and could reasonably be affected by the Proposed Action. Traffic relates to changes in the number of vehicles on roadways and highways because of the Proposed Action.

3.13.2 Affected Environment

The region of analysis contains a mixture of primary, secondary, and tertiary roadways. The primary roadway in this region is New Mexico State Highway- (NM) 9, which extends along the U.S./Mexico international border from the Arizona/New Mexico state line to Santa Theresa, New Mexico. Smaller intersecting roadways include NM-11 at Columbus, NM-81 at Hachita, and NM-338 at Animas. Numerous paved and unpaved tertiary roadways are present throughout much of the region.

The majority of roadways within the Proposed Action are classified as FC-3 (graded earth) and FC-4 (two-track) roadways (see **Appendix C** for detailed definitions) and extend across mostly undeveloped property. Due to the remoteness of the region, very little public traffic is present, and the USBP is the primary user of these roadways.

The primary function of the roadways proposed for maintenance and repair is to support USBP efforts to limit illegal border intrusion. Most of these roads extend across undeveloped land and the vast majority of vehicles to traverse these roads are USBP vehicles. Very little public traffic is present.

Common issues with the roadways proposed for maintenance and repair include flooding, erosion, and the overgrowth of vegetation. Improper management of storm water can cause water to pond at low-points and create flooding deep enough to obstruct vehicles. Improper management of storm water can also cause erosion that leads to potholes and washouts. Over long periods, erosion can wash out entire sections of roadway and in many instances make roads impassable. Vegetative growth can encroach into the roadways creating obstructions and visual impairments.

3.13.3 Environmental Consequences

Impacts on transportation are evaluated by how well existing roadways can accommodate changes in traffic. Adverse effects would occur if drivers experience high delays because the Proposed Action altered traffic patterns beyond existing lane capacity or resulted in the closures or detours of roadways.

3.13.3.1 Alternative 1: Proposed Action

Short-term, negligible to minor, adverse effects on transportation would be expected from the Proposed Action due to short-term, local increases in traffic from vehicles conducting maintenance and repair activities. Long-term, minor to moderate, beneficial effects on transportation would be expected by improving the condition of the roadways. Traffic impacts would be most notable closer to the location of a given maintenance and repair activity and less noticeable farther away. Highways such as NM-9 and other State of New Mexico highways would experience no noticeable change in traffic volume. A slight increase in traffic volume on the smaller, single-lane roadways might be noticeable but would affect very few people due to the remoteness of the region. Due to the limited number of vehicles anticipated to be needed for the maintenance and repair activities, impacts on traffic volume would be negligible to minor.

The tactical infrastructure maintenance and repair activities focusing on the roadways themselves would likely cause short-term roadway closures and detours while work is underway. Because most of the roadways proposed for maintenance and repair are used solely by USBP, the public would not be impacted by these roadway closures or detours. The roadway closures and detours would be temporary, so USBP personnel accessing the tactical infrastructure would experience only minor disruptions. In addition, maintenance and repair activities would be spread over time and scattered across the region of analysis. As such, all short-term effects on transportation would be expected to be limited.

Long-term, minor to moderate, beneficial effects on transportation would be expected. Roadway maintenance and repair would be prioritized and this would lessen the potential for the gradual degradation of the roadways by conducting thoughtful regional-scale, preventative maintenance rather than only making small-scale, reactionary repairs as is currently done. The Proposed Action would prevent the roadways from falling into disrepair and improve the condition of those roadways that have already fallen into disrepair.

It is possible that the Proposed Action would result in increased public use of access roads. For areas already authorized for unrestricted public access, improving road maintenance would result in a long-term, beneficial effect. For protected areas, such as wilderness areas, road maintenance would be coordinated with the land management agency to ensure that any potential for increased public use would be consistent with the agency's policies. Repairs to the roads used by USBP would allow for faster, safer, and more efficient responses by the USBP to threats. Better quality roads would lessen the wear-and-tear on USBP vehicles and minimize the potential for blown tires, damaged vehicle components, and stuck vehicles. Repairs to these roadways would not increase the amount of long-term traffic because patrols by the USBP would not increase in frequency and most of the roads proposed for maintenance and repair are not used by the public.

3.13.3.2 Alternative 2: No Action Alternative

The No Action Alternative would result in the continuation of the existing CBP roadway maintenance and repair procedures as described in **Section 3.13.2**. The roadways proposed by CBP for maintenance and repair under the No Action Alternative would continue to be repaired on an as-needed basis. As such, most roadway repairs would be reactive to immediate issues affecting these roadways and would not address long-term preventative maintenance requirements. Repairs performed on an as-needed basis would not be considered sustainable in quality because it would result in gradual degradation of these roadways. The No Action Alternative would result in greater impacts on roadways and traffic than the Proposed Action. The No Action Alternative could entail larger and longer disruptions in the flow of traffic due to reactionary maintenance and repair activities that potentially require greater attention than those associated with a preventative maintenance plan. Conversely, the periodic maintenance and repair activities as discussed under the Proposed Action would result in more occurrences of minor roadwork, which would be anticipated to result in a shorter disruption to the flow of traffic. Therefore, the No Action Alternative would result in greater short-term, and fewer long-term impacts on roadways and traffic when compared to the Proposed Action.

3.14 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

3.14.1 Definition of the Resource

Hazardous materials are defined by 49 CFR 171.8 as “hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions” in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

A hazardous substance, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. §9601(14)), is defined as “(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33; (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and RCRA, as amended, (42 U.S.C. §6921); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any HAPs listed under section 112 of the CAA (42 U.S.C. §7412); and (F) any imminently hazardous chemical substance or mixture which the Administrator of USEPA has taken action pursuant to section 2606 of Title 15.” The term hazardous substance does not include petroleum products.

Hazardous wastes are defined by RCRA at 42 U.S.C. §6903(5), as amended by the Hazardous and Solid Waste Amendments, as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.” Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden and facilitate the recycling of such materials. These are called universal wastes and their associated regulatory requirements are specified in 40 CFR Part 273.

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include ACM, PCBs, and LBP. The USEPA is given authority to regulate these special hazard substances by TSCA Title 15 U.S.C. Chapter 53. USEPA has established regulations regarding asbestos abatement and worker safety under 40 CFR Part 763 with additional regulation concerning emissions (40 CFR Part 61). Whether from lead abatement or other activities, depending on the quantity or concentration, the disposal of the LBP waste is potentially regulated by the RCRA at 40 CFR 260. The disposal of PCBs is addressed in 40 CFR Parts 750 and 761.

Pesticides are regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947 (40 CFR Parts 150–189). In 1972, Congress enacted the Federal Environmental Pesticide Control Act, which amended FIFRA by specifying methods and standards of control in greater detail. Subsequent amendments have clarified the duties and responsibilities of the USEPA. These regulations stipulate the USEPA must regulate all pesticides that are sold and distributed in the United States. The term “pesticides” includes pesticides, herbicides,

rodenticides, antimicrobial products, biopesticides, and other substances used to control a wide variety of pests.

EO 12088, *Federal Compliance with Pollution Control Standards*, as amended, directs Federal agencies to (1) comply with “applicable pollution control standards,” in the prevention, control, and abatement of environmental pollution; and (2) consult with the USEPA, state, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution.

Evaluation of hazardous materials and wastes focuses on the storage, transport, handling, and use of pesticides, herbicides, petroleum products, fuels, solvents, and other hazardous substances. Evaluation also extends to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site. In addition to being a threat to humans, the improper release of hazardous materials and wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of hazardous materials or wastes, the extent of contamination varies based on the type of soil, topography, and water resources.

Solid waste management primarily relates to the availability of landfills to support a population’s residential, commercial, and industrial needs. Alternative means of waste disposal include waste-to-energy programs and incineration. In some localities, landfills are designed specifically for, and limited to, disposal of construction and demolition debris. Recycling programs for various waste categories (e.g., glass, metals, papers, asphalt, and concrete) reduce reliance on landfills for disposal.

3.14.2 Affected Environment

The management of hazardous substances, petroleum products, hazardous and petroleum wastes, pesticides, solid waste, ACMs, LBP, and PCBs is regulated by Federal and state agencies. Each state has its own regulatory agency and associated regulations. The state agencies either adopt the Federal regulations or have their own regulations that are more restrictive than the Federal regulations. The following sections address the regulatory agencies and existing conditions of these materials.

Likewise, the Federal government and state agencies also have regulations for the handling, disposal, and remediation of special hazards; however, the nature and age of the tactical infrastructure is such that the handling or disposal of these materials is unlikely for the activities associated with the Proposed Action.

Hazardous Substances, Petroleum Products, and Hazardous and Petroleum Wastes. The NMED, Hazardous Waste Bureau’s mission is to provide regulatory oversight and technical guidance to New Mexico hazardous waste generators and treatment, storage, and disposal facilities as required by the New Mexico Hazardous Waste Act of 1978 and regulations promulgated under the Act. NMED is authorized by the USEPA to regulate and enforce the provisions of RCRA. Additional responsibilities of NMED are to inspect work sites and industrial facilities to ensure they meet environmental laws and protect public and employee health and safety. NMED also administers a pollution prevention program and a storage tank program.

USBP or its contractors currently store, transport, handle, use, generate, and dispose of various types and quantities of hazardous substances, petroleum products, and hazardous and petroleum wastes as a result of conducting tactical infrastructure maintenance and repair activities on an as-needed basis. These materials are used for or generated directly from the maintenance and repair activities, and the operation and maintenance of the equipment necessary for maintaining and repairing the tactical infrastructure. The primary hazardous substances and petroleum products likely include materials such as lead-acid batteries, motor oil, antifreeze, paint and paint thinners, cleaners, hydraulic oils, lubricants, and liquid fuels (diesel and gasoline). The hazardous substances, petroleum products, and hazardous and petroleum wastes are stored at various USBP or contractor maintenance shops and managed in accordance with hazardous materials standard operating procedures (SOPs). The hazardous and petroleum wastes are recycled or disposed of offsite in accordance with Federal, state, and local regulations.

There are several public and private storage areas, facilities, maintenance areas, and other operations that store, transport, handle, use, generate, and dispose of various types and quantities of hazardous substances, petroleum products, and hazardous and petroleum wastes within and near the New Mexico tactical infrastructure area.

None of the USBP stations within the New Mexico tactical infrastructure area are listed in the USEPA RCRA Info database (USEPA 2011a).

There are no National Priorities List sites within the New Mexico tactical infrastructure area (USEPA 1971). A Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) site is known to exist in New Mexico tactical infrastructure area (CBP 2008). The CERCLIS site is El Paso County/Doña Ana County Metals. This site is defined by a 3-mile radius from the boundary of New Mexico, Texas, and Chihuahua, Mexico. The pollutants of concern are primarily heavy metals; however, sampling and clean-up activities have centered on lead and arsenic. The El Paso County/Doña Ana County Metals site has been evaluated for listing on the National Priorities List; however, due to voluntary and mandatory clean-up efforts the listing process has been temporarily put on hold (USEPA 2011b). Additionally, multiple hazardous waste sites are known to exist within and near the New Mexico tactical infrastructure area (CBP 2008).

Pesticides. The New Mexico Department of Agriculture is the responsible agency for the oversight of pesticide production, use, and worker and sensitive population's safety. The main duties performed by the New Mexico Department of Agriculture are to register and license pesticide companies or products in accordance with Federal and state laws, enforce pesticide use compliance, and ensure that people are protected.

USBP or its contractors currently use small quantities of herbicides for vegetation control in the New Mexico tactical infrastructure area. The herbicides are stored at various USBP or contractor maintenance shops and applied by certified personnel in accordance with label requirements.

The New Mexico tactical infrastructure area is not known to have extensive agricultural areas and is therefore unlikely to have large volumes of pesticide storage and application.

Asbestos-Containing Materials. Asbestos is regulated by the USEPA under the CAA; TSCA; and CERCLA. USEPA has established that any material containing more than 1 percent asbestos by weight is considered an ACM. Friable ACM is any material containing more than 1 percent asbestos, and that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Nonfriable ACM is any ACM that does not meet the criteria for friable ACM.

Based on the nature and age of the tactical infrastructure proposed for maintenance and repair, it is not anticipated to contain asbestos. Additionally, the equipment used to maintain and repair the tactical infrastructure is not likely to contain asbestos.

Lead-Based Paint. The Residential Lead-Based Paint Hazard Reduction Act of 1992, Subtitle B, Section 408 (commonly called Title X) regulates the use and disposal of LBP on Federal facilities. Federal agencies are required to comply with applicable Federal, state, and local laws relating to LBP activities and hazards. The use of most LBP was banned in 1978.

The tactical infrastructure proposed for maintenance and repair was constructed after 1978 and, therefore, is not anticipated to contain LBP. Additionally, the equipment used to maintain and repair the tactical infrastructure is not likely to contain LBP.

Polychlorinated Biphenyls. PCBs are a group of chemical mixtures used as insulators in electrical equipment such as transformers and fluorescent light ballasts. Federal regulations govern items containing 50 to 499 parts per million (ppm) PCBs. Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. PCB-containing oil is typically found in older electrical transformers and light fixtures (ballasts).

Based on the nature and age of the tactical infrastructure, it is not anticipated to contain PCBs. Additionally, the equipment used to maintain and repair the tactical infrastructure is not likely to contain PCBs. PCBs might be found in the electrical transformers within the tactical infrastructure areas, but maintenance and repair activities are not expected to disturb electrical transformers.

Solid Wastes. New Mexico's recycling and waste management programs are run by the Environment Department's Solid Waste Bureau. Solid waste disposal facilities are shared for Hidalgo and Grand Counties and operated by the Southwest Solid Waste Authority. The City of Deming manages solid waste in Luna County. Luna County has also received funds to begin a recycling program for the county in cooperation with the City of Deming. Solid waste facilities in Doña Ana County are operated by the South Central Solid Waste Authority.

USBP or its contractors generate, store, transport, and dispose of various types and quantities of solid wastes from maintenance and repair activities on an as-needed basis. The solid waste generally consists of vegetation (e.g., tree trimmings) and construction materials (e.g., damaged infrastructure). They are temporarily stored at various USBP or contractor maintenance shops prior to offsite recycling or disposal in accordance with Federal, state, and local regulations.

There are several public and private storage areas, facilities, maintenance areas, and other operations that generate, store, transport, and dispose of solid wastes within and near the region of analysis.

3.14.3 Environmental Consequences

Impacts on hazardous materials management would be considered significant if a proposed action resulted in worker, resident, or visitor exposure to these materials above established limits. Impacts on hazardous materials management would be considered significant if the Federal action resulted in noncompliance with applicable Federal and respective state regulations, or increased the amounts generated or procured beyond current CBP hazardous materials management procedures and capacities.

An effect on solid waste management would be significant if the Proposed Action exceeded existing capacity or resulted in a long-term interruption of waste management, a violation of a permit condition, or a violation of an approved plan for that utility.

3.14.3.1 Alternative 1: Proposed Action

Long-term, negligible to minor, adverse impacts on hazardous substances, petroleum products, and hazardous and petroleum wastes, and pesticides would be expected from implementation of the Proposed Action. Maintenance vehicles containing hazardous substances and petroleum products would be deployed more frequently, than the No Action Alternative, increasing the probability of a spill or release. Prior to pesticide application, the NMED would be consulted for the appropriate permits or instruction on the quantity and approved application techniques.

No impacts on ACMs, LBP, or PCBs would be expected from implementation of the Proposed Action. As stated in **Section 3.14.2**, none of these substances would be expected to be present due to the nature and age of the tactical infrastructure. If maintenance and repair activities require disturbing a known or encountered solid waste landfill, the NMED would be consulted prior to disturbance to significantly reduce or eliminate any potential exposure to ACM, LBP, or PCBs that might be in the landfill.

No impacts on solid waste would be expected from implementation of the Proposed Action. The volumes of solid waste produced during the maintenance and repair activities would be negligible and are not anticipated to increase.

3.14.3.2 Alternative 2: No Action Alternative

Long-term, negligible to minor, adverse impacts on solid waste would be expected due to potentially greater generation. The No Action Alternative is reactive in nature and could eventually result in greater deterioration of tactical infrastructure over time due to lack of preventative maintenance, which could result in more frequent maintenance and repair of tactical infrastructure. This could create greater volumes of solid waste.

No impacts on hazardous substances, petroleum products, hazardous and petroleum wastes, or pesticides would be expected from the implementation of the No Action Alternative. The No Action Alternative would result in the continuation of the existing storage, transport, handling, use, generation, and disposal of hazardous substances, petroleum products, hazardous and petroleum wastes, and pesticides as described in **Section 3.14.2**. The tactical infrastructure would continue to be maintained and repaired on an as-needed basis. There would be no new chemicals or toxic substances used or stored. Prior to pesticide application, the respective state

agency should be consulted for the appropriate permits or instruction on the quantity and approved application techniques.

No impacts on ACMs, LBP, or PCBs would be expected from implementation of the No Action Alternative. As stated in **Section 3.14.2**, due to the nature and age of the tactical infrastructure it is not anticipated to contain ACMs, LBP, or PCBs. If maintenance and repair activities require disturbance of a known or encountered solid waste landfill, the respective state regulatory agency would be consulted prior to disturbance to significantly reduce or eliminate any potential exposure to ACMs, LBP, or PCBs that might be in the landfill. The No Action Alternative does not guarantee that all BMPs would be implemented during emergency repair activities. Therefore, the No Action Alternative would result in greater impacts associated with hazardous materials and wastes than the Proposed Action.

3.15 SOCIOECONOMIC RESOURCES, ENVIRONMENTAL JUSTICE, AND PROTECTION OF CHILDREN

3.15.1 Definition of the Resource

Socioeconomic Resources. Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Factors that describe the socioeconomic environment represent a composite of several interrelated and nonrelated factors. There are several factors that can be used as indicators of economic conditions for a geographic area, such as median household income, employment and unemployment rates, percentage of residents living below the poverty level, and employment by business sector. Data on employment can identify gross numbers of employees, employment by industry or trade and unemployment trends. Data on household income in a region can be used to compare the before and after effects of any jobs created or lost as a result of a proposed action. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. After the project, the same data can be gathered again to analyze any impacts from the proposed action to the economic health of the region.

Environmental Justice. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued on February 11, 1994, by President Clinton, and pertains to environmental justice issues and relates to various socioeconomic groups and the health effects that could be imposed on them. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was created to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

Protection of Children. EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each Federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children;

and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”

3.15.2 Affected Environment

The geographical area in which a majority of the socioeconomic, environmental justice, and protection of children effects for the alternatives might occur is defined as the region of influence (ROI). The ROI is considered a primary impact area because it could receive direct and indirect socioeconomic impacts from the proposed maintenance and repair of tactical infrastructure. The ROI for this EA is composed of the counties along the U.S./Mexico international border in New Mexico: Doña Ana County, Grant County, Hidalgo County, and Luna County. Data and analysis pertaining to housing, schools, and community services within the ROI is excluded from the socioeconomic analysis as the alternatives would not likely result in drastic increases or decreases in demographics or employment characteristics. Subsequently, impacts on the housing market, schools, or community services would not be expected under the proposed alternatives. Therefore, analysis of the housing market, schools, or community services is omitted further from this section.

Socioeconomic Resources

The socioeconomic baseline conditions are presented using three spatial levels: (1) county-level data for the ROI and the counties along the U.S./Mexico international border in New Mexico, (2) state-level data for New Mexico and (3) national-level data. County-level data are included in the analysis to provide a baseline condition. Data for New Mexico and the United States are included for comparative purposes.

Demographic Characteristics. The southwestern region of the United States has been characterized by robust population growth over the past 20 years. During the period from 1990 to 2010, the population in New Mexico increased 30 percent, with 400,000 additional people reported in 2010. The United States’ population increased 21 percent from 1990 to 2010. New Mexico has four counties along 180 miles of the U.S./Mexico international border: Doña Ana, Grant, Hidalgo, and Luna. Growth in these four counties ranged from rates greater than New Mexico’s growth rates from 1990 to 2009, with 46 percent in Doña Ana County and 48 percent in Luna County, to less than the growth rate in New Mexico, with 7 percent in Grant County and negative 16 percent in Hidalgo County. In Hidalgo County the population decreased from approximately 5,900 people in 1990 to 5,000 people in 2009. Conversely the population in Doña Ana County increased from 135,000 in 1990 to 198,000 in 2009 (U.S. Census Bureau 1990, U.S. Census Bureau 2009). Complete population data for the four counties and New Mexico are displayed in **Table 3-11**.

Employment Characteristics. The largest percentage of people employed by industry in New Mexico and the United States is the educational services, and health care and social assistance industry. The second largest industry is the retail trade industry accounting for 11 to 12 percent of all those employed in New Mexico and the United States. The agriculture, forestry, fishing and hunting, and mining industry is the smallest industry by percentage of those employed in the United States (1.8 percent). The smallest industry by percentage of those employed in New Mexico (2.0 percent) is the information industry. The educational services, and health care and

Table 3-11. Population Estimates within the ROI, 1990, 2000 and 2010

Geographic Area	1990	2000	2010	Percent Change		
				1990 to 2000	2000 to 2010	1990 to 2010
Doña Ana County	135,510	174,682	197,819	29%	13%	46%
Grant County	27,676	31,002	29,723	12%	-4%	7%
Hidalgo County	5,958	5,932	5,001	0%	-16%	-16%
Luna County	18,110	25,016	26,724	38%	7%	48%
New Mexico	1,515,069	1,819,046	1,964,860	20%	8%	30%
United States	248,709,873	281,421,906	301,461,533	13%	7%	21%

Sources: U.S. Census Bureau 1990, U.S. Census Bureau 2000, U.S. Census Bureau 2009

social assistance industry employs the largest number of people by percentage when compared to other industries in Doña Ana, Grant, Hidalgo, and Luna counties. In Doña Ana and Grant counties, 28 percent and 32 percent respectively are employed in the educational services, and health care and social assistance industry; percentages which are larger than New Mexico’s 23 percent (U.S. Census Bureau 2009). **Table 3-12** contains data for New Mexico and the United States for all 13 industries as defined by the U.S. Census Bureau.

Figure 3-1 displays unemployment data for New Mexico and the United States. From 1990 to 2000, New Mexico and the United States follow a similar trend. From 2004 to 2009, the unemployment rate in New Mexico was less or similar to the unemployment rate for the United States. The highest annual unemployment rates occurred in 2009. In New Mexico, the lowest unemployment rate was 3.5 percent in 2007. In the United States the annual unemployment rate was lowest in 2000, at 4.0 percent (BLS 2010).

Environmental Justice and Protection of Children

Racial, Ethnic, and Youth Population Characteristics. The southwestern United States contains a large Hispanic or Latino population. The elevated Hispanic or Latino populations in New Mexico (45 percent) are much larger when compared to the United States (15 percent). The American Indian/Alaskan Native population accounts for 9 percent in New Mexico, compared to less than 1 percent for the entire United States. The Black or African American population within New Mexico was less by percentage when compared to the United States. The percentage of the population younger than 18 years of age in the United States was estimated at 25 percent. In New Mexico the percentage of the population younger than 18 years of age is 26 percent (U.S. Census Bureau 2009). The four counties along the U.S./Mexico international border in New Mexico contain Hispanic or Latino populations that were either similar or greater by percentage of the total population when compared to New Mexico. For example, Grant County contains a Hispanic or Latino population of 48 percent, slightly greater than the Hispanic or Latino population in New Mexico, which is 45 percent. In contrast, Doña Ana County contains a Hispanic or Latino population accounting for 65 percent of the total population. In Hidalgo

Table 3-12. Employment by Industry in New Mexico and the United States by Percentage, 2009

Industry	New Mexico	United States
Population 16 years and over in labor force	571,238	94,056,060
Agriculture, forestry, fishing and hunting, and mining	4.1	1.8
Construction	8.8	7.4
Manufacturing	5.4	11.2
Wholesale trade	2.4	3.2
Retail trade	11.7	11.5
Transportation and warehousing, and utilities	4.5	5.1
Information	2.0	2.4
Finance and insurance, and real estate and rental and leasing	5.2	7.1
Professional, scientific, and management, and administrative and waste management services	10.8	10.3
Educational services, and health care and social assistance	22.8	21.5
Arts, entertainment, and recreation, and accommodation and food services	10.3	8.8
Other services, except public administration	4.8	4.8
Public administration	7.2	4.7

Source: U.S. Census Bureau 2009

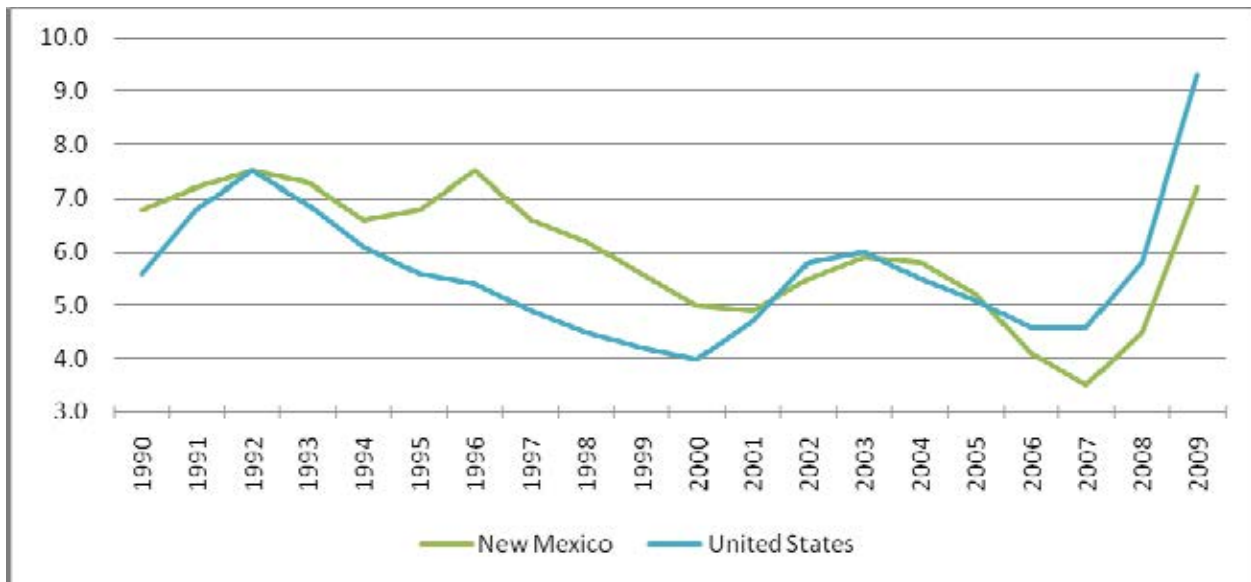


Figure 3-1. Annual Unemployment Rates for New Mexico and the United States, 1990 to 2009

County, the Hispanic or Latino population is 55 percent, and in Luna County it is 60 percent (see **Table 3-13**). The youth population in both Doña Ana County and Luna County accounted for 28 percent of the population compared to 26 percent in Hidalgo County 22 percent in Grant County, and 25 percent for New Mexico overall (U.S. Census Bureau 2009).

Low-income and Poverty Characteristics. The overall poverty rate and family poverty rate in the United States are 14 percent and 10 percent respectively. In New Mexico, the overall poverty rate is 18 percent and the family poverty rate is 14 percent, which is higher than the United States average. The median household income in the United States is approximately \$51,400, greater than New Mexico’s median household income which is \$42,700.

Table 3-13. Racial and Ethnic Characteristics for Border Counties in New Mexico, 2009

Race and Ethnicity	Doña Ana County	Grant County	Hidalgo County	Luna County	New Mexico	United States
Total Population	197,819	29,723	5,001	26,724	1,964,860	301,461,533
Percent of population younger than 18	27.8	21.8	26.3	27.9	25.7	24.6
White	30.7	48.7	42.2	37.0	41.6	65.8
Black or African American	1.7	0.4	0.7	0.6	2.0	12.1
American Indian & Alaska Native	0.9	1.2	0.3	0.3	8.7	0.7
Asian	0.9	0.5	0.0	0.3	1.3	4.3
Native Pacific Islander	0.0	0.0	0.0	0.0	0.0	0.1
Some Other Race	0.2	0.	0.0	0.0	0.2	0.2
Two or More Races	0.8	1.0	1.6	1.4	1.4	1.6
Hispanic or Latino	64.8	48.0	55.3	60.3	44.8	15.1

Source: U.S. Census Bureau 2009

Poverty rates in the four New Mexico counties along the U.S./Mexico international border vary from a low of 15 percent in Grant County to a high of 33 percent in Luna County. The family poverty rates followed a similar trend, with the lowest family poverty rates reported in Grant County at 11 percent, and the highest family poverty rates in Luna County at 28 percent. The overall poverty rate in Doña Ana County was 25 percent, and in Hidalgo County the rate was 21 percent. The family poverty rate for the same counties was 20 percent and 19 percent respectively. These poverty rates are elevated in comparison to New Mexico’s overall poverty rate of 18 percent and family poverty rate of 14 percent. The lowest median household income is in Luna County at \$26,600, compared to \$42,700 for New Mexico (U.S. Census Bureau 2009). See **Table 3-14** for poverty rates for New Mexico.

Table 3-14. Poverty Rates and Median Household Income for the Counties within New Mexico

Geographic Area	Overall Poverty Rate	Family Poverty Rate	Median Income
Doña Ana County	24.6	20.4	\$35,544
Grant County	15.0	11.4	\$35,896
Hidalgo County	20.8	19.0	\$39,020
Luna County	33.4	28.1	\$26,661
New Mexico	18.1	13.7	\$42,742
United States	13.5	9.9	\$51,425

Source: U.S. Census Bureau 2009

3.15.3 Environmental Consequences

Socioeconomic Resources. Project-related expenditures are assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing). The magnitude of potential impacts can vary greatly, depending on the location of a proposed action. For example, implementation of an action that creates ten employment positions might go unnoticed in an urban area, but could have considerable impacts in a rural region. If potential socioeconomic changes were to result in substantial shifts in population trends or a decrease in regional spending or earning patterns, those effects would be considered adverse. A proposed action could have a significant effect with respect to the socioeconomic conditions in the surrounding ROI if the following were to occur:

- Change the local business volume, employment, personal income, or population that exceeds the ROI’s historical annual change
- Disproportionately impact minority populations or low-income populations.

Environmental Justice and the Protection of Children. Ethnicity and poverty data are examined for the counties along the U.S./Mexico international border in New Mexico to determine if a low-income or minority populations could be disproportionately affected by the Proposed Action.

3.15.3.1 Alternative 1: Proposed Action

Socioeconomic Resources. Maintenance and repair of tactical infrastructure under the Proposed Action would have short-term, minor, direct and indirect, beneficial impacts on socioeconomics, demographics, and employment through increased employment and the purchase of goods and services. Direct impacts on employment and the procurement of material supplies would be minor and short-term and would not overburden the available supply. No permanent changes to the CBP workforce would be expected as a result of this alternative.

Short-term, minor increases in population might occur during times of maintenance and repair. It is assumed that many of the workers needed for this alternative would be drawn from the

regional workforce and would not require the permanent relocation of workers from outside the area. The construction industry would be able to meet the demand for workers adequately. The short-term nature and scale of the maintenance and repair projects would not induce indirect population growth in the region.

Materials for maintenance and repair could be sourced locally and local contractors could be used. In addition, many of the workers needed for the maintenance and repair activities would likely be employed within the regional construction industry. Incremental gains to the construction industry might occur to fulfill an increased demand for workers. Each job created by implementation of the Proposed Action would generate additional revenue and could create additional jobs within companies that supply goods and services. The project would not likely create any long-term employment in the region.

Direct, beneficial impacts would result from increases to payroll earnings and taxes and the purchase of materials required. Indirect, beneficial impacts would result from increases in expenditures on goods and services. No permanent or long-term impacts on employment, population, personal income, poverty levels, or other demographic or employment indicators would be expected from the Proposed Action.

Environmental Justice and the Protection of Children. Much of the tactical infrastructure that would be maintained as a part of the Proposed Action runs through or adjacent to many rural settlements, small towns, and neighborhoods within larger cities. Property owners and residents might be affected by visual intrusion, noise, and temporary disruptions during maintenance activities.

The proposed maintenance and repair of tactical infrastructure would have short- to long-term, indirect, beneficial impacts on protection of children in the areas along the U.S./Mexico international border. The maintenance and repair of tactical infrastructure would allow USBP agents to perform their mission. As a result, the Proposed Action would indirectly help to deter cross-border violators in the immediate area, which in turn could prevent drug smugglers, terrorists, and terrorist weapons from entering the surrounding area.

3.15.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, there would be no change from the baseline conditions. Overall maintenance requirements for tactical infrastructure along the U.S./Mexico international border would not be addressed and the tactical infrastructure would not be considered sustainable in quality, resulting in gradual degradation. If the No Action Alternative was implemented, short-term local employment benefits from the purchase of maintenance and repair materials and a temporary increase in maintenance jobs would not occur. Furthermore, money from maintenance and repair payrolls that would circulate throughout the local economies would also not occur. The Proposed Action would result in greater benefits to socioeconomics than the No Action Alternative because maintenance and repair work would occur on a periodic basis, providing a more stable source of income for workers and the local economy.

3.16 BLM REALTY AND MINERALS

3.16.1 Definition of the Resource

The BLM, through the Realty and Minerals programs, is responsible for administering authorizations and claims including (but not limited to) rights-of-way (ROWs), permits, mining claims, and leases. BLM Authorizations and claims are site-specific decisions that must be administered in accordance with Federal Regulations found at 43 CFR 2800, 43 CFR 2900, and 43 CFR 3000. Public Lands open to authorizations and claims are limited to areas that have not otherwise been identified in a resource management plan (RMP) as being closed, ROW avoidance, or ROW exclusion.

Established exclusion/avoidance areas are intended to protect the area's special and sensitive resource values and limit or restrict development. Issuance of ROW within an RMP avoidance area is allowable when no feasible alternative route is available, and as long as the ROW does not interfere with the purpose of the avoidance area.

ROWs and permits are non-exclusive/non-possessory authorizations, meaning BLM may grant overlapping non-conflicting authorizations. Mining claims are possessory claims to extract minerals; BLM may authorize ROWs across mining claims staked after July 15, 1955. Leases, as relates to the proposed action, are administered under the minerals division of BLM, but ROWs within lease boundaries may be authorized as long as the surface use ROW does not interfere with development of the sub-surface mineral estate.

3.16.2 Affected Environment

The Proposed Action does not occur within any ROW exclusion area; however, it would traverse approximately 25 miles of Big Hatchet and Peloncillo Bighorn Sheep ROW avoidance areas (see **Figure 3-2**), approximately 1.25 miles of Continental Trail ROW avoidance area (see **Figure 3-3**), and would intersect several ROWs and oil/gas leased parcels (see **Table 3-15**). As part of the decision making process, BLM would notify the holders whose authorizations occur within or adjacent to the area of potential effect prior to maintenance and repair activities.

3.16.3 Environmental Consequences

3.16.3.1 Alternative 1: Proposed Action

No adverse impacts on BLM Realty and Minerals programs would be expected under the Proposed Action. BLM does not anticipate that granting ROW for operation and maintenance of the proposed TIMR project would result in any negative impacts on mining claims, or authorized leases and ROWs, because maintenance of the existing roads does not conflict with any current mining claim, lease, or ROW use. Long-term, beneficial impacts on encumbrances on Public Land would be expected because physical access would be improved.

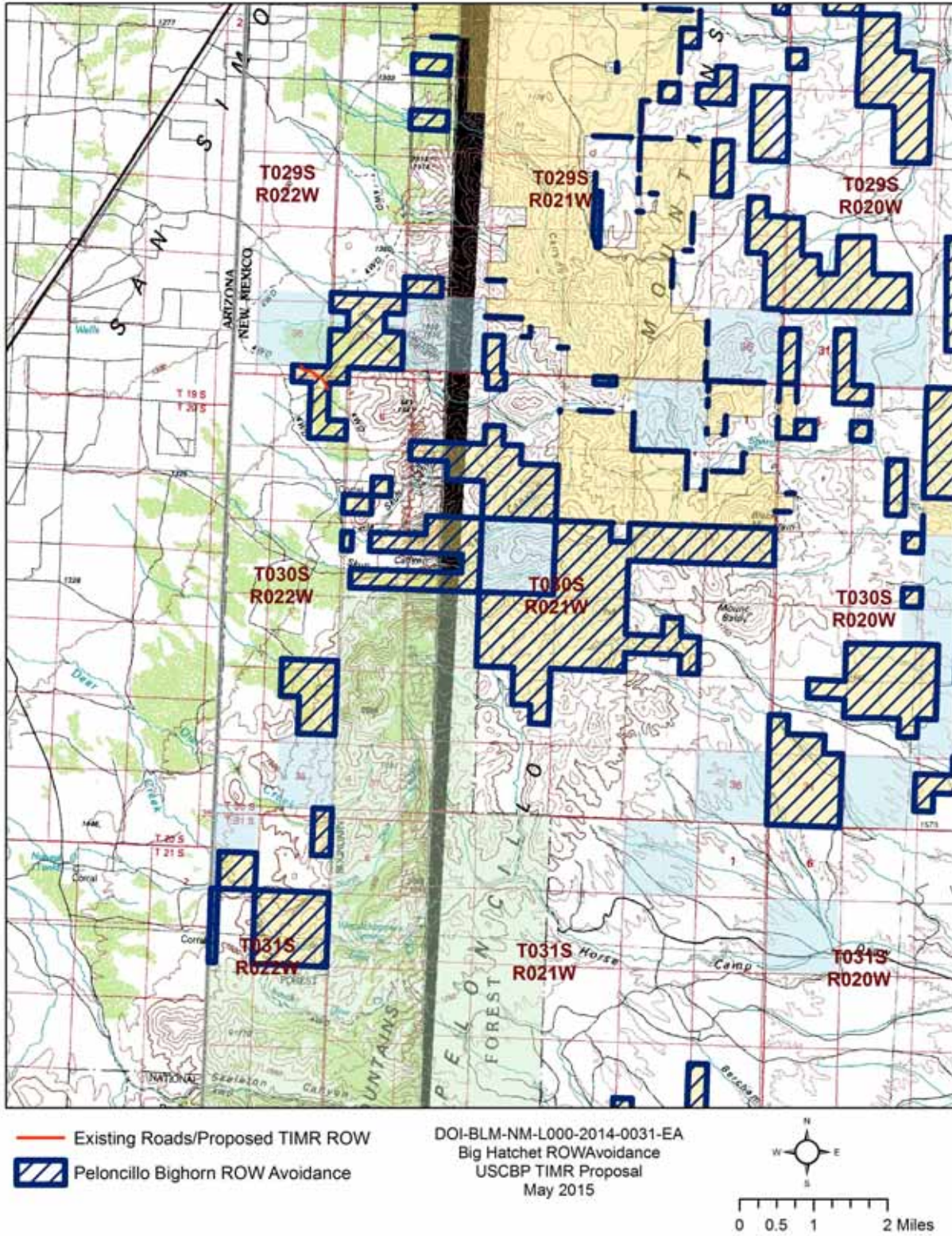


Figure 3-2. Peloncillo Bighorn Sheep ROW avoidance area within the Proposed Action

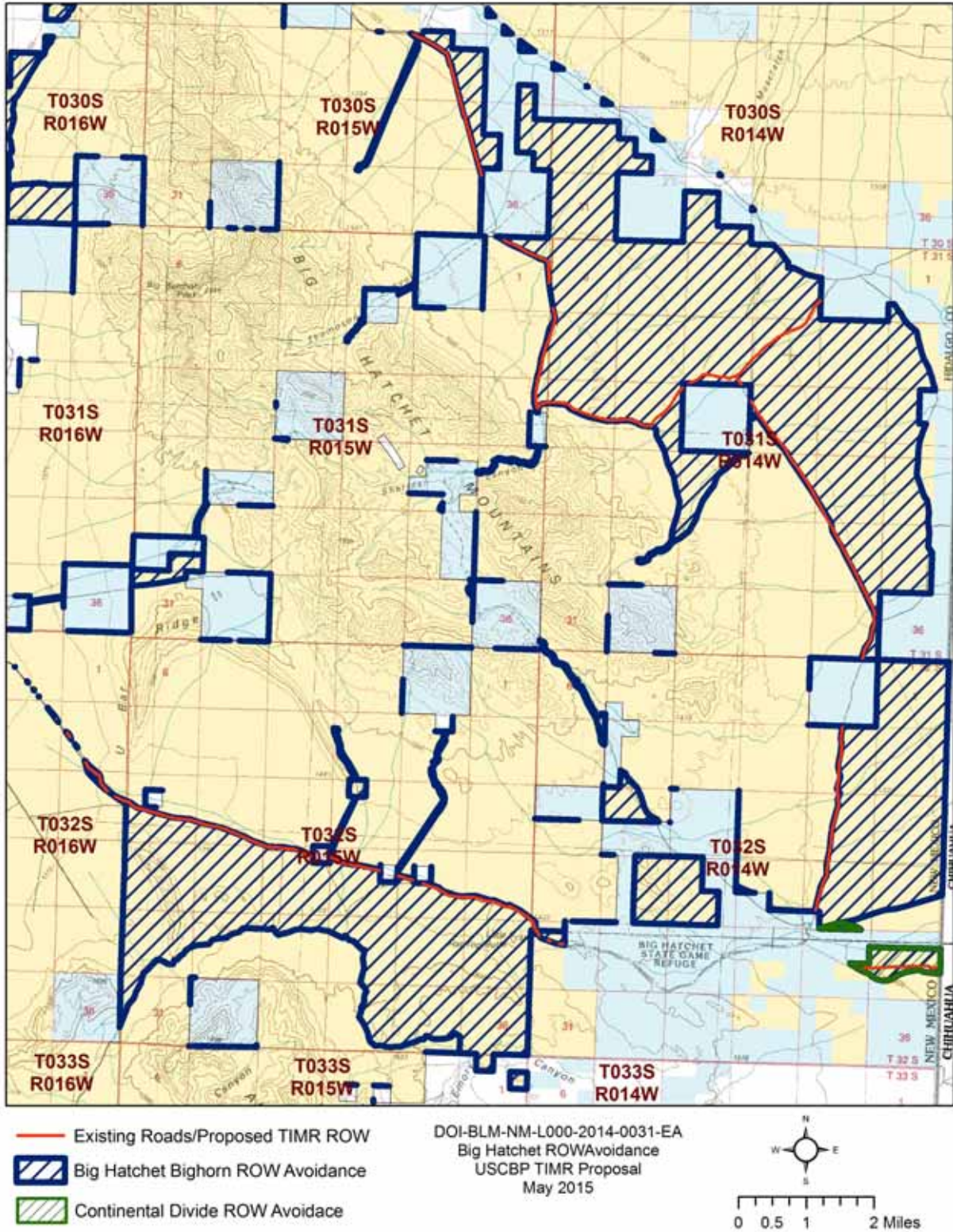


Figure 3-3. Big Hatched and Continental Trail ROW avoidance areas within the Proposed Action

Table 3-15. Descriptions of Other Recent Tactical Infrastructure in New Mexico

Authorization Serial Number	Description (Holder)	Type	Affected Location Legal Description
NMNM 052983	Luna County	RS-2477 Road	T.27S., R.10W., sec 31, SW ¹ / ₄ NE ¹ / ₄ .
NMLC 0057346	El Paso Natural Gas Co.	Oil/Gas Pipeline	T.24S.,R.12W., sec. 30, S ¹ / ₂ SE ¹ / ₄ , NE ¹ / ₄ SW ¹ / ₄ ; sec. 33, lots 6, 9, and 10, S ¹ / ₂ SE ¹ / ₄ .
NMNM 0027944	El Paso Natural Gas Co.	Electric Transmission Line	T.24S., R.12W., sec. 30, NE ¹ / ₄ SW ¹ / ₄ ,SE ¹ / ₄ SW ¹ / ₄ , SW ¹ / ₄ SE ¹ / ₄ ,SE ¹ / ₄ SE ¹ / ₄ ; sec. 31, NE ¹ / ₄ NE ¹ / ₄ ; sec. 33, lots 6, 9, and 10, S ¹ / ₂ SE ¹ / ₄ .
NMNM 127593	Valley Telephone Coop.	Fiber Optic Facility	T.29S.,R.13W.,sec. 17, lots 2 and 4.
NMNM 128839	R&R Royalty, Ltd.	Oil/Gas Lease	T. 29S., R.14W.,sec. 20, SW ¹ / ₄ NW ¹ / ₄ ,SW ¹ / ₄ NW ¹ / ₄ .
NMNM 128840	R&R Royalty, Ltd.	Oil/Gas Lease	T.29S.,R.14W.,sec. 22, S ¹ / ₂ NE ¹ / ₄ ,NE ¹ / ₄ NW ¹ / ₄ ,NW ¹ / ₄ NW ¹ / ₄ ,SW ¹ / ₄ NW ¹ / ₄ .
n/a	Continental Divide Trail	ROW Avoidance	T.32S., R.14W., sec. 25, S ¹ / ₂ ; sec. 26, NE ¹ / ₄ SE ¹ / ₄ .

Source: BLM 2015

The Mimbres RMP conformant would grant the proposed ROW within the Peloncillo and Big Hatchet Bighorn ROW avoidance area, and the Continental Divide National Scenic Trail ROW avoidance areas because the Proposed Action would be issued for existing roads, and those roads would not be improved beyond their existing footprint.

3.16.3.2 Alternative 2: No Action Alternative

Under the No Action Alternative, ROW applications would not be granted for the BLM ROW avoidance areas. Maintenance and repair activities within the ROW avoidance areas would not be completed by CBP and would not follow the procedures described in the proposed work plan. As such, most roadway repairs within the ROW avoidance areas would be reactive to immediate issues affecting these roadways and would not address long-term preventative maintenance requirements. Repairs performed on an as-needed basis would not be considered sustainable in quality because it would result in gradual degradation of these roadways. The No Action Alternative would result in greater impacts on ROW avoidance areas than the Proposed Action due to a reduction to physical access to these areas. Therefore, the No Action Alternative would result in greater short-term, and fewer long-term impacts on ROW avoidance areas when compared to the Proposed Action.

4. CUMULATIVE AND OTHER ADVERSE IMPACTS

Cumulative impacts can result from individually minor but collectively significant past present and foreseeable future actions. For the purposes of the analysis in this section, consideration was given to cumulative impacts of all CBP maintenance and repair of tactical infrastructure activities including maintenance and repair activities addressed under this EA, under previous NEPA documents and activities which were covered by a Secretary's waiver. In this instance, the type of activity that is at issue in this EA—the maintenance and repair of tactical infrastructure—is unique to CBP. Thus, these activities are unlikely to be subjected to the compounding activity of other entities, particularly when they take place, as they often do, in isolated areas and on an infrequent basis. To that same end, where maintenance of roads occurs, it is complimentary to and or in lieu of maintenance performed by others. The geographic scope of the analysis varies by resource area.

4.1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS IDENTIFIED WITH THE POTENTIAL FOR CUMULATIVE EFFECTS

Past, Present and Foreseeable Future Actions

Past and present actions are those CBP maintenance and repair actions that occurred within the geographic scope of cumulative effects prior to the development of this EA or are concurrently being undertaken by way of a Secretary's waiver or separate NEPA. Past actions have shaped the current environmental conditions in close proximity (i.e., within several miles) to existing tactical infrastructure. Therefore, the effects of identified past actions are now part of the existing environment, and are generally included in the affected environment described in **Section 3**. Present actions consist of the current ad hoc, as needed approach to the maintenance and repair of existing tactical infrastructure and future actions would consist of the maintenance and repair of all current tactical infrastructure including tactical infrastructure analyzed in this EA.

Additionally, it is reasonable to assume consideration of the maintenance and repair activities for future additional tactical infrastructure, including pedestrian and vehicle fence, roads, bridges, lighting, and other types of infrastructure mentioned in this EA, will be required in the El Paso Sector along the U.S./Mexico international border to address future border security needs.

Cumulative Tactical Infrastructure in New Mexico

As discussed in **Section 1** of this EA, CBP constructed a substantial amount of tactical infrastructure along the U.S./Mexico international border under the Secretary's waiver. CBP prepared ESPs to analyze the potential environmental impacts associated with construction and maintenance of tactical infrastructure covered by the waiver. Tactical infrastructure has also been constructed that was not covered under the waiver but was analyzed in other NEPA documents. **Table 4-1** summarizes recently constructed and existing tactical infrastructure within the USBP El Paso Sector.

Table 4-1. Descriptions of Other Recent Tactical Infrastructure in New Mexico

State	Description of Tactical Infrastructure Covered under Recent Waiver
New Mexico	<p>Total of approximately 85 miles of primary pedestrian and vehicle fence and 75 miles of roads:</p> <ul style="list-style-type: none"> • <i>HV-1, HV-2, HV-3.</i> 16.3 miles of vehicle fence and 19.8 miles of roads, within the Roosevelt Reservation west of Antelope Wells POE in Hidalgo County, New Mexico.¹ • <i>HV-4.</i> 6 miles of vehicle fence within the Roosevelt Reservation east and west of Antelope Wells POE in Hidalgo County, New Mexico.² • <i>JV-1, JV-2, JV-3.</i> 40 miles of vehicle fence and 8 miles of roads, within the Roosevelt Reservation west of the Santa Teresa POE in Luna and Doña Ana counties, New Mexico.¹ • <i>J-1, J-2, J3.</i> 8 miles of pedestrian fence. • <i>Other.</i> 6 miles of pedestrian fence, 16.5 miles of vehicle fence (Segments IV-2/IV-4B), 12 miles of lights, 2 miles of patrol road, 44 miles of drag road, and other ancillary infrastructure along the southern boundary of Luna County, New Mexico.^{1, 2, 3}
Texas	<p>Total of approximately 57 miles of primary pedestrian fence and permanent lights:</p> <ul style="list-style-type: none"> • <i>K-1B.</i> 0.63 miles of primary pedestrian fence and associated maintenance road along the eastern side of the canal in El Paso County, Texas.⁶ • <i>K-2A.</i> 9.6 miles of primary pedestrian fence along the flood-control levee and irrigation canals near Modesto-Gomez Park in El Paso, Texas.⁴ • <i>K-2B.</i> 2.4 miles of primary pedestrian fence between the flood-control levee and the Rio Grande near Rio Bosque Park in El Paso County, Texas.⁴ • <i>K-2C.</i> 6.9 miles of primary pedestrian fence and permanent lights on the south side of the canal in El Paso County, Texas.⁴ • <i>K-2D.</i> 9.4 miles of primary pedestrian fence between the canal and the levee with two bridge locations, and permanent lights in El Paso County, Texas.⁴ • <i>K-3.</i> 9.1 miles of primary pedestrian fence and permanent lights between the canal and the levee extending east of the Fabens POE in El Paso County, Texas.⁴ • <i>K-4.</i> 13.5 miles of primary pedestrian fence are planned near the Fabens POE in El Paso and Hudspeth counties, Texas.^{5 *} • <i>K-5.</i> 5.1 miles of primary pedestrian fence extending from west of the Fort Hancock POE to the Diablo Arroyo east of the Fort Hancock POE in Hudspeth County, Texas.⁴

Sources: 1. CBP 2010b, 2. CBP 2007a, 3. CBP 2007b, 4. CBP 2010c, 5. CBP 2008, 6. CBP 2011

Note: *Segment K-4 (Texas) has not yet been constructed, but it is included in the project total and considered in this cumulative effects analysis because it is a reasonably foreseeable future project. Additionally, construction of bridges and permanent lights are also planned.

This cumulative effects analysis focuses on all assets associated with the maintenance and repair of tactical infrastructure, because they are most relevant to the Proposed Action and are, therefore, the type of activities that are most likely to lead to additive or cumulative effects. Cumulative, long-term effects that would be expected as a result of maintenance and repair of the tactical infrastructure along the U.S./Mexico international border in New Mexico are identified and discussed in detail in this section. Segments K-2, K-3, K-4, and K-5 are within the State of Texas but included in this cumulative effects analysis because they are within the USBP El Paso Sector area of operation. Most construction activities have already occurred, so adverse effects

identified as a result of construction activities are not discussed unless some unique aspect of that project segment warrants further discussion. As noted in **Table 4-1**, Segment K-4 (Texas) has not yet been constructed (less than 14 miles of pedestrian fence).

The maintenance and repair activities analyzed in this cumulative impacts analysis would be the same as those described in **Section 2.3** of this EA.

4.2 CUMULATIVE ANALYSIS BY RESOURCE AREA

This section presents the resource-specific impacts related to the past, present, and reasonably foreseeable actions previously discussed in **Section 4.1**.

4.2.1 Alternative 1: Proposed Action

Implementation of the Alternative 1: Proposed Action is CBP's preferred alternative, which would result in maintenance and repair activities occurring via a periodic work plan. Maintenance and repair activities would be implemented based on prioritization and funding within the Sector. For the purpose of this analysis, it is assumed that all CBP tactical infrastructure—that is, tactical infrastructure within the scope of Proposed Action, tactical infrastructure covered by the Secretary's waiver and previous NEPA analysis, and future CBP tactical infrastructure—would be maintained via a periodic work plan. Implementation of the Proposed Action would not be expected to contribute to significant adverse cumulative effects.

4.2.2 Land Use

Most areas in the region of analysis along the U.S./Mexico international border in New Mexico are remote and contain agricultural, Federal, recreational, and open space land uses, many of which are managed or protected by the Federal government. The maintenance and repair of tactical infrastructure would have no effect on land use plans or policies. Maintenance and repair activities involve work on existing infrastructure, so there would be no change in long-term land uses. Cumulatively, the Proposed Action and other tactical infrastructure maintenance and repair activities would not contribute to adverse effects on land use.

4.2.3 Geology and Soils

The potential for effects on geology and soils is limited to areas where ground disturbance would occur within the region of analyses. As noted, all CBP tactical infrastructure would be subjected to centralized maintenance and repair planning. As a part of the centralized maintenance and repair planning, CBP's interdisciplinary maintenance and repair technical staff, including environmental staff, would participate in reviewing and approving a maintenance and repair work plan for all tactical infrastructure. The adoption of appropriate BMPs and proposed schedule for maintenance would ensure that erosion would be minimized and erosion-creating activities well dispersed throughout the region avoiding any pockets of intense activity. Cumulatively, this approach reduces the impacts of any ad hoc approach applied to past maintenance and repair activities and ensures future potential erosion is well-managed. Consequently, the maintenance and repair of past, present, and foreseeable future construction activity would be expected to result in short-term, minor, adverse effects that are localized to the

areas where ground disturbance has occurred. Use of herbicides could also result in localized short-term and long-term, adverse effects due to increased erosion and sedimentation from a decrease in vegetative cover but would be minor in nature due to adherence to the work plan. Long-term, beneficial effects would be expected from stabilization of roadways and drainage structures throughout the region of analysis. In the event that multiple maintenance and repair activities or any ground-disturbing activities were occurring simultaneously and in proximity, minor, short-term and negligible long-term, adverse, cumulative effects could occur.

4.2.4 Vegetation

Minor to moderate effects on native species vegetation and habitat and introductions of nonnative species are observable from past and present development and land use. In addition, indirect, adverse impacts and direct take of habitat occurred during construction of pedestrian and vehicle fence. Selective maintenance and repair activities would be expected to result in generally negligible to minor adverse effects on terrestrial and aquatic vegetation. All CBP tactical infrastructure would be a component of the selective maintenance and repair centralized work plan. Under the work plan, BMPs would ensure impacts on vegetation including the introduction of nonnative species would be minimized, and consequently the cumulative effects on vegetation resources would be considered negligible to minor.

4.2.5 Terrestrial and Aquatic Wildlife Resources

Minor to moderate effects on wildlife species have occurred from the additive effects of past and present actions, though there is quality habitat in the region of analysis to support wildlife. The Proposed Action does not involve new development activities, and effects on wildlife and aquatic species are limited to the existing footprint and immediately surrounding areas. Maintenance and repair activities would be expected to result in generally negligible to minor, adverse effects on wildlife and aquatic species. Operation of heavy equipment would generate temporary noise and could displace wildlife species. Under the work plan, which would cover all CBP tactical infrastructure in the region of analyses, BMPs would ensure impacts on terrestrial and aquatic wildlife resources (including migratory birds) would be minimized and therefore the cumulative impacts on terrestrial and aquatic wildlife resources would also be considered to be negligible to minor.

4.2.6 Threatened and Endangered Species

As discussed in **Section 3.6**, CBP has begun consultation with USFWS under Section 7 of the ESA regarding potential effects on listed species and designated critical habitat. Potential direct and indirect effects on federally listed species presented in this EA are based on currently available data. A separate effects analysis is developed under NEPA, but parallels impact determinations made for the Section 7 consultation process.

The designation of threatened or endangered implies that past activities have had major adverse effects on these species. Threatened and endangered species are commonly protected because their historic range and habitat have been reduced and will only support a small number of individuals. Some species have declined for natural reasons, but declines are commonly exacerbated or accelerated by anthropogenic influences. Anthropogenic influences that have

contributed to reduced range and habitat availability and reduced populations include agriculture, livestock grazing, urban development and road construction, overcollection, trampling and off-road vehicle use, hydrologic modifications, and altered fire regimes. Once natural vegetation and habitat are disturbed, introduced species can colonize more readily and out-compete native species. Some species occupy specific niches, so even minor alterations are not well-tolerated.

There are seven federally listed threatened or endangered species that are known to occur within the region of analysis. **Section 3.6** presents detailed discussions for each of these species. Cumulatively, present and future activities are likely to continue to affect threatened and endangered species. Potential threats include habitat loss from urbanization and road construction, trampling of protected plants, corridor fragmentation, and noise from increasingly urban areas. The ESA will continue to protect threatened and endangered species with the goal of recovery.

The Proposed Action would be expected to have negligible effects on threatened or endangered species that have been identified as potentially occurring in the region of analysis. Tactical infrastructure that was included under a Secretary's waiver or previous NEPA documentation was constructed under the supervision of biological monitors to ensure that BMPs and approved mitigation measures were followed for the protection of threatened and endangered species. No direct, adverse effects or takes on threatened and endangered species were identified in the Environmental Stewardship Summary Reports during construction of pedestrian and vehicle fence along the U.S./Mexico international border. Cumulatively, the Proposed Action and other tactical infrastructure maintenance and repair activities would be expected to have negligible contributions to adverse effects on threatened and endangered species.

4.2.7 Hydrology and Groundwater

Water quality and quantity of aquifers in the region of analysis have historically been affected adversely by surrounding land uses and water withdrawals. The Proposed Action does not involve new development activities; negligible to minor, indirect, adverse effects could occur on hydrology and groundwater systems from the maintenance and repair of roadways and drainage management structures. Cumulatively, effects on hydrology and groundwater from the maintenance and repair of tactical infrastructure would also be negligible to minor.

4.2.8 Surface Waters and Waters of the United States

Surface water quality of subwatersheds within the region of analysis has historically been significantly affected by various inputs including urban, agricultural and livestock runoff, and septic, wastewater, and industrial discharges. Some surface water bodies are consequently on USEPA's 303(d) list of impaired waters, as discussed in **Section 3.8** (USEPA 2010d). Historically significant wetland losses have resulted from draining, dredging, filling, leveling, and flooding for agricultural and urban development. Due to the arid climate, less than 1 percent of the land area in New Mexico contains wetlands; historically, more than one-third of original New Mexico wetlands have been modified or drained (USGS 1996).

The Proposed Action does not involve new development activities, but negligible to minor, indirect, adverse effects could occur on surface waters from the maintenance and repair of

roadways and drainage management structures. Under the work plan, which as noted will include all CBP tactical infrastructure, BMPs would ensure impacts on surface water and wetlands are minimized. Cumulatively, effects on surface waters and waters of the United States from the maintenance and repair of tactical infrastructure would be negligible to minor in the short term but with the consistent observance of the work plan could result in long term minor beneficial impacts on surface water quality.

4.2.9 Floodplains

Floodplain resources can be adversely impacted by development, increases in impervious areas, loss of vegetation, hydrological changes, and soil compaction. Historically, natural floodplains have been permanently altered by development activities and the construction of canals and reservoirs. The Proposed Action does not involve new development activities and would have no direct effects on floodplains. Vegetation control and debris removal could result in increased sedimentation into floodplains and drainage structures, but this would be a negligible indirect effect. Maintenance of other existing tactical infrastructure would be expected to have similar effects on floodplains as those described in this EA (see **Section 3.9.3**). Cumulatively, effects on floodplains from the maintenance and repair of tactical infrastructure would be negligible.

4.2.10 Air Quality

The USBP El Paso Sector operates within an AQCR that is in nonattainment for CO and PM₁₀. The Proposed Action would have short-term, minor, localized, adverse effects on air quality during maintenance and repair activities. Other construction and ground-disturbing activities could result in cumulative, adverse effects if there are multiple projects occurring at the same time and in the same vicinity within the region of analysis. The adoption of appropriate BMPs and proposed schedule for maintenance under a centralized work plan would ensure that dust creation would be minimized and dust-creating activities would be well dispersed throughout the region avoiding any pockets of intense activity. Moreover, because all CBP tactical infrastructure would be maintained via the work plan, it would be more likely, relative to the No Action Alternative, that BMPs will be incorporated into maintenance activities. Consequently, cumulative effects on local and regional air quality from the maintenance and repair of tactical infrastructure would be minor.

4.2.11 Noise

Cumulative effects on the noise environment occur when a project has noise emissions that are noticeably loud or that raise ambient noise levels. New noise sources are generally more noticeable in areas that have lower ambient noise levels. Cumulative effects on noise could occur where multiple projects are occurring at the same time and in the same vicinity because noise attenuates over distance.

The Proposed Action would have short-term, minor, localized, adverse effects as a result of the operation of heavy machinery to maintain and repair tactical infrastructure. Maintenance and repair of tactical infrastructure in remote areas would be distant from most other substantial noise-generating activities, so there is little potential for cumulative effects. Increased noise from the operation of machinery could combine with existing noise sources or other

construction-type activities to produce a temporary cumulative effect on noise-sensitive receptors. The combined noise of several projects occurring simultaneously in proximity might be heard over a greater distance, but effects would be short-term and localized. Under the centralized work plan, the adoption of appropriate BMPs and proposed schedule for maintenance would ensure that noise would be minimized and noise-creating activities would be well dispersed throughout the region avoiding any pockets of intense activity. Consequently, existing noise sources would continue to dominate the noise environment and, cumulatively, effects on the noise environment from the maintenance and repair of all tactical infrastructure would be negligible to minor.

4.2.12 Cultural Resources

Historically, long-term, major, adverse effects on cultural resources have likely occurred from the destruction or alteration of resources before their significance was realized. The Proposed Action involves maintenance and repair of tactical infrastructure along existing corridors and roadways. Tactical infrastructure construction for those projects identified in **Table 4-1** was performed under the supervision of cultural resources specialists to ensure known cultural resources would be protected and that any unanticipated discoveries would be identified and coordinated with the appropriate Federal, state, or tribal parties. CBP prepared detailed cultural resources reports and surveyed areas prior to construction, and ground-breaking activities were subsequently monitored. No effects on cultural resources were identified in the Environmental Stewardship Summary Reports for construction of pedestrian and vehicle fence along the U.S./Mexico international border because cultural resources were appropriately identified and mitigated prior to construction. The cumulative effects on cultural resources from the maintenance and repair of past present and foreseeable future tactical infrastructure projects when considered in conjunction with the Proposed Action would be negligible since all activity would occur within previously disturbed or environmentally cleared footprints.

4.2.13 Roadways and Traffic

Most of the region of analysis is remote; there are fewer and smaller roadways servicing remote areas. States and localities maintain or improve roadways as needed to service the population. This occurs more frequently and intensely in populated areas than in remote areas. The roadways affected by the Proposed Action are primarily unpaved roadways classified as FC-3 (graded earth) or FC-4 (two-track) (see **Appendix C**) that are not commonly used by the general public. Maintenance of other existing tactical infrastructure would be expected to have similar effects on roadways and traffic as those described in this EA (see **Section 3.13.3**). Cumulatively, effects on roadways and traffic from the maintenance and repair of tactical infrastructure would be negligible.

4.2.14 Hazardous Materials and Waste Management

Past development activities and land uses have resulted in multiple hazardous waste sites in the region of analysis. As discussed in **Section 3.14**, Federal and state regulations govern the storage, transportation, handling, use, generation, and disposal of hazardous substances, petroleum products, and hazardous and petroleum wastes. Some of the region of analysis is

heavily agricultural, so herbicides and pesticides are used and stored. Pesticide sales and use are also regulated.

The Proposed Action and other tactical infrastructure maintenance and repair activities would use small amounts of hazardous materials. Quantities of hazardous materials for individual projects would be relatively small, contained to areas associated with construction sites, and handled in accordance with all Federal and New Mexico laws and regulations. Localized, adverse effects could occur in the event of a spill, but the potential for cumulative, adverse effects is negligible. Cumulatively, effects on hazardous materials and waste management from the maintenance and repair of tactical infrastructure would be negligible.

4.2.15 Socioeconomic Resources, Environmental Justice, and Protection of Children

The populations of Luna and Doña Ana counties have almost doubled over the past two decades. The Proposed Action would provide only minor, short-term, beneficial effects while maintenance and repair activities are occurring and would have little potential for cumulative effects on socioeconomic resources. Maintenance and repair activities of tactical infrastructure, including the Proposed Action and other projects identified in **Table 4-1**, would result in long-term, beneficial cumulative effects by allowing USBP agents to patrol border areas effectively. This would be considered cumulatively beneficial for the safety of all residents, including children, in the southern border area.

4.2.16 Alternative 2: No Action Alternative

The No Action Alternative (Alternative 2) would result in reactive maintenance and repair of tactical infrastructure within 25 miles of the U.S./Mexico international border in New Mexico. As discussed in **Section 3**, generally, the No Action Alternative would be expected to have a greater potential for adverse effects than the Proposed Action on soils, vegetation, terrestrial and aquatic wildlife, threatened and endangered species, groundwater, surface water and waters of the United States, floodplains, air quality, noise, cultural resources, roadways and traffic, hazardous materials and waste management, and socioeconomic resources. Under the No Action Alternative, maintenance and repair work would be completed on an as-needed basis without a centralized planning process that establishes maintenance and repair specifications and standardizes BMPs. The lack of a centralized planning effort would make it far more difficult for CBP to prevent the gradual degradation of all tactical infrastructure. This gradual degradation of past, present, and foreseeable future tactical infrastructure projects when considered in conjunction with the No Action Alternative could result in adverse impacts on resources well beyond the intended footprint of proposed maintenance and repair. Degraded roads and associated drainage features could lead to more adverse offsite erosion and sedimentation with an unintended increase in impacts on associated water quality and species habitat. There is a greater potential for emergency repairs when BMPs might not be implemented. Under such conditions, there is also a greater likelihood of repair activities occurring beyond the proposed footprint with a corresponding potential to adversely affect cultural resources and species habitat that have not been previously surveyed. Maintenance and repair activities could also be more sporadic under the No Action Alternative, which would be more adverse on socioeconomic resources than the Proposed Action. Effects on land use under the No Action Alternative would be the same as effects under the Proposed Action.

Cumulative effects on soils, vegetation, terrestrial and aquatic wildlife, threatened and endangered species, groundwater, surface water and waters of the United States, floodplains, air quality, noise, cultural resources, roadways and traffic, hazardous materials and waste management, and socioeconomics under the No Action Alternative would be expected to be more adverse than those discussed under the Proposed Action. Cumulative effects on land use would be essentially the same as those discussed under the Proposed Action. Implementation of the No Action Alternative would not however be expected to contribute to significant adverse, cumulative effects when considered with other recently completed or planned future projects in the region of analysis.

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5. REFERENCES

- Bailey 1995 Bailey, R. G. 1995. "Description of the Ecoregions of the United States, 2nd edition." Available online <www.fs.fed.us/land/ecosysmgmt/>. Accessed January 2011.
- BLM 2007 Bureau of Land Management (BLM). 2007. *NMAC Wildfire Risk Reduction Grant Program Biological Assessment*. Prepared by Bureau of Land Management. May 2007
- BLS 2010 Bureau of Labor Statistics (BLS). 2010. "Local Area Unemployment Rates." U.S. Department of Labor. Available online <<http://www.bls.gov/lau/#tables>>. Accessed 30 December 2010.
- Brown 1994 Brown, D.E. 1994. *Biotic Communities Southwestern United States and Northwestern Mexico*. Salt Lake City, Utah. University of Utah Press.
- CBP 2007a CBP. 2007. *Final Supplemental Environmental Assessment of U.S. Department of Homeland Security, Office of Border Patrol, Proposed Tactical Infrastructure, Replacement of 3 miles of Permanent Vehicle Barrier With Primary Fence, El Paso Sector, Deming Station, New Mexico*. July 2007
- CBP 2007b U.S. Customs and Border Protection (CBP). 2007. *Final Environmental Assessment of Proposed Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, Office of Border Patrol, El Paso Sector, Deming Station, New Mexico*. April 2007.
- CBP 2008 CBP. 2008. *Environmental Stewardship Plan for Construction, Operation, and Maintenance of Tactical Infrastructure, U.S. Border Patrol, El Paso Sector, Texas, El Paso, Ysleta, Fabens and Fort Hancock Stations Areas of Operation*. July 2008.
- CBP 2010a CBP. 2010. CBP Border Patrol Overview. Updated 3 September 2008. Available online: <http://www.cbp.gov/xp/cgov/border_security/border_patrol/who_we_are.xml>. Accessed 5 November 2010.
- CBP 2010b CBP. 2010. *Environmental Stewardship Summary Report for the Construction, Operation, and Maintenance of Vehicle Fence and Related Tactical Infrastructure, Sections HV-1/2/3, HV-4, and JV-1A/1B/2/3, Lordsburg Station and Santa Teresa Station, U.S. Border Patrol El Paso Sector, New Mexico*. June 2010.

- CBP 2010c CBP. 2010. *Environmental Stewardship Summary Report of the Construction, Operation, and Maintenance of Tactical Infrastructure Pedestrian Fence Segments K-2 through K-5, U.S. Border Patrol El Paso Sector, Texas*. May 2010.
- CBP 2011 CBP. 2011. *Environmental Stewardship Plan for Construction, Operation, and Maintenance of Tactical Infrastructure, Segment K1B, U.S. Border Patrol, El Paso Sector, El Paso Station, Texas*. October 2011.
- CEQ 2007 Council on Environmental Quality (CEQ). 2007. *Aligning National Environmental Policy Act Processes with Environmental Management Systems; A Guide for NEPA and EMS Practitioners*.
- Church and Hokanson 2010 Church, Michael and Jeffrey Hokanson. 2010. *Summary of Cultural Resources Management Reports from the Construction of Tactical Infrastructure, U.S.-Mexico International Border, California, Arizona, New Mexico, and Texas*. Prepared for Customs and Border Protection, U.S. Department of Homeland Security.
- Contaldo 1991 Contaldo, G.J. and J.E. Miller. 1991. *Earth Fissures and Land Subsidence of the Mimbres Basin, Southwestern New Mexico, USA*. 1991. Available online: <http://iahs.info/redbooks/a200/iahs_200_0301.pdf>. Accessed December 27, 2010.
- Cordell 1984 Cordell, Linda. 1984. *Prehistory of the Southwest*. Academic Press, Orlando.
- Davis 2008 Davis, M.A. 2008. *Population Dynamics Of The New Mexico Ridge-Nosed Rattlesnake (Crotalus Willardi Obscurus) In The Madrean Archipelago: Threatened Species In A Changing Ecosystem*. Thesis. Colorado State University, Fort Collins, Colorado.
- DeBano et al. 1995 DeBano, Leonard F, P.H. Folliott, A. Ortega-Rubio, G.J. Gottfried, R.H. Hamre, and C.B. Edminster, Technical Coordinators. 1995. *Biodiversity And Management Of The Madrean Archipelago: The Sky Islands Of Southwestern United States And Northwestern Mexico*. Prepared by U.S. Department of Agriculture, Forest Service, Fort Collins, Colorado.
- Degenhardt et al. 1996 Degenhardt, W. G., C. W. Painter, and A. H. Price. 1996. *Amphibians and Reptiles of New Mexico*. Albuquerque, New Mexico. University of New Mexico Press.
- Delaney et al. 1999 Delaney, K.D., Grubb, T.G., Beier, P., Pater, L.L., Reiser, M.H. 1999. *Effects of Helicopter Noise on Mexican Spotted Owls*. *Journal of Wildlife Management* 63(1):60-76. 1999.

- DOE and
USFWS 2007 Department of Defense (DOD) and U.S. Fish and Wildlife Service (USFWS). 2007. Northern Aplomado Falcon Fact Sheet. Available online <http://www.fws.gov/endangered/esa-library/pdf/aplomado_falcon_fact_sheet.pdf>. Accessed April 1, 2014.
- EIA 2010 U.S. Department of Energy/Energy Information Administration (EIA). 2010. State Carbon Dioxide Emissions, Emissions Detail for the State of New Mexico. Released date: 26 October 2010. Available online <http://www.eia.doe.gov/oiaf/1605/state/state_emissions.html>. Accessed 17 January 2011.
- Fagan 2005 Fagan, Brian. 2005. *Ancient North America*. Fourth edition. Thames & Hudson, London.
- FedCenter 2010 FedCenter.gov (FedCenter). 2010. “FedCenter – EO 13514.” Last updated on 13 September 2010. Available online <<http://www.fedcenter.gov/programs/eo13514/>>. Accessed 31 December 2010.
- Felger and
Wilson 1995 Felger, R.S. and M.F. Wilson, eds. 1995. “Northern Sierra Madre Occidental and its Apachian outliers: a neglected center of biodiversity.” In DeBano, L.F., Folliott, P.F. and R.H. Hamre, eds. *Biodiversity and Management of the Madrean Archipelago: the Sky Islands of the Southwestern United States and Northwestern Mexico*. Prepared by USDA Forest Service, Fort Collins, Colorado.
- FEMA 1994 Federal Emergency Management Agency (FEMA). 1994. A Unified National Program for Floodplain Management. Available online: <<http://www.fema.gov/library/viewRecord.do?id=4150>>. Accessed 22 December 2010.
- FEMA 2010 FEMA. 2010. “Map Service Center”. Available online: <https://hazards.fema.gov/femaportal/wps/portal!/ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0>. Accessed December 21, 2010.
- Griffith et al.
2006 Griffith, G.E., J.M. Omernik, M.M. McGraw, G.Z. Jacobi, C.M. Canavan, T.S. Schrader, D. Mercer, R. Hill, and B.C. Moran. 2006. Ecoregions of New Mexico (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,400,000). Available online <http://www.epa.gov/wed/pages/ecoregions/nm_eco.htm>. Accessed December 29, 2010.

- Hawley et al. 2000 Hawley, John W., Barry J. Hibbs, John F. Kennedy, Bobby J. Creel, Marta D. Remmenga, Molly Johnson, Monica M. Lee, and Phil Dinterman. 2000. Trans-International Boundary Aquifers in Southwest New Mexico. Technical Report prepared for U.S. Environmental Protection Agency - Region 6 and the International Boundary and Water Commission. 2000. Available online: <<http://wrrri.nmsu.edu/publish/otherrpt/swnm/DjVu/downl.html>>. Accessed December 29, 2010.
- McCain and Childs 2008 McCain, E. B., and J. L. Childs. 2008. "Evidence of Resident Jaguars (*Panthera onca*) in the Southwestern United States and The Implications For Conservation." *Journal of Mammalogy* 89:1-10.
- Menke and Hayes 2003 Menke, K.A. and C.L. Hayes. 2003. *Evaluation of the Relative Suitability of Potential Jaguar Habitat in New Mexico*. Prepared by New Mexico Department of Game and Fish, Albuquerque, New Mexico.
- Meyer and Williams 2005 Meyer, R. A., and S. O. Williams III. 2005. Recent nesting and current status of Aplomado Falcon (*Falco femoralis*) in New Mexico. *North American Birds* 59:352-356.
- NatureServe 2010a NatureServe. 2010. NatureServe Explorer: An Online 2008 encyclopedia of life [web application]. Version 7.0. NatureServe, Arlington, Virginia. Available online <<http://www.natureserve.org/explorer/>>. Accessed 27 December 2010.
- NatureServe 2010b NatureServe. 2010. What it an Element Occurrence? PowerPoint. <http://www.natureserve.org/prodServices/biotics/BioticsDoc/Presentations/What_is_an_Element_Occurrence.ppt>.
- Neary and Michael undated Neary, D.G. and J.L. Michael. Undated. Effect of Herbicides on Soil Productivity and Water Quality. Available online <http://www.srs.fs.usda.gov/pubs/misc/r8_mb023-neary001.pdf>. Accessed 4 January 2011.
- NMBGMR 2008a New Mexico Bureau of Geology and Mineral Resources (NMBGMR). 2008. "Virtual Geologic Tour of New Mexico." Available online <<http://geoinfo.nmt.edu/tour/>>. Accessed 21 December 2010.
- NMBGMR 2008b New Mexico Bureau of Geology and Mineral Resources (NMBGMR). 2008. *Geologic Hazards*. Available online: <<http://geoinfo.nmt.edu/geoscience/hazards/home.html>>. Accessed 29 December 2010.
- NMDGF 2006 New Mexico Department of Game and Fish (NMDGF). 2006. Comprehensive Wildlife Conservation Strategy for New Mexico. Available online: <http://fws-nmcfwru.nmsu.edu/cwcs/New_Mexico_CWCS.htm>. Accessed December 29, 2010.

- NMDGF 2008 NMDGF. 2008. *Threatened and Endangered Species of New Mexico 2008 Biennial Review*. Prepared by New Mexico Department of Game and Fish, Santa Fe, New Mexico. December 2008.
- NMDGF 2010 NMDGF. 2010. Biota Information System of New Mexico. New Mexico Department of Game and Fish electronic database, BISON, Version January 2010, Santa Fe, New Mexico. Available online <<http://www.bison-m.org/index.aspx>>. Accessed 4 January 4, 2011.
- NMDGF 2012 NMDGF. 2012. *Threatened and Endangered Species of New Mexico 2012 Biennial Review*. Prepared by New Mexico Department of Game and Fish, Santa Fe, New Mexico. October 2012.
- NMDGF 2014 NMDGF. 2014. *Threatened and Endangered Species of New Mexico Biennial Review*. Prepared by New Mexico Department of Game and Fish, Santa Fe, New Mexico. Draft.
- NMDOA 2010 New Mexico Department of Agriculture (NMDOA). 2010. Soil and Water Conservation Districts. Available online: <<http://www.nmda.nmsu.edu/natural-resources/soil-and-water-conservation-program>>. Accessed 29 December 2010.
- NMDOT 2005 New Mexico Department of Transportation (NMDOT). 2005. Official Highway Map of New Mexico. Available online: <http://newmexico.org/map/images/State_map020220052.pdf>. Accessed 29 December 2010.
- NMED 2010a New Mexico Environmental Department (NMED), Drinking Water Bureau. 2010. "Uranium". Available online: <<http://www.nmenv.state.nm.us/dwb/contaminants/Uranium.htm>>. Accessed December 29, 2010.
- NMED 2010b NMED. 2010. "Lower Rio Grande Project". Available online: <<http://www.nmenv.state.nm.us/swqb/LowerRioGrande/>>. Accessed December 29, 2010.
- NMSE 2006 New Mexico Office of the State Engineer (NMSE). 2006. "Managing a Limited Resource-Fresh Water". *The Water Source: Volume 1 Issue 1*. Available online: <<http://www.seo.state.nm.us/PDF/ActiveWater/LowerRioGrande/Water-SourceVoll-Iss1-FallWinter.pdf>>. Accessed December 29, 2010.
- NMSE 2010 NMSE. 2010. "Underground Water Basins in New Mexico." Available online: <http://www.ose.state.nm.us/PDF/Maps/underground_water.pdf>. Accessed December 30, 2010.

- NRCS undated a Natural Resources Conservation Service (NRCS). Undated. *Eight-Digit Hydrologic Units – Alphabetically*. Available online: <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/dma/?cid=nrcs143_013731>. Accessed 29 October 2012.
- NRCS undated b NRCS. Undated. *Rapid Watershed Assessment: Landreth-Monument Draws*. Available online: <<http://www.nm.nrcs.usda.gov/soils/watershed/RWAs/Landreth-MonumentDraws.pdf>>. Accessed 29 October 2012.
- NRCS 2011 NRCS. 2011. “Playas Lake Watershed.” Available online: <<http://www.nm.nrcs.usda.gov/programs/csp/fy06/playas-lake.html>>. Accessed January 4, 2011.
- Propst 1999 Propst, D.L. 1999. *Threatened and Endangered Fishes of New Mexico*. Technical Report, No. 1. Prepared by New Mexico Department of Game and Fish, Santa Fe, New Mexico.
- Schaub et al. 2008 Schaub, A., J. Ostwald, and B. Siemers. 2008. Foraging Bats Avoid Noise. *The Journal of Experimental Biology* 211, 3174-3180. Available online <<http://jeb.biologists.org/cgi/content/full/211/19/3174>>. Accessed December 30, 2009.
- Seymour 1989 Seymour, K. L. 1989. “*Panthera onca*.” *Mammalian Species* 340:1–9.
- Sogge et al. 1997 Sogge, M.K., D. Ahlers, and S.J. Sferra. 1997. *A Natural History Summary And Survey Protocol For The Southwestern Willow Flycatcher*. U.S. Geological Survey Techniques and Methods 2A-10. Prepared by U.S. Geological Survey, Reston, Virginia.
- Stone et al. 2009 Stone, E., G. Jones, and S. Harris. 2009. Street Lighting Disturbs Commuting Bats. *Current Biology* 19:1123–1127.
- TRC 2010 TRC. 2010. Memorandum, Summary of Findings-2010 Southwestern Willow Flycatcher and Yellow-billed Cuckoo Surveys. August 4, 2010.
- TSHA 2011 Texas State Historical Association (TSHA). 2011. “Rio Grande.” Available online: <<http://www.tshaonline.org/handbook/online/articles/rnr05>>. Accessed January 4, 2011.
- U.S. Army 2001 U.S. Army. 2001. *Automated IFSAR Terrain Analysis System: Basin and Range Province*. Available online <http://giigt.tec.army.mil/publications/ifsar/lafinal08_01/five/5.1.6_frame.htm>. Accessed 28 December 2010.

U.S. Census Bureau 1990 U.S. Census Bureau. 1990. American Fact Finder. 1990 Summary Tape File 1 (STF 1) - 100-Percent data. Available online <http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_tabId=DEC2&_submenuId=datasets_1&_lang=en&_ts=203863707222>. Accessed 20 December 2010.

U.S. Census Bureau 2000 U.S. Census Bureau. 2000. American Fact Finder. Census 2000 Summary File 1 (SF 1) 100-Percent Data and Summary File 3 (SF 3) - Sample Data. Available online <http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_submenuId=&_lang=en&_ts=>>. Accessed 20 December 2010.

U.S. Census Bureau 2009 U.S. Census Bureau. 2009. American Fact Finder. American Community Survey 5-Year Estimates, 2005-2009. Available online <http://factfinder.census.gov/servlet/DTGeoSearchByListServlet?ds_name=ACS_2009_5YR_G00_&_lang=en&_ts=312470967539>. Accessed 20 December 2010.

USACE 1987 U.S. Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetland Delineation Manual. Wetlands Research Program Technical Report Y-87-1. 1987. Available online: <<http://el.ercd.usace.army.mil/wetlands/pdfs/wlman87.pdf>>. Accessed 5 January 2011.

USACE 1994a USACE. 1994. *Programmatic Environmental Impact Statement for JTF-6 Activities along the U.S./Mexico Border*. August 1994.

USACE 1994b USACE. 1994. *Environmental Baseline: New Mexico Land Border, Volume Three*. January 1994.

USEPA 1971 U.S. Environmental Protection Agency (USEPA). 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. 31 December 1971.

USEPA 1981a USEPA. 1981. Noise Effects Handbook. A Desk Reference to Health and Welfare Effects of Noise. Office of Noise Abatement and Control. October 1979, Revised July 1981. Available online: <<http://nonoise.org/epa/Roll7/roll7doc27.pdf>>. Accessed 3 March 2010.

USEPA 1981b USEPA. 1981. "Noise and its Measurement." January 1981. Available online: <<http://nonoise.org/epa/Roll19/roll19doc49.pdf>>. Accessed 3 March 2010.

USEPA 2001a USEPA. 2001. Functions and Values of Wetlands. EPA Publication 843-F-01-002c. Available online: <http://www.epa.gov/owow/wetlands/pdf/fun_val.pdf>. Accessed 4 January 2011.

- USEPA 2001b USEPA. 2001. Threats to Wetlands. EPA Publication 843-F-01-002d. Available online: <<http://www.epa.gov/owow/wetlands/pdf/threats.pdf>>. Accessed 4 January 2011.
- USEPA 2007 USEPA. 2007. “Level III Ecoregions of the Continental United States.” Available online: <<http://www.epa.gov/wed/pages/ecoregions.htm>>. Accessed 27 December 2010.
- USEPA 2010a USEPA. 2010. “Clean Water Act Definitions of ‘Waters of the United States.’” Available online: <http://www.epa.gov/owow_keep/wetlands/guidance/CWAwaters.html>. Accessed 4 January 2011.
- USEPA 2010b USEPA. 2010. “Clean Water Act.” Available online: <<http://www.thecre.com/fedlaw/legal14water/cwa.htm>>. Accessed 4 January 2011.
- USEPA 2010c USEPA. 2010. “Section 10 of the Rivers and Harbors Appropriation Act of 1899.” Available online: <<http://water.epa.gov/lawsregs/guidance/wetlands/sect10.cfm>>. Accessed 4 January 2011.
- USEPA 2010d USEPA. 2010. “Water Quality Assessment and Total Maximum Daily Loads Information.” Available online: <http://www.water.ca.gov/groundwater/bulletin118/colorado_river.cfm>. Accessed December 29, 2010.
- USEPA 2010e USEPA. 2010. *Part 81 – Designation of Areas for Air Quality Planning Purposes – Table of Contents, Subpart C – Section 107 Attainment Status Designations, Section 81.344, Texas*. Last updated on 16 June 2010. Available online <http://edocket.access.gpo.gov/cfr_2002/julqtr/pdf/40cfr81.344.pdf>. Accessed 17 January 2011.
- USEPA 2010f USEPA. 2010. *Part 81 – Designation of Areas for Air Quality Planning Purposes – Table of Contents, Subpart C – Section 107 Attainment Status Designations, Section 81.332, New Mexico*. Last updated on 16 June 2010. Available online <http://edocket.access.gpo.gov/cfr_2002/julqtr/pdf/40cfr81.332.pdf>. Accessed 17 January 2011.
- USEPA 2010g USEPA. 2010. *Part 81 – Designation of Areas for Air Quality Planning Purposes – Table of Contents, Subpart C – Section 107 Attainment Status Designations, Section 81.303, Arizona*. Last updated on 16 June 2010. Available online <http://edocket.access.gpo.gov/cfr_2002/julqtr/pdf/40cfr81.303.pdf>. Accessed 17 January 2011.

- USEPA 2011a USEPA. 2011. List of EPA regulated facilities in Envirofacts, search query “Border Patrol.” January 2011. Available online: <http://oaspub.epa.gov/enviro/fii_master.fii_retrieve?fac_search=primary_name&fac_value=border+patrol&fac_search_type=Containing&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&epa_region_code=&sic_code=&all_programs=YES&sic_code_desc=&chem_name=&chem_search=Beginning+With&cas_num=&page_no=1&output_sql_switch=FALSE&report=1&database_type=ENVIROFACTS>. Accessed 14 January 2011.
- USEPA 2011b USEPA. 2011. USEPA Region 6 Superfund Program, El Paso County/Doña Ana County Metals. Current as of 2008. Available online: <http://www.epa.gov/region6/6sf/texas/el_paso/tx_el_paso_index.html>. Accessed 14 January 2011.
- USEPA 2012a USEPA. 2012. “Surf Your Watershed: New Mexico.” Available online: <<http://cfpub.epa.gov/surf/state.cfm?statepostal=NM>>. Accessed 29 October 2012.
- USEPA 2012b USEPA. 2012. “National Ambient Air Quality Standards.” Last updated on 4 December 2012. Available online: <<http://www.epa.gov/air/criteria.html>>. Accessed 12 November 2013.
- USFS 2010 U.S. Forest Service (USFS). 2010. Available online: <<http://www.fs.fed.us/rm/ecoregions/docs/publications/delineation-ecosystem-regions.pdf>>. Accessed January 2011.
- USFWS 1985 U.S. Fish and Wildlife Service (USFWS). 1985. *New Mexico Ridge-nosed Rattlesnake Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 1994a USFWS. 1994. *Fishes of the Rio Yaqui Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 1990 USFWS. 1990. *Aplomado Falcon Recovery Plan*. U.S. Fish and Wildlife Service. Albuquerque, New Mexico.
- USFWS 1994b USFWS. 1994. *Mexican Long-nosed Bat (Leptonycteris nivalis) Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 1995 USFWS. 1995. *Recovery Plan for the Mexican Spotted Owl (Strix occidentalis lucida)*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

- USFWS 2000 USFWS. 2000. “General Species Information: Jaguar.” Available online <<http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Jaguar%20RB.pdf>>. Accessed 23 July 2010.
- USFWS 2001 USFWS. 2001. “General Species Information: Lesser long-nosed bat.” Available online: <<http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Lesser%20Long-nosed%20bat%20RB.pdf>>. Accessed 23 July 2008.
- USFWS 2002a USFWS. 2002. *Sonora Tiger Salamander Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Phoenix, Arizona.
- USFWS 2002b USFWS. 2002. *Southwestern Willow Flycatcher (Empidonax traillii extimus) Final Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 2004 USFWS. 2004. *Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl; Final Rule*. Prepared by U.S. Fish and Wildlife Service. *Federal Register* Vol. 69, No. 168.
- USFWS 2007a USFWS. 2007. *Lesser Long-nosed Bat (Leptonycteris curasoae yerbabuenae), 5-Year Review: Summary and Evaluation*. Prepared by U.S. Fish and Wildlife Service, Phoenix, Arizona.
- USFWS 2007b USFWS. 2007. *Chiricahua Leopard Frog (Rana chiricahuensis) Recovery Plan*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 2007c USFWS. 2007. *Biological Opinion for Pedestrian Fence in Pima, Santa Cruz, and Cochise counties*. Prepared by U.S. Fish and Wildlife Service, Phoenix, Arizona.
- USFWS 2008 USFWS. 2008. *Chiricahua Leopard Frog Recovery Team West-Central Stakeholders Group Meeting Silver City*. Prepared by U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USFWS 2011 USFWS. 2011. “Questions and Answers: Chiricahua Leopard Frog Critical Habitat and Listing Proposal” Available online <<http://www.fws.gov/southwest/es/arizona/CLF.htm>>. Accessed January 05, 2012.
- USFWS 2012 USFWS. 2012. *Recovery Outline for the Jaguar (Panthera onca)*. Southwest Region, U.S. Fish and Wildlife Service, Albuquerque, New Mexico. April 2012.
- USGS 1995a United States Geological Survey (USGS). 1995. *Ground Water Atlas of the United States, California, Nevada*. Available online: <http://pubs.usgs.gov/ha/ha730/ch_b/index.html>. Accessed 27 December 2010.

- USGS 1995b USGS. 1995. Ground Water Atlas of the United States, Arizona, Colorado< Utah, New Mexico. Available online: <http://pubs.usgs.gov/ha/ha730/ch_c/index.html>. Accessed December 27, 2010.
- USGS 1996 USGS. 1996. "Loss of Wetlands in the Southwestern United States". Available online: <<http://geochange.er.usgs.gov/sw/impacts/hydrology/wetlands/>>. Accessed December 21, 2010.
- USGS 2000 USGS. 2000. *Map of Quaternary Faults and Folds in New Mexico and Adjacent Areas*. Available online: <<http://pubs.usgs.gov/of/1998/ofr-98-0521/ofr-98-0521so.pdf>>. Accessed 28 December 2010.
- USGS 2007 USGS. 2007. Digital Animal-Habitat Models for the Southwestern United States. Version 1.0. U.S. Geological Service National Gap Analysis Program. Center for Applied Spatial Ecology, New Mexico Cooperative Fish and Wildlife Research Unit, New Mexico State University. Available online <<http://www.gap.uidaho.edu/landcoverviewer.html>>. Accessed 23 December 2010.
- USGS 2008 USGS. 2008. New Mexico Seismic Hazard Map. Available online: <http://earthquake.usgs.gov/earthquakes/states/new_mexico/hazards.php>. Accessed 28 December 2010.
- USGS 2009 USGS. 2009. *USGS Earthquake Hazards Program: Database Search*. Available online: <<http://geohazards.cr.usgs.gov/cfusion/qfault/index.cfm>>. Accessed 29 December 2010.
- USGS 2010a USGS. 2010. Physiographic Provinces of California. Available online: <<http://education.usgs.gov/california/provinces.htm>>. Accessed 22 December 2010.
- USGS 2010b USGS. 2010. "Contemporary Land-Cover Change from 1973 to 2000 in the Chihuahua Deserts Ecoregion." Available online: <<http://landcovertrends.usgs.gov/west/eco24Report.html>>. Accessed December 28, 2010.
- USGS 2010c USGS. 2010. "Boundary Descriptions and Names of Regions, Subregions, Accounting Units, and Cataloging Units." Available online: <http://water.usgs.gov/GIS/huc_name.html>. Accessed December 27, 2010.
- WRCC undated Western Regional Climate Center (WRCC). Undated. *Climate of New Mexico*. Available online: <<http://www.wrcc.dri.edu/narratives/NEWMEXICO.htm>>. Accessed 29 December 2010.

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APPENDIX A

Applicable Laws and Executive Orders



APPENDIX A

Applicable Laws and Executive Orders

Table A-1. Applicable Laws and Executive Orders ¹

Title, Citation	Summary
Archaeological and Historical Preservation Act, 16 U.S.C. 469	Protects and preserves historical and archaeological data. Requires Federal agencies to identify and recover data from archaeological sites threatened by a proposed action(s).
Clean Air Act, 42 U.S.C. 7401–7671q, as amended	Establishes Federal standards for air pollutants. Prevents significant deterioration in areas of the country where air quality fails to meet Federal standards.
Clean Water Act, 33 U.S.C. 1251–1387 (also known as the Federal Water Pollution Control Act)	Comprehensively restores and maintains the chemical, physical, and biological integrity of the nation’s waters. Implemented and enforced by the U.S. Environmental Protection Agency (USEPA).
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601–9675 (also known as “Superfund”)	Provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and cleanup of inactive hazardous substance disposal sites. Establishes a fund financed by hazardous waste generators to support cleanup and response actions.
Endangered Species Act of 1973, 16 U.S.C. 1531–1543, as amended	Protects threatened, endangered, and candidate species of fish, wildlife, and plants and their designated critical habitats. Prohibits Federal action that jeopardizes the continued existence of endangered or threatened species. Requires consultation with U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries and a biological assessment when such species are present in an area affected by Federal government activities.
Fish and Wildlife Coordination Act, 16 U.S.C. 661–667e, as amended	Authorizes the Secretaries of the Interior and Commerce to provide assistance to and cooperate with Federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. The 1946 amendments require consultation with the USFWS and the state fish and wildlife agencies involving any waterbodies that are proposed or authorized, permitted, or licensed to be impounded, diverted, or otherwise controlled or modified by any agency under a Federal permit or license.
Migratory Bird Treaty Act, 16 U.S.C. 703–712	Implements various treaties for protecting migratory birds; the taking, killing, or possession of migratory birds is unlawful.
National Environmental Policy Act of 1969, 42 U.S.C. 4321–4370e, as amended	Requires Federal agencies to use a systematic approach when assessing environmental impacts of government activities. Proposes an interdisciplinary approach in a decisionmaking process designed to identify unacceptable or unnecessary impacts to the environment.

Title, Citation	Summary
National Historic Preservation Act, 16 U.S.C. 470–470x-6	Requires Federal agencies to consider the effect of any federally assisted undertaking or licensing on any district, site, building, structure, or object eligible for inclusion, or listed in the National Register of Historic Places (NRHP). Provides for the nomination, identification (through NRHP listing), and protection of significant historical and cultural properties.
Noise Control Act of 1972, 42 U.S.C. 4901–4918	Establishes a national policy to promote an environment free from noise that jeopardizes health and welfare. Authorizes the establishment of Federal noise emissions standards and provides relevant information to the public.
Occupational Safety and Health Act of 1970, 29 U.S.C. 651–678	Establishes standards to protect workers, including standards on industrial safety, noise, and health standards.
Resource Conservation and Recovery Act, 42 U.S.C. 6901–6992k	Establishes requirements for safely managing and disposing of solid and hazardous waste and underground storage tanks.
Executive Order (EO) 12372, <i>Intergovernmental Review of Federal Programs</i> , July 14, 1982, 47 FR 30959 (6/16/82), as supplemented	Requires Federal agencies to consult with state and local governments when proposed Federal financial assistance or direct Federal development impacts interstate metropolitan urban centers or other interstate areas.
EO 12898, <i>Environmental Justice</i> , February 11, 1994, 59 FR 7629 (2/16/94), as amended	Requires certain Federal agencies, to the greatest extent practicable permitted by law, to make environmental justice part of their missions by identifying and addressing disproportionately high and adverse health or environmental effects on minority and low-income populations.
EO 13423, <i>Strengthening Federal Environmental, Energy, and Transportation Management</i> , January 24, 2007, 72 FR 3919 (January 26, 2007)	Requires the head of each Federal agency to implement sustainable practices for energy efficiency, greenhouse gas emissions avoidance or reduction, and petroleum products use reduction; renewable energy, including bioenergy; water conservation; acquisition; pollution and waste prevention and recycling; reduction or elimination of acquisition and use of toxic or hazardous chemicals; high performance construction, lease, operation, and maintenance of buildings; vehicle fleet management; and electronic equipment. Requires more widespread use of Environmental Management Systems as the framework with which to manage and continually improve these sustainable practices.

Title, Citation	Summary
EO 13514, <i>Federal Leadership in Environmental, Energy, and Economic Performance</i> , October 5, 2009, 74 FR 52117 (October 8, 2009)	Directs Federal agencies to improve water use efficiency and management; implement high performance sustainable Federal building design, construction, operation, and management; and advance regional and local integrated planning by identifying and analyzing impacts from energy usage and alternative energy sources. EO 13514 also directs Federal agencies to prepare and implement a Strategic Sustainability Performance Plan to manage its greenhouse gas (GHG) emissions, water use, pollution prevention, regional development and transportation planning, and sustainable building design; and promote sustainability in its acquisition of goods and services. Section 2(g) requires new construction, major renovation, or repair and alteration of buildings to comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings.
EO 13175, <i>Consultation and Coordination with Indian Tribal Governments</i> , November 6, 2000, 65 FR 67249 (11/09/00)	Requires Federal agencies to establish an accountable process that ensures meaningful and timely input from tribal officials in developing policies that have tribal implications.
EO 13186, <i>Responsibilities of Federal Agencies to Protect Migratory Birds</i> , January 10, 2001, 66 FR 3853 (1/17/01)	Requires each agency to ensure that environmental analyses of Federal actions (required by the National Environmental Policy Act or other established environmental review processes) evaluate the effects of actions and agency plans on migratory birds, emphasizing species of concern. Agencies must support the conservation intent of migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities, and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions.
EO 11593, <i>Protection and Enhancement of the Cultural Environment</i> , May 13, 1971, 36 FR 8921 (5/15/71)	Requires all Federal agencies to locate, identify, and record all cultural resources, including significant archeological, historical, or architectural sites.

Note:

1. This table only reflects those laws and EOs that might reasonably be expected to apply to the Proposed Action and alternatives addressed in this EA.

Other laws and Executive Orders potentially relevant to this EA include, but are not limited to, the following:

- American Indian Religious Freedom Act, 42 U.S.C. 1996, et seq.
- Antiquities Act, 16 U.S.C. 433, et seq.; Archeological Resources Protection Act, 16 U.S.C. 470 aa-ll, et seq.
- Architectural Barriers Act, 42 U.S.C. 4151, et seq.
- Community Environmental Response Facilitation Act, 42 U.S.C. 9620, et seq.
- Department of Transportation Act, Public Law (P.L.) 89-670, 49 U.S.C. 303, Section 4(f), et seq.

- Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11001–11050, et seq.
- Environmental Quality Improvement Act, P.L. 98-581, 42 U.S.C. 4371, et seq.
- Farmlands Protection Policy Act, P.L. 97-98, 7 U.S.C. 4201, et seq.
- Federal Insecticide, Fungicide, and Rodenticide Act, P.L. 86-139, 7 U.S.C. 135, et seq.
- Federal Records Act, 44 U.S.C. 2101-3324, et seq.
- Fish and Wildlife Act of 1956, P.L. 85-888, 16 U.S.C. 742, et seq.
- Flood Disaster Protection Act, 42 U.S.C. 4001, et seq.
- Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001, et seq.
- Pollution Prevention Act of 1990, 42 U.S.C. 13101-13109, et seq.
- Safe Drinking Water Act, P.L. 93-523, 42, U.S.C. 201, et seq.
- Toxic Substances Control Act, 7 U.S.C. 136, et seq.
- Wild and Scenic Rivers Act, P.L. 90-542, 16 U.S.C. 1271, et seq.
- EO 12114, dated January 9, 1979, *Environmental Effects Abroad of Major Federal Actions*, 44 FR 1957
- EO 12088, dated October 13, 1978, *Federal Compliance with Pollution Control Standards*, 43 FR 47707, as amended by EO 12580, dated January 23, 1987, and revoked (in part) by EO 13148, dated April 21, 2000
- EO 13132, dated August 4, 1999, *Federalism*, 64 FR 43255
- EO 11988, dated May 24, 1977, *Floodplain Management and Protection*, 42 FR 26951, as amended by EO 12148, dated July 20, 1979, 44 FR 43239
- EO 13007, dated May 24, 1996, *Historic Sites Act*, 16 U.S.C. 46, et seq.; Indian Sacred Sites, 61 FR 26771
- EO 12372, dated July 14, 1982, *Intergovernmental Review of Federal Programs*, 47 FR 30959, as amended by EO 12416, April 8, 1983, 48 FR 15587; supplemented by EO 13132, August 4, 1999, 64 FR 43255
- EO 13112, dated February 3, 1999, *Invasive Species*, 64 FR 6183, as amended by EO 13286, February 28, 2003, 68 FR 10619
- EO 11514, dated March 5, 1970, *Protection and Enhancement of Environmental Quality*, 35 FR 4247, as amended by EO 11541, July 1, 1970, 35 FR 10737 and EO 11991, May 24, 1977, 42 FR 26967
- EO 13045, dated April 21, 1997, *Protection of Children from Environmental Health and Safety Risks*, 62 FR 19885, as amended by EO 13229, October 9, 2001, 66 FR 52013 and EO 13296, April 18, 2003, 68 FR 19931
- EO 11990, dated May 24, 1977, *Protection of Wetlands*, 42 FR 26961, as amended by EO 12608, September 9, 1987, 52 FR 34617.

APPENDIX B

Public Involvement and Agency Coordination



APPENDIX B

Public Involvement and Agency Coordination

Interested Party List

Copies of the Coordination Letter and Draft EA were sent to the following agencies and interested parties during the Draft EA public review period:

Federal Agency Contacts

Mr. William Childress
Superintendent
U.S. Bureau of Land Management

Mr. Wally Murphy
Field Supervisor
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field
Office

Mr. John Blevins
Division Director
U.S. EPA Region 6

Mr. Daniel Malanchuck
Chief Regulatory Branch
U.S. Army Corps of Engineers
Albuquerque District

Mr. Jose A. Nunez
Principal Engineer
International Boundary and Water
Commission

State Agency Contacts

Mr. Aubrey Dunn
Commissioner of Public Lands
New Mexico State Land Office

Dr. Jeff Papas
State Historic Preservation Officer and
Director
New Mexico State Land Office

Mr. Robert Sivinski
Forestry and Resource Conservation
Division
New Mexico Energy, Minerals, and Natural
Resources Department

Dr. Matt Wunder
Chief, Conservation Services Divisions
New Mexico Department of Game and Fish

Environmental Impact Review Coordinator
New Mexico Environment Department

Local Agency Contact

Mr. Bob Hill
County Manager
Hidalgo County

Charlene Webb
County Manager
Grant County

Mr. Charles Jackson
County Manager
Luna County

Ms. Julia T. Brown, ESQ
County Manager
Dona Ana County

Tribal Agency Contact

Mr. Mark Altaha
Tribal Historic Preservation Officer
White Mountain Apache Tribe

Mr. Brian Jones
Cultural Preservation Officer
Fort Sill Apache Tribe

Mr. Jimmy Arterberry
Historic Preservation Officer
Comanche Nation

Honorable Mark Chino
President
Mescalero Apache Tribal Council

Chairman Ronald "Dawes" Twohatchet
Chairman
Kiowa Tribe of Oklahom

Comment Letter from White Mountain Apache Tribe



White Mountain Apache Tribe

Office of Historic Preservation

PO Box 1032

Fort Apache, AZ 85926

Ph: (928) 338-3033 Fax: (928) 338-6055

To: Paul Enriquez, Environmental Branch Chief Border Patrol Facilities
Date: March 26, 2015
Re: Proposed Tactical Infrastructure Maintenance/Repair along the United States
Mexico International Border in New Mexico

.....
The White Mountain Apache Tribe Historic Preservation Office appreciates receiving information on the proposed project, March 16, 2015. In regards to this, please attend to the following checked items below.

► ***There is no need to send additional information unless project planning or implementation results in the discovery of sites and/or items having known or suspected Apache Cultural affiliation.***

N/A - The proposed project is located within an area of probable cultural or historical importance to the White Mountain Apache tribe (WMAT). As part of the effort to identify historical properties that maybe affected by the project we recommend an ethno-historic study and interviews with Apache Elders. The tribe's ***Cultural Heritage Resource Director Mr. Ramon Riley*** may be contacted at (928) 338-3033 for further information should this become necessary.

► Please refer to the attached additional notes in regards to the proposed project:

We have received and reviewed information regarding the U.S. Customs and Border Protection proposal to maintain and repair existing tactical infrastructure along the U.S./Mexico international border in New Mexico, and we have determine the proposed plans will **not have an impact** on the White Mountain Apache tribe's (WMAT) historic and/or traditional cultural properties. Regardless, any/all ground disturbing activities should be monitored **if** there are reasons to believe that there are human remains and/or funerary objects are present, and if such remains and/or objects are encountered they shall be treated with respect and handled accordingly until such remains are repatriated to the affiliated tribe.

Thank you. We look forward to continued collaborations in the protection and preservation of place of cultural and historical significance.

Sincerely,

Mark T. Altaha - THPO

White Mountain Apache Tribe
Historic Preservation Office

Comment Letter from New Mexico Environmental Department



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary

5500 San Antonio Drive, NE
Albuquerque, NM 87109
Telephone (505) 222-9500 Fax (505) 222-9510
www.nmenv.state.nm.us



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

March 30, 2015

U.S. Customs and Border Protection
Mr. Paul Enriquez
Environmental Branch Chief
Border Patrol Facilities and Tactical Infrastructure Program Management Office
24000 Avila Road, Suite 5020
Laguna Niguel, CA 92677

e-mail: nm.timr.ea@cbp.dhs.gov

**RE: NM TIMR EA, c/o Joseph Zidron
NMED EIR #5265**

Messrs. Enriquez and Zidron:

Your letter regarding the above named project was received by the New Mexico Environment Department (NMED) and was sent to various bureaus for review. Comments on the Environmental Assessment (EA) and Draft Finding of No Significant Impact for the proposed maintenance and repair of existing tactical infrastructure along the international border in New Mexico are provided by the Air Quality, Ground Water Quality, and Surface Water Quality Bureaus.

The U.S. Customs and Border Protection are proposing to repair and maintain tactical infrastructure including fences, gates, roads, bridges, and drainages along the U.S./Mexico international border in New Mexico.

Air Quality Bureau

The Air Quality Bureau (AQB) concurs with the statements in the EA regarding air quality impacts and use of best management practices (BMPs). The following comments emphasize the importance of using BMPs to minimize potential impacts and address the use of properly permitted and licensed contractors.

The Counties in the proposed project area are currently in attainment for all of the New Mexico and National Ambient Air Quality Standards. However, the AQB has recorded exceedances of the standard for particulate matter (PM₁₀ & PM_{2.5}) in Doña Ana and Luna Counties in the past. In lieu of a nonattainment designation, a Natural Events Action Plan (NEAP) for Doña Ana County has been prepared and approved by the U.S. Environmental Protection Agency. As part

of the NEAP, local governments adopted dust control ordinances and appropriate controls and reclamation measures must be implemented for any soil disturbing activities.

All asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the proposed project must have current and proper air quality permits. Potential emissions from any diesel generator sets should be calculated assuming continuous operation to determine whether a construction permit is required. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.

This project will temporarily impact air quality as a result of fugitive dust and equipment exhaust emissions generated during construction and will impact air quality in the area. However, with the appropriate dust control measures in place, the increased levels should be minimal. The project, as proposed, is not anticipated to result in nonattainment of the New Mexico or National Ambient Air Quality Standards or contribute negatively to air quality on a long-term basis.

Groundwater Quality Control Bureau

Ground Water Quality Bureau (GWQB) staff reviewed the above-referenced project focusing specifically on the potential effect to ground water resources in the area.

The project is not expected to have any adverse impacts on ground water quality in the area of construction. However, implementation of the project may involve the use of heavy equipment thereby leading to a possibility of contaminant releases (e.g., fuel, hydraulic fluid, etc.) associated with equipment malfunctions. The GWQB advises all parties involved in the project to be aware of notification requirements for accidental discharges contained in 20.6.2.1203 NMAC. Compliance with the notification and response requirements will further ensure the protection of ground water quality in the vicinity of the project.

A copy of the Water Quality Control Commission Regulations, 20.6.2 NMAC, is available at <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0002.htm>.

Surface Water Quality Bureau

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb (or re-disturb) one or more acres, or smaller sites that are part of a larger common plan of development. The total area of disturbed soil for the roadway and the area where the material removed is placed are included in total disturbed soil footprint.

Prior to discharging storm water, construction operators must obtain coverage under an NPDES permit. Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site, including support and staging areas, and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This

permit also requires that permanent stabilization measures (re-vegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters.

Part 9 of the 2012 CGP includes permit conditions applicable to specific states, Indian country lands, or territories. In the State of New Mexico, except on tribal land, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.4.1.1 of the 2012 CGP).

USEPA requires that all "operators" (see Appendix A of the 2012 CGP) obtain NPDES permit coverage by submitting a Notice of Intent (NOI) for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications, the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the SWPPP and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective February 16, 2012. The CGP, NOI, deadlines for submitting an NOI, Fact Sheet, and Federal Register notice is available at:
<http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>

Clean Water Act, Section 404 USACE/Section 401 Certification

Information is provided below if the project (or associated construction support areas, if any) during construction requires discharge of dredged/fill material into Waters of the U.S., including wetlands.

Section 404 of the Clean Water Act requires approval from the U.S. Army Corp of Engineers (USACE) prior to discharging dredged or fill material into waters of the United States (U.S.). Any person, firm, or agency (including Federal, state, tribal and local governmental agencies) planning to work in waters of the United States should first contact the USACE regarding the need to obtain a permit from the Regulatory Division. Failure to receive and implement proper permit coverage would be a violation of the Clean Water Act.

More information on the §404 permitting process, including applicability of Nationwide Permits, mitigation requirements, requirements for certification for any discharges on state, private or tribal land, can be obtained from the USACE at:

<http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx>

NMED Surface Water Quality Bureau Watershed Protection Section coordinates the state's §401 certification of §404 dredged/fill material permits with the USACE. In response to the §404

Draft EA, Proposed Tactical Infrastructure Maintenance and Repair
U.S./Mexico International Border in New Mexico
NMED EIR # 5265
March 30, 2015
4 | P a g e

reissued nationwide permits on April 13, 2012, a Conditional §401 Certification for discharges to State of New Mexico surface water has been issued and is available at the following web site:

<ftp://ftp.nmenv.state.nm.us/www/swqb/WPS/401-404/NWPCertificationNotice04-13-2012.pdf>

For additional information, including permitting procedures and jurisdictional water determination, contact the USACE, Albuquerque District, 4101 Jefferson Plaza NE, Albuquerque, New Mexico 87109-343, 505-342-3262.

If you have any questions please contact me at (505) 222-9552 or by email at thomas.skibitski@state.nm.us

Sincerely,

Thomas Skibitski

Digitally signed by Thomas Skibitski
DN: cn=Thomas Skibitski, ou=New Mexico
Environment Department, ou=DOE Oversight Bureau,
email=thomas.skibitski@state.nm.us, c=US
Date: 2015.03.30 11:50:29 -0600

Thomas Skibitski

Environmental Impact Review Coordinator
NMED File Number: EIR #5265

Cc: (by email): nm.timr.ea@cbp.dhs.gov

Comment Letter from IBWC



INTERNATIONAL BOUNDARY AND WATER COMMISSION UNITED STATES AND MEXICO

April 8, 2015

Mr. Joseph Zidron
U.S. Customs and Border Protection
24000 Avila Road, Suite 5020
Laguna Niguel, CA 92677

Subject: Review of Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) Addressing Proposed Tactical Infrastructure Maintenance and Repair Along the U.S./Mexico International Border in New Mexico

Dear Mr. Zidron:

The International Boundary and Water Commission, United States Section (USIBWC) has reviewed Customs and Border Patrol's *Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) Addressing Proposed Tactical Infrastructure Maintenance and Repair Along the U.S./Mexico International Border in New Mexico*. The Proposed Action in the EA/FONSI is for repair and maintenance of infrastructure including fences and gates; access roads and integrated bridges/crossovers; drainage management structures; vegetation control to maintain road visibility; lighting and ancillary power systems; communications and surveillance towers; and equipment storage. The EA/FONSI does not propose any new construction. The USIBWC has the following comments on the Draft EA/FONSI, for your consideration.

- 1) In section 3.12.2.3 Known Cultural Resources, the EA mentions that 10 border monuments were surveyed as cultural resources. The EA should discuss, possibly in this section or other appropriate section, that the USIBWC has a duty to access, maintain, and utilize the international boundary monuments along the U.S./Mexico international land boundary. The USIBWC is charged with these duties through treaties and international agreements between the United States and Mexico. We require that the proposed works and related facilities not affect the permanence (disturb the foundations) of existing boundary monuments nor impede access for their maintenance.
- 2) Although the EA does not propose to construct any new drainage structures, the repair and maintenance of existing drainage structures should be accomplished in a manner that does not change historic surface runoff characteristics at the international border. If drainage flows will be altered as a result of repair and maintenance, the USIBWC will need to review the construction drawings and hydrological or hydraulic studies for the structures prior to work commencing.

The Commons, Building C, Suite 100 • 4171 N. Mesa Street • El Paso, Texas 79902-1441
(915) 832-4764 • Fax: (915) 832-4166 • <http://www.ibwc.gov>

- 3) USIBWC notes, as stated in the EA, that many of the infrastructure projects, such as fences and gates, are within the 60-foot Roosevelt Reservation, a 1907 Presidential Proclamation reserving a 60-foot wide strip of land parallel with and adjacent to the international boundary on all lands which were not already patented to the boundary line through New Mexico, Arizona, and California. The provisions of the 1907 Presidential declaration for the 60-foot wide strip adjacent to the international boundary should be observed.

The USIBWC appreciates the opportunity to provide comments on the Draft EA/FONSI. Please continue to keep the USIBWC informed of the progress of this project and other projects impacting the U.S./Mexico international boundary.

Sincerely,



Gilbert G. Anaya
Division Chief
Environmental Management Division

cc: NM.TIMR.EA@cbp.dhs.gov

Concurrence Letter from USFWS



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
Telephone 505-346-2525 Fax 505-346-2542
www.fws.gov/southwest/es/newmexico/

April 30, 2015

Consultation # 02ENNM00-2015-I-0253

Paul Enriquez, Environmental Branch Chief
Border Patrol Facilities and Tactical Infrastructure
Program Management Office
U.S. Customs and Border Protection
1300 Pennsylvania Avenue NW
Washington, D.C. 20229

Dear Mr. Enriquez:

Thank you for your March 2015 biological assessment (assessment) for the proposed Tactical Infrastructure Maintenance and Repair along the U.S./Mexico International Border (TIMR) Project in New Mexico. The Department of Homeland Security and U.S. Customs and Border Protection (CBP) propose to maintain and repair certain existing tactical infrastructure along the international border in New Mexico. The existing tactical infrastructure to be maintained and repaired consists of fences, gates, roads, bridges, crossovers, drainage structures, grates, lighting, ancillary power systems, and communication and surveillance tower components, including, but not limited to, remote video surveillance system and secure border initiative towers.

The action area for this assessment includes all of the areas within a corridor ranging from approximately 10 to 52 miles north along the U.S./Mexico international border in the El Paso Sector of the U.S. Border Patrol in New Mexico. To accommodate changes in missions, requests from landowners and managers, and other changing situations, additional existing tactical infrastructure within the action area may be maintained under this project in the future. Any such tactical infrastructure will be maintained and repaired as described in this assessment. Tactical infrastructure assets covered by a waiver issued by the Secretary of Homeland Security have been excluded from the scope of this assessment.

Seven listed species and designated critical habitat for three of these species occur within the action area and may be affected by the TIMR Project. CBP has determined this project "may affect, but is not likely to adversely affect" the threatened Chiricahua leopard frog (*Lithobates chiricahuensis*), threatened New Mexico ridge-nosed rattlesnake (*Crotalus willardi obscurus*), threatened Mexican spotted owl (*Strix occidentalis lucida*), endangered Southwestern willow flycatcher (*Empidonax traillii extimus*), endangered Jaguar (*Panthera onca*), endangered lesser long-nosed bat (*Leptonycteris yerbabuenae*), and the endangered Mexican long-nosed bat (*Leptonycteris nivalis*). CBP has also determined this project would not jeopardize the continued

Paul Enriquez, Environmental Branch Chief

existence of the nonessential experimental population of the northern aplomado falcon (*Falco femoralis septentrionalis*). Additionally, CBP determined the TIMR Project “may affect, but is not likely to adversely affect” critical habitat for the jaguar and New Mexico ridge-nosed rattlesnake.

These determinations are based on the nature of the proposed action, location of the proposed action relative to suitable or critical habitat for these species, and general and species-specific best management practices (BMPs) that are part of the proposed action to minimize or avoid potential harm to listed species and critical habitat. Project components supporting these determinations include the following:

- The TIMR Project involves the maintenance and repair of existing tactical infrastructure. All activities would be conducted within and immediately adjacent to the footprint of existing infrastructure. Separate section 7 consultation under the Endangered Species Act would be conducted for any changes to roadway networks and upgrades of existing roadways, such as paving of previously unpaved roads or widening of existing roads.
- CBP would use a centralized planning process to ensure that all project activities are appropriately planned and implemented.
- CBP would implement general and species-specific design standards and BMPs designed in coordination with the U.S. Fish and Wildlife Service (Service) to avoid directly harming or harassing listed species and minimize other direct and indirect effects.
- Protocol surveys would be conducted prior to implementing maintenance and repair activities when appropriate based on occupied or suitable habitat for threatened and endangered species.
- The project would result in no or very minor habitat degradation and have few other direct and indirect impacts on threatened and endangered species. Vegetation trimming would be restricted to the minimum necessary to maintain drivable access roads and maintain the functionality of tactical infrastructure and would not occur in critical habitat of threatened or endangered species.
- If the above conditions are not met, CBP would seek additional consultation from the Service for activities that have the potential to adversely affect listed species or adversely affect their critical habitat.
- Equipment and support vehicles would be stored within the existing footprint of the maintenance and repair location or at a staging area previously designated for such purposes by CBP. All such staging areas are either covered by the Secretarial waiver or previous section 7 consultation. Requests for staging areas on land administered by the

Paul Enriquez, Environmental Branch Chief

Bureau of Land Management (BLM) would require additional planning and coordination with BLM prior to use.

- CBP would provide an annual report to the New Mexico Ecological Services Field Office (NMESFO) within 3 months of the end of the calendar year to document all project activities that took place within the range of listed species. The report will include conservation measures and BMPs that were implemented and any federally listed species observed at or near project sites.

The Service concurs that the proposed TIMR Project “may affect, but is not likely to adversely affect” the species and critical habitat listed above. This concludes section 7 consultation regarding the proposed action. If monitoring or other information results in modification or the inability to complete all aspects of the proposed action, consultation should be reinitiated. Please contact the Service if: 1) Future surveys detect listed, proposed or candidate species in habitats where they have not been previously observed; 2) the proposed action changes or new information reveals effects of the proposal to listed species that have not been considered in this analysis; or 3) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for your concern for endangered species and New Mexico’s wildlife habitats and your comprehensive coordination with the NMESFO on this project. If you have any questions about this letter, please contact Dr. Patricia Zenone of my staff at the letterhead address or at (505) 761-4718.

Sincerely,

ERIC HEIN

for Wally Murphy
Field Supervisor

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,
Santa Fe, New Mexico
Joseph Zidron, U.S. Customs and Border Protection, Laguna Niguel, California

APPENDIX C

Tactical Infrastructure Classifications and Maintenance and Repair Standards



APPENDIX C

Tactical Infrastructure Classifications and Maintenance and Repair Standards

Introduction

The tactical infrastructure will be maintained in accordance with proven maintenance and repair standards. All of the standards CBP is adopting are developed based on comprehensive engineering analysis, proven BMPs adopted by other Federal agencies, and mitigation measures derived from extensive consultation with both regulatory and resources agencies. Below is a description of tactical infrastructure classifications and maintenance and repair standards.

Road Classification

CBP has developed a road classification system whereby roads are maintained to specific standards dependent upon their classification. Under the CBP classification system, five standards for roads have been developed:

- *FC-1 Paved Road* – Paved, all-weather road constructed of any material. Road is two lane with a total road width of 24 feet (see **Figures C-1** and **C-2**).
- *FC-2 All-Weather Road* – Unpaved, all-weather road consisting of a surface of imported aggregate material such as milled bituminous material or processed stone and gravel. Road is two-lane with a total road width of 24 feet (see **Figures C-3** and **C-4**).
- *FC-3 Graded Earth Road* – Unpaved road constructed of graded, native material. Road is two-lane with a total road width of 20 feet (see **Figures C-5** and **C-6**).
- *FC-4 Two-Track Road* – Unpaved road on natural ground consisting of a single lane with an overall road width of 10 feet (see **Figures C-7** and **C-8**).
- *FC-5 Sand Road* – Unpaved, sand road consisting of natural ground conditions, two lanes, and an overall road width of 16 to 18 feet (see **Figures C-9** and **C-10**).

Road Maintenance and Repair

The maintenance and repair of FC-1 and FC-2 roads within state, county, or municipal government's purview is completed by their transportation departments. Maintenance and repair of FC-1 and FC-2 roads located on Federal land are maintained in coordination and performed where necessary by agreement with the appropriate Federal agency. In general, CBP would adhere to approved standards for road maintenance applicable to the appropriate land manager, which have been tried and proven over many years and in a variety of environmental conditions.

Some of the tactical infrastructure on Federal lands (e.g., BLM, USFS) is covered by the Secretary's waiver and is the responsibility of CBP to maintain and repair. In the few instances where CBP is required to maintain FC-1 and FC-2 roads, maintenance and repair would be restricted to minor resurfacing to address potholes in paved surfaces and rutting and raveling in all-weather roads. Minor work to shoulder areas of these roads would also be required to maintain the integrity of the road surfaces and road beds.



Figure C-1. FC-1 Paved Road (Photograph)

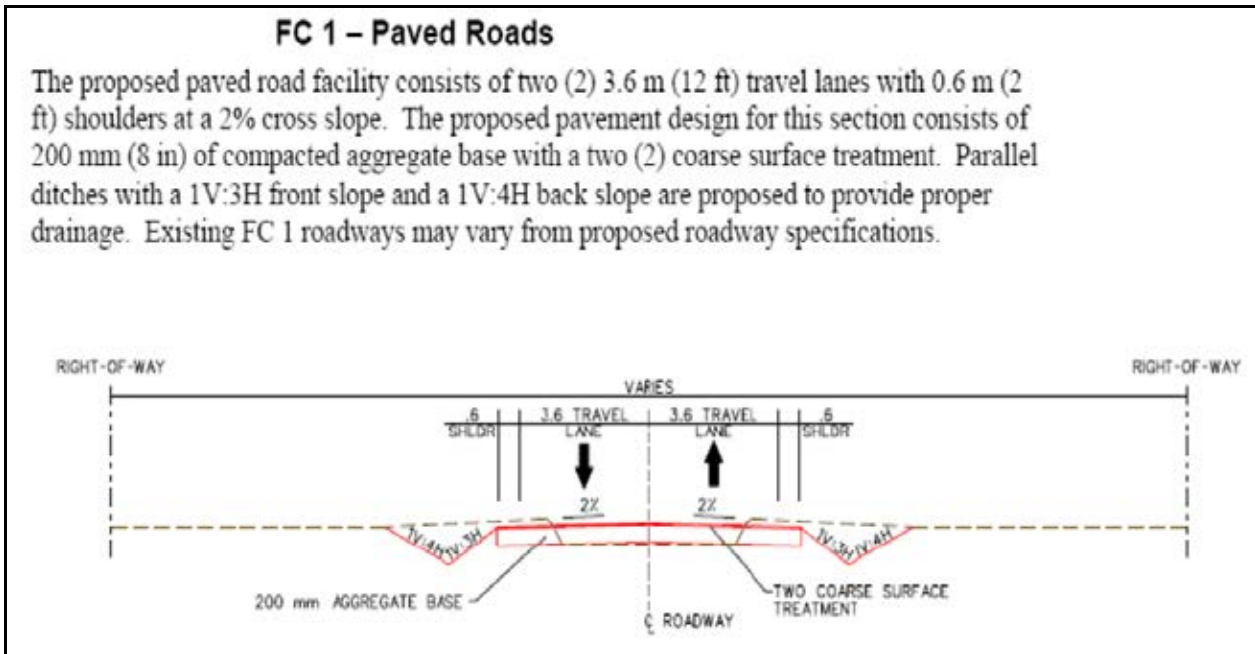


Figure C-2. FC-1 Paved Road (Diagram)



Figure C-3. FC-2 All-Weather Road (Photograph)

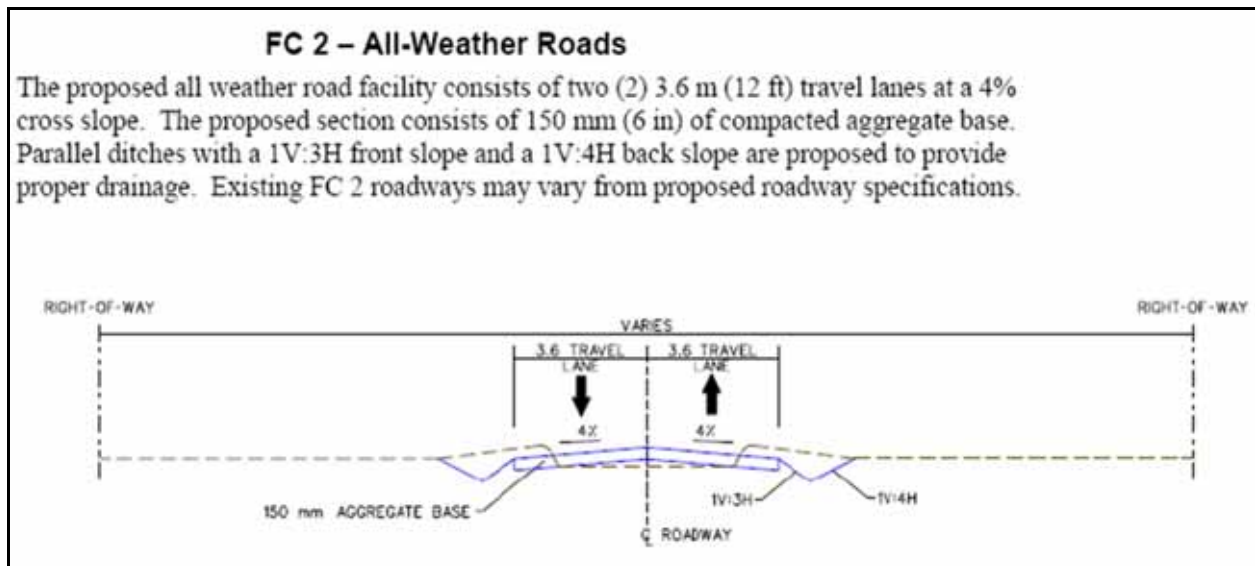


Figure C-4. FC-2 All-Weather Road (Diagram)



Figure C-5. FC-3 Graded Earth Road (Photograph)

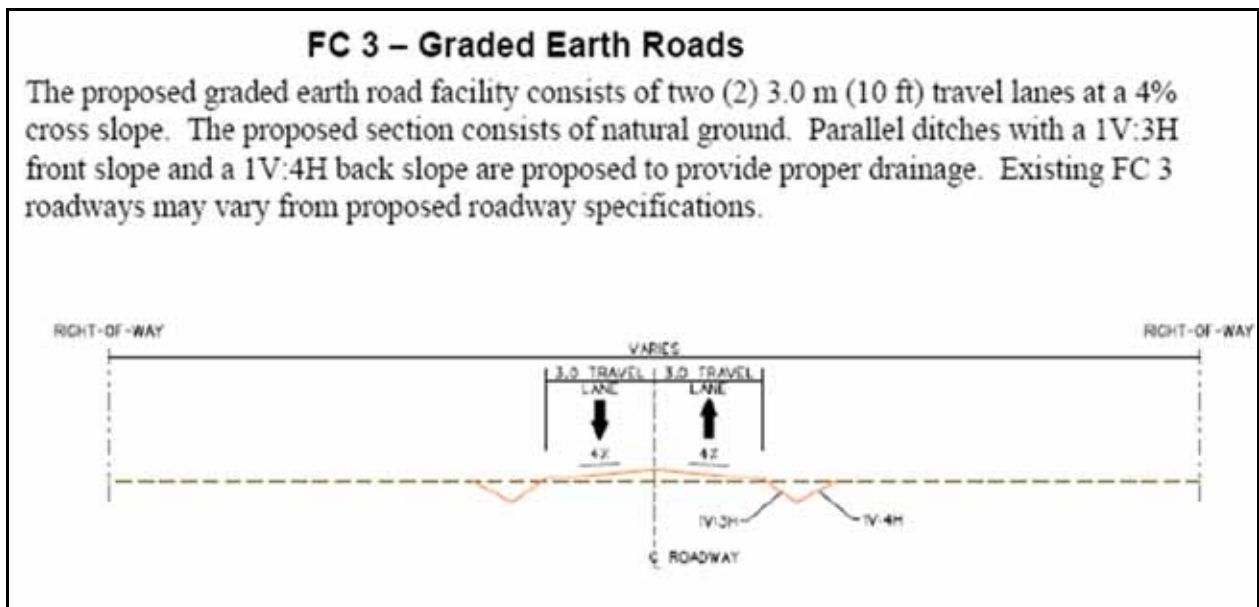


Figure C-6. FC-3 Graded Road (Diagram)



Figure C-7. FC-4 Two-Track Road (Photograph)

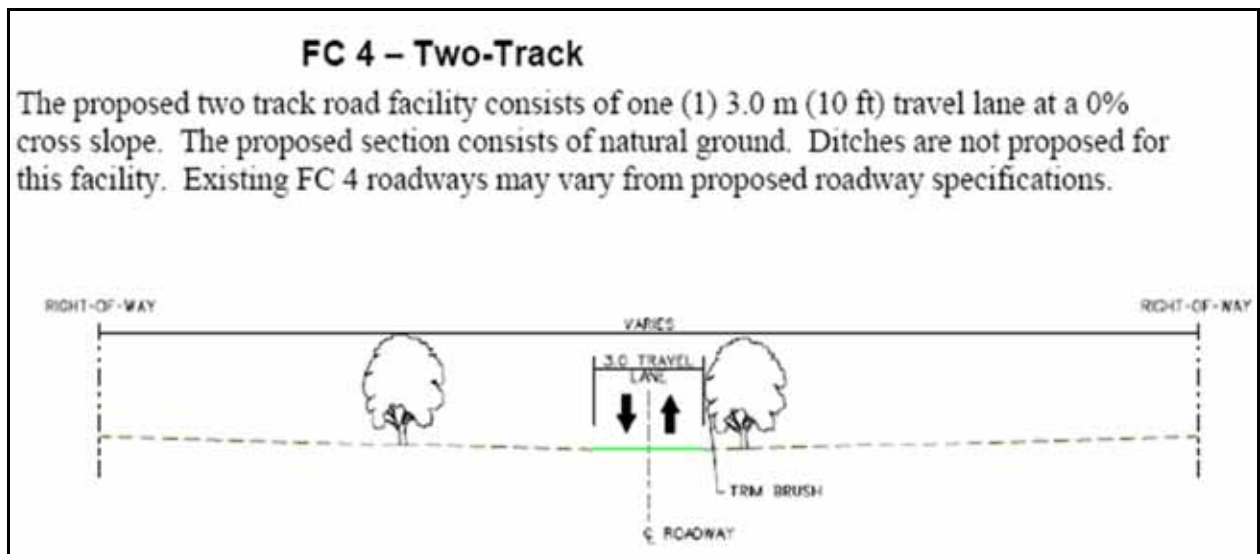


Figure C-8. FC-4 Two-Track Road (Diagram)



Figure C-9. FC-5 Sand Road (Photograph)

FC5 – Sand Road

The proposed sand road consists of 16-18 feet travel lane at a 0% cross slope. The proposed section consist of natural ground – no foundation base. Drainage ditches are not proposed for this type road. Existing FC-5 roadways may vary from proposed roadway specifications,

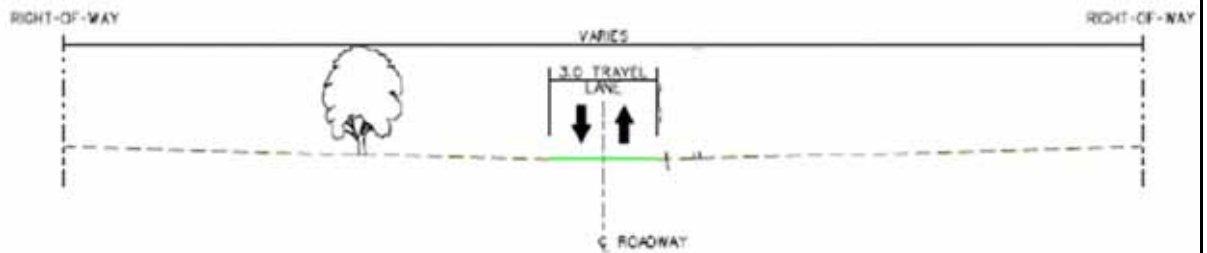


Figure C-10. FC-5 Sand Road (Diagram)

The majority of proposed maintenance and repair is planned for FC-3 and FC-4 roads. Because of their lack of formal construction design, FC-3 and FC-4 roadways are subject to the greatest deterioration if left unmaintained. When subjected to heavier traffic, rutting occurs, which in turn is exacerbated by rain events that further erode the surface. Unmanaged storm water flow also causes general erosion to occur, washing out complete sections of road and in many instances making roads impassable.

Grading with the use of commercial grading equipment (see **Figure C-11**) is proposed to restore an adequate surface to FC-3 roads. USBP sector personnel and contract support personnel well versed in grading techniques would be employed for such activities. A poorly regraded surface quite often results in rapid deterioration of the surface. The restored road should be slightly crowned and absent of windrows in the gutter line to avoid ponding and channeling within the road during rain events. Any associated roadside drainage would be maintained to ensure that runoff is relieved from the road surface quickly and effectively without creating further erosion issues.



Figure C-11. Standard Grading Equipment

The frequency of maintenance would depend on usage and weather conditions (e.g., heavy rain seasons could require an increase in maintenance and repair). Maintenance and repair activities would include inspections to determine surface irregularities (e.g., potholes, washout), then grading, compacting, and reshaping of the road would occur generally using onsite soils as necessary. The addition of material to these roads to achieve the proposed objective would be kept to a minimum, but may be necessary to fill depressions or to grade the surface of the road

back up to match shoulder grades. Roads could occasionally need to be scarified, have aggregate added, and the surface recompact. It is recommended that these roads be inspected and, if necessary, maintained every six months and after major storm events. Debris and sedimentation removal from low water crossings, culverts, and ditches to minimize flooding, water diversion, and erosion would also occur every six months and after major storm events. All necessary erosion-control BMPs would be adopted to ensure stabilization of the project areas (see **Appendix E**).

As the two track name implies, FC-4 roads consist of two parallel tracks created by the loss of vegetation where the tires contact and compact the earth; between which may lay a strip of low-growth vegetation. These roads receive very little maintenance consisting primarily of occasional brush and boulder clearing, and possibly but much less frequently grading with small tractor mounted box blades. Two-track roads have no crown, and generally do not have any improved drainage features or ditches, although culverts and low water crossings may be installed where continuous erosion issues occur.

Most FC-5 roads are associated with fence infrastructure that has been covered by the Secretary's waiver or previous NEPA documentation and therefore dismissed from further discussion. There are, however, some FC-5 roads that provide access to infrastructure that are not covered by the Secretary's waiver or previous NEPA documentation and will be examined throughout this EA. Activities to maintain FC-5 roads would be similar to those described above for FC-3 roads.

APPENDIX D

Detailed Maps of the Tactical Infrastructure Maintenance and Repair Region of Analysis



APPENDIX D

Detailed Maps of the Tactical Infrastructure Maintenance and Repair Region of Analysis

There are approximately 37 ecological systems in the region of analysis (see **Table D-1**). The ecological systems that generally define and compose 95 percent of the landscape within the region of analysis are described below. These ecological systems were extracted from NatureServe Explorer (NatureServe 2010).

Additionally, links are provided here for supplementary detailed maps of the tactical infrastructure along the U.S./Mexico international border in New Mexico (see Map Index on page **D-3**). In addition to displaying existing tactical infrastructure, the maps display the ranges of threatened and endangered species within the region of analysis. The maps depict additional activities occurring within the range of threatened and endangered species that would require use of species-specific BMPs, as formally agreed upon during consultation with the USFWS and further discussed in the Biological Assessment. Depending on the number and nature of resources that could be impacted, a graduated series of BMPs would be identified to reduce impacts to less than significant levels. The BMPs are presented in **Appendix E** along with the affected resources.

The maps delineate ranges, including designated critical habitat, extent of suitable habitat, and documented sightings of the species in the area. Wilderness or other special-use designations and land management agency practices are considered in maintenance and repair planning. Coordination with land management agencies, Federal land managers, and the USFWS, if necessary, would occur and appropriate BMPs would be implemented. The maps presented are not intended to be used as an implementation tool for maintenance and repair activities, but instead represent a method to show the range of potential threatened and endangered species.

Depending on the number and nature of resources that could be impacted, a graduated series of BMPs would be identified to reduce impacts to less than significant levels. The BMPs are presented in Appendix E along with the affected resources. The combination of the informative maps and the relevant BMPs are intended to provide CBP with a visual framework to assist in applying appropriate maintenance and repair solutions in sensitive areas. Descriptions of BLM and state-listed rare, threatened, and endangered species, their habitat, and impact determinations are outlined in **Table D-2**.

Table D-1. Ecological Systems within the Region of Analysis

Ecological Systems
Apacherian-Chihuahuan Semi-Desert Grassland and Steppe*
Chihuahuan Creosotebush, Mixed Desert and Thorn Scrub*
Chihuahuan Stabilized Coppice Dune and Sand Flat Scrub*
Madrean Encinal*
Apacherian-Chihuahuan Mesquite Upland Scrub*
Madrean Pinyon-Juniper Woodland*
Chihuahuan Mixed Salt Desert Scrub*
Chihuahuan Sandy Plains Semi-Desert Grassland*
Cultivated Cropland
North American Warm Desert Active and Stabilized Dune
Mogollon Chaparral
Madrean Juniper Savanna
North American Warm Desert Pavement
Chihuahuan Succulent Desert Scrub
Recently Burned
North American Warm Desert Bedrock Cliff and Outcrop
Developed, High Intensity
North American Warm Desert Lower Montane Riparian Woodland and Shrubland
North American Warm Desert Volcanic Rockland
Developed, Low Intensity
Madrean Pine-Oak Forest and Woodland
Inter-Mountain Basins Semi-Desert Shrub Steppe
Madrean Upper Montane Conifer-Oak Forest and Woodland
North American Warm Desert Wash
Chihuahuan Gypsophilous Grassland and Steppe
North American Warm Desert Playa
North American Warm Desert Riparian Woodland and Shrubland
North American Warm Desert Riparian Mesquite Bosque
No Data
Open Water (Fresh)
Southern Rocky Mountain Pinyon-Juniper Woodland
Rocky Mountain Aspen Forest and Woodland
Rocky Mountain Cliff, Canyon and Massive Bedrock
North American Arid West Emergent Marsh
Rocky Mountain Lower Montane-Foothill Shrubland
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland
Sonoran Paloverde-Mixed Cacti Desert Scrub

Note: * Ecological systems that generally define and compose 95 percent of the landscape within the New Mexico region of analysis.

Map Index for New Mexico Threatened and Endangered Species

Seven threatened and endangered species have the potential to occur in the region of analysis and could be affected by the Proposed Action. The ranges of threatened and endangered species within the region of analysis are detailed in the maps linked below. *Click on the species names provided below to view the range map for that species.*

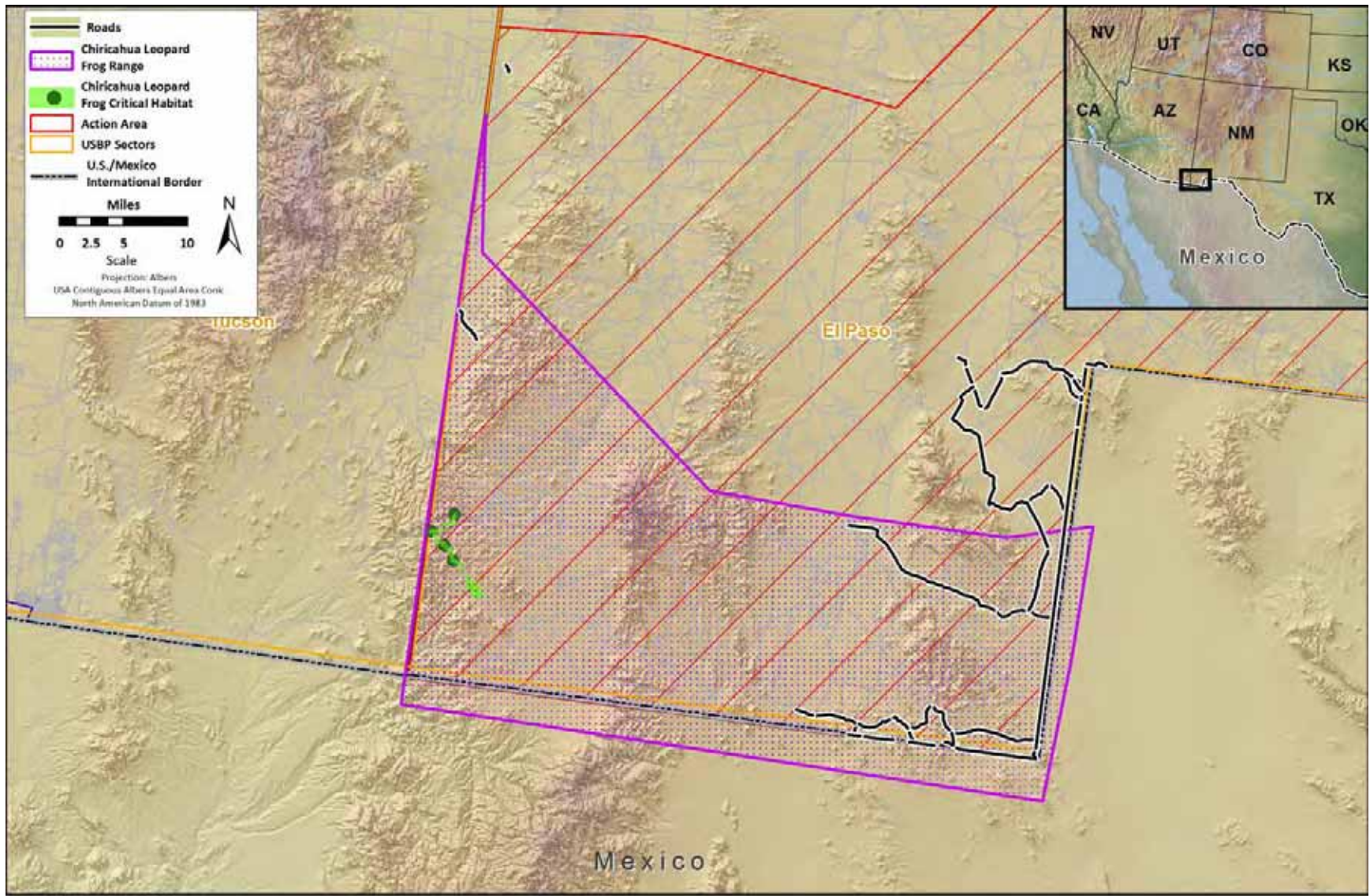
Aquatic Threatened and Endangered Species:

- [*Chiricahua leopard frog*](#)

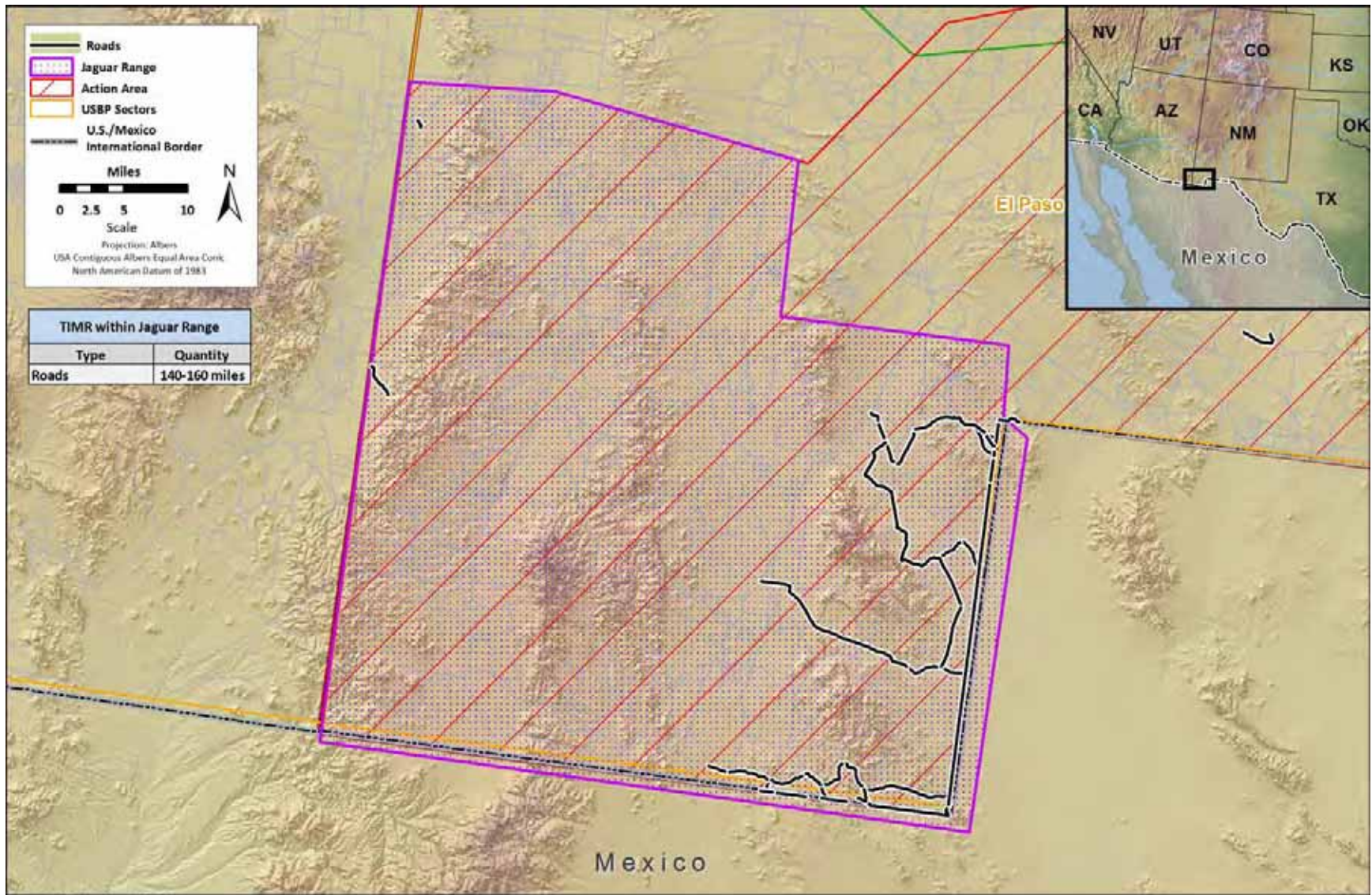
Terrestrial Threatened and Endangered Species:

- [*Jaguar*](#)
- [*Lesser long-nosed bat*](#)
- [*Mexican long-nosed bat*](#)
- [*Mexican spotted owl*](#)
- [*New Mexico ridge-nosed rattlesnake*](#)
- [*Northern aplomado falcon*](#)
- [*Southwestern willow flycatcher*](#)

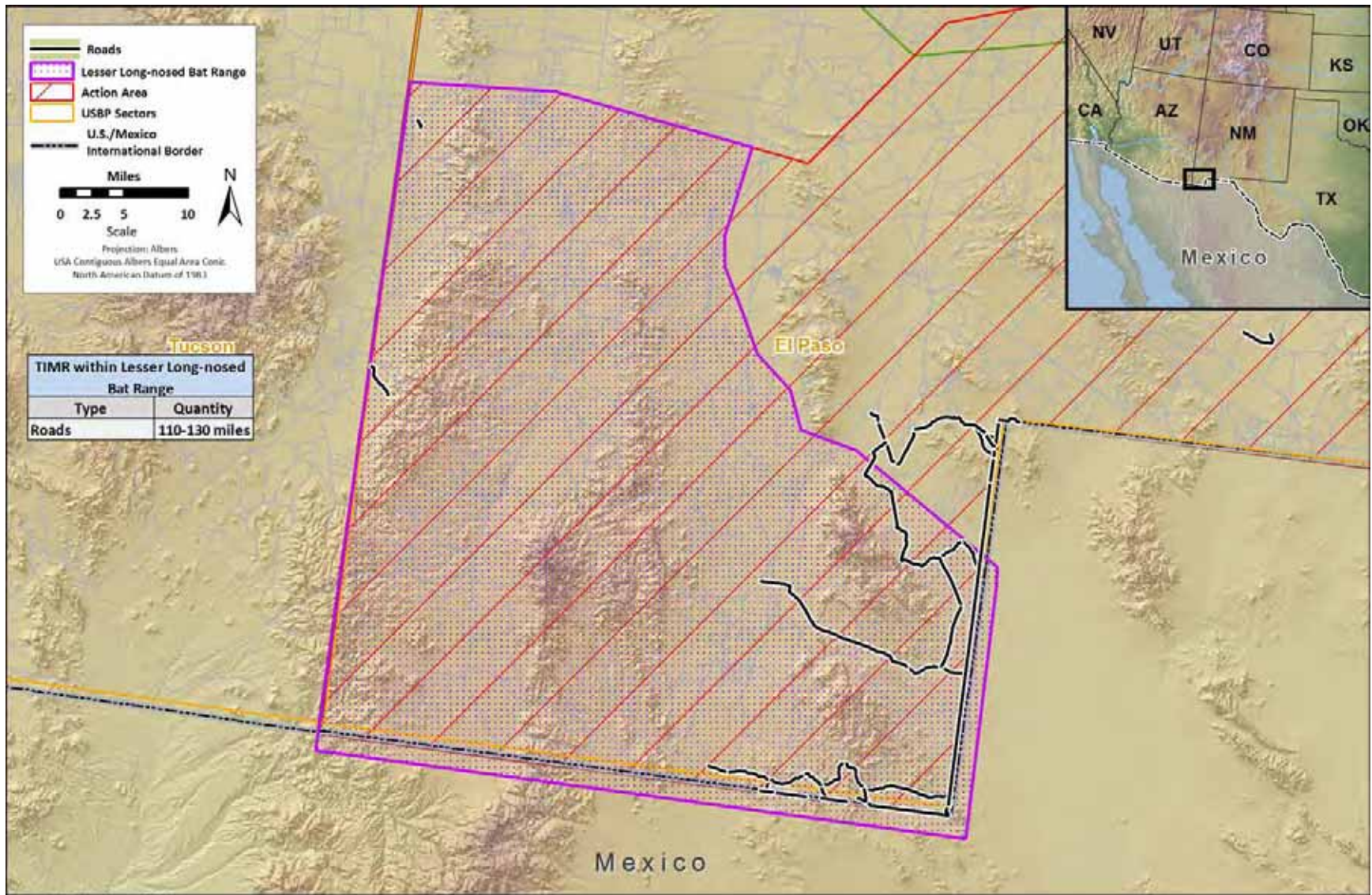
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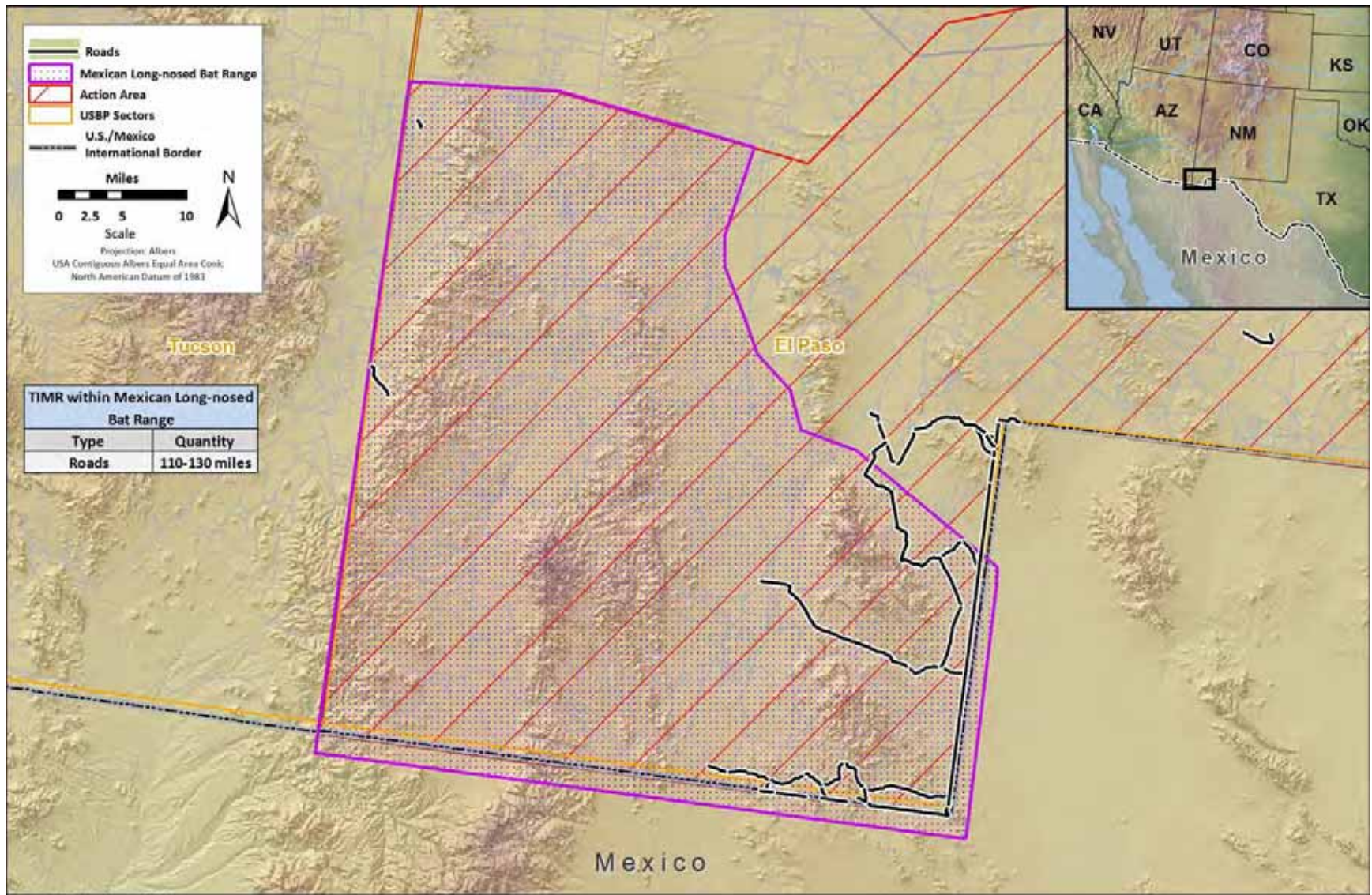
Source: ESRI StreetMap USA 2010



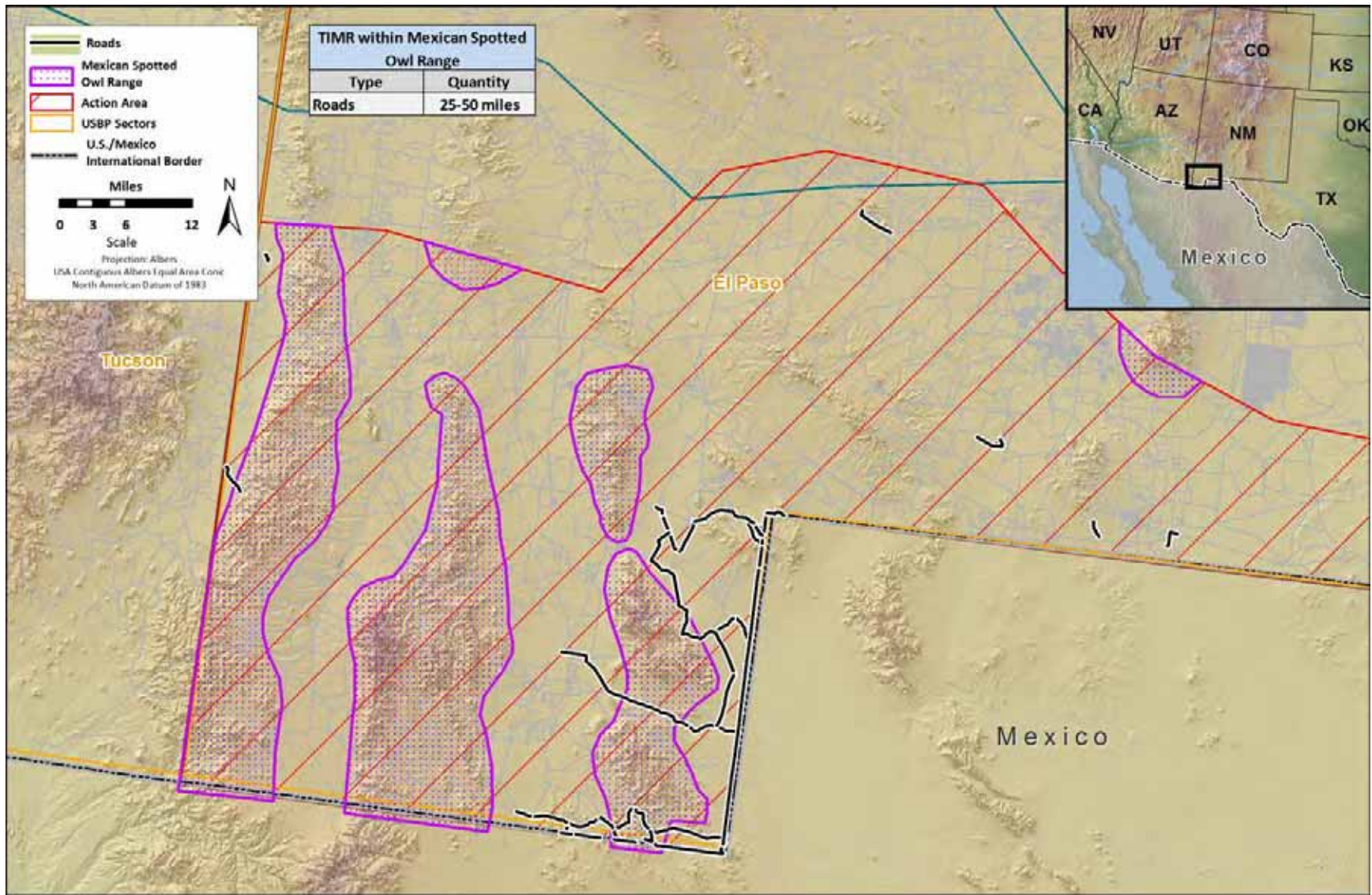
Source: ESRI StreetMap USA 2010



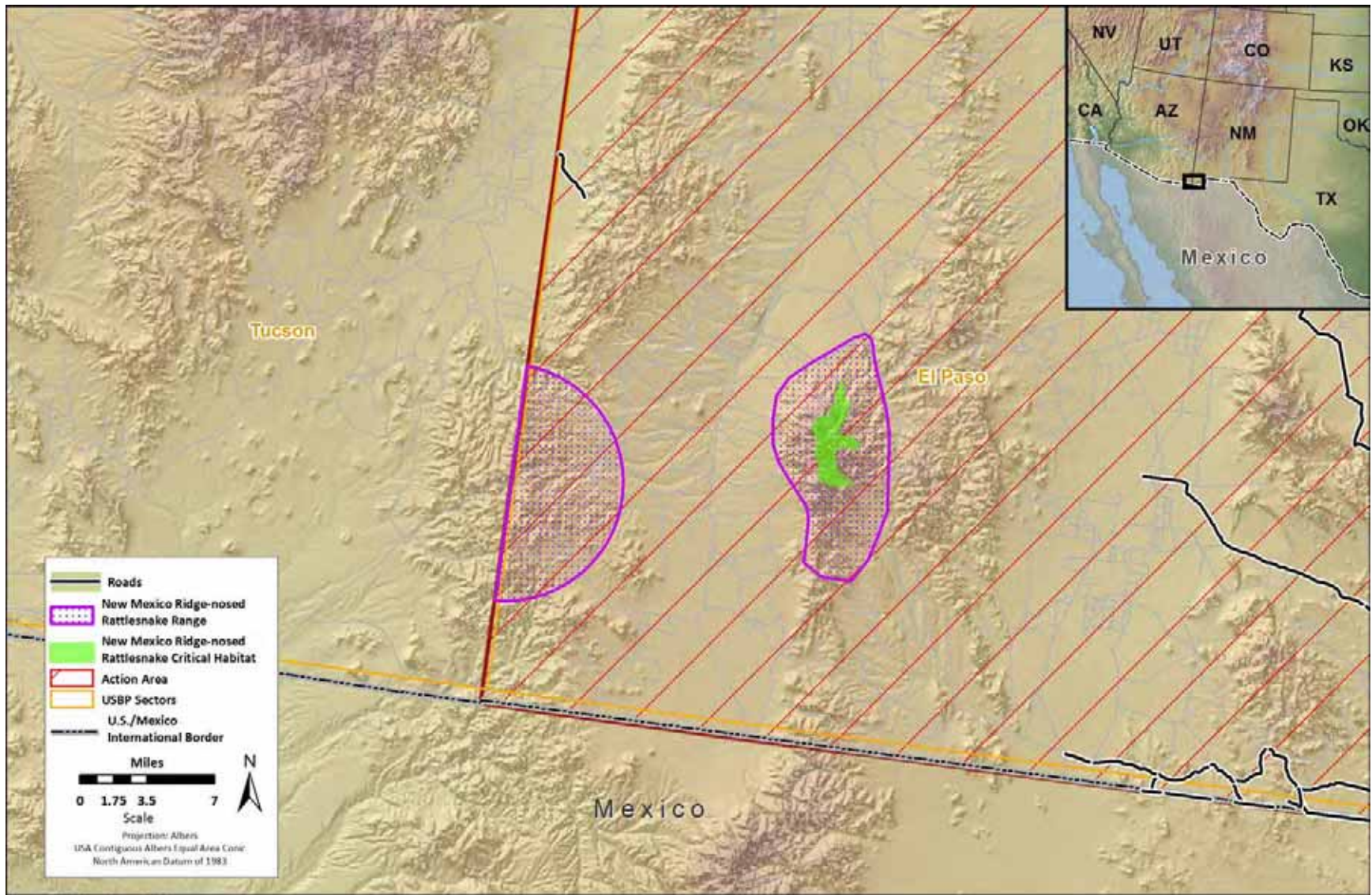
Source: ESRI StreetMap USA 2010



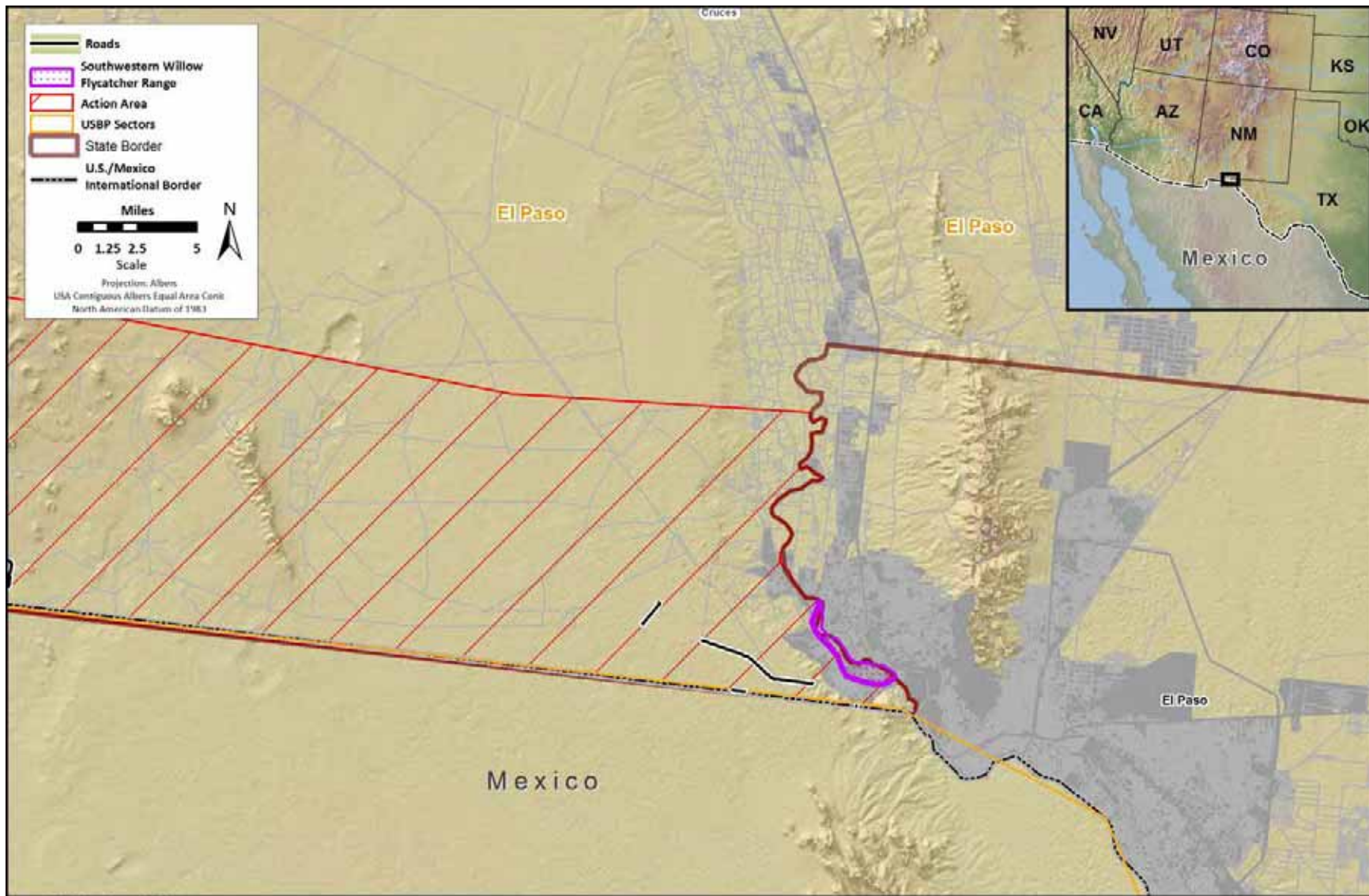
Source: ESRI StreetMap USA 2010



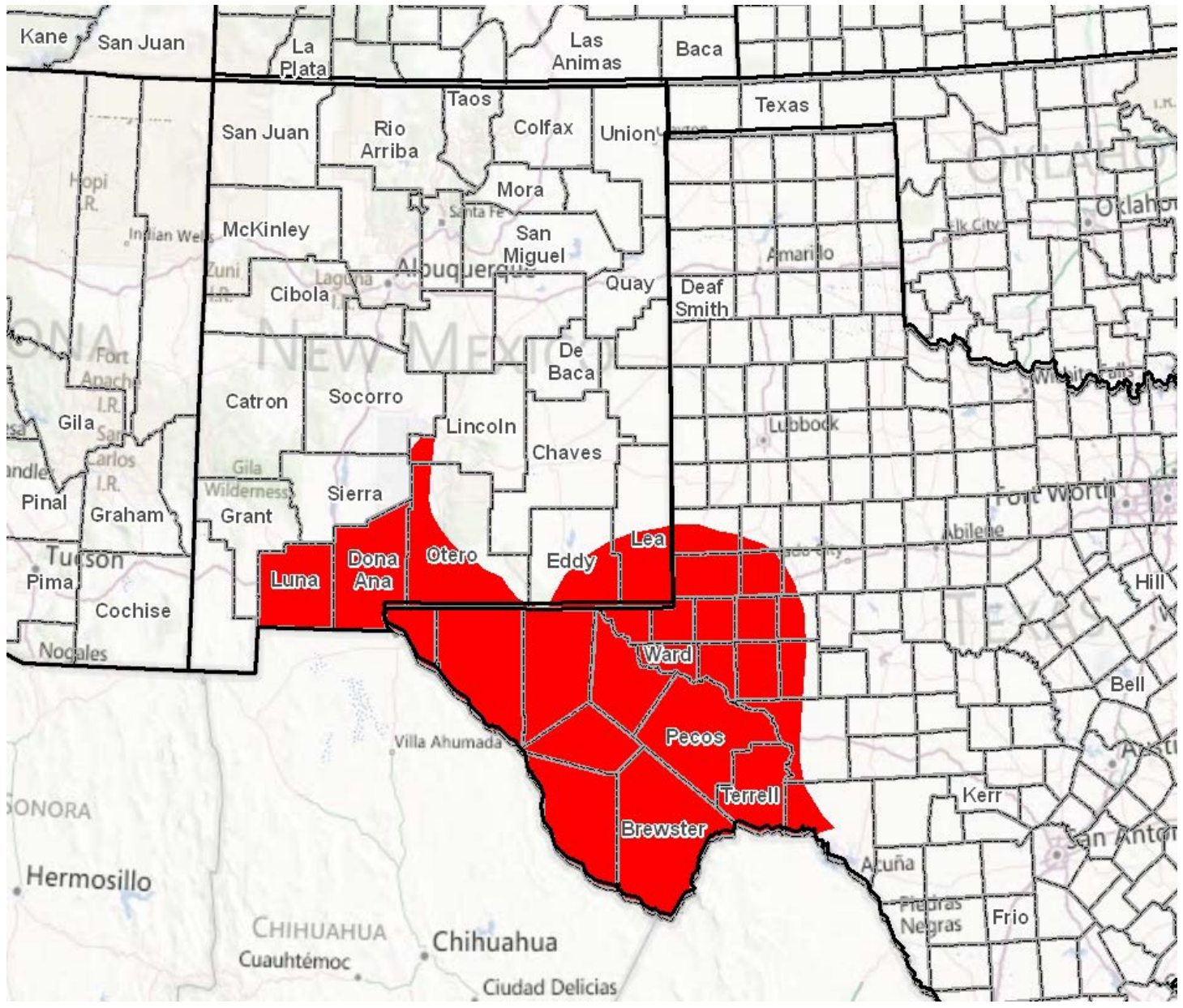
Source: ESRI StreetMap USA 2010



Source: ESRI StreetMap USA 2010



Source: ESRI StreetMap USA 2010



APPENDIX E

Best Management Practices



APPENDIX E

Best Management Practices

The following best management practices (BMPs) will be implemented for the Project. As described in **Section 1.2** of the Biological Assessment associated with this EA, U.S. Customs and Border Protection (CBP) will use an established planning and work development process to identify the BMPs that must be implemented. To identify species-specific BMPs that must be implemented, CBP environmental subject matter experts (SMEs) will identify which species potentially occur in the geographic location associated with maintenance and repair activity using information such as that shown in **Appendix D**. They will then consider other available sources of information, such as prior survey data, aerial photographs, site visits, and previously developed environmental documentation, to evaluate whether suitable habitat for threatened and endangered species could occur at each project location. The CBP environmental SME will also determine if a survey conducted by a qualified biologist is required prior to maintenance and repair activities to determine if habitat is present or required by a BMP. If necessary, the CBP environmental SMEs will hold further consultation with the U.S. Fish and Wildlife Service (USFWS) to clarify any compliance requirements.

Land Use

1. CBP will notify all land managers at least 5 days in advance of any scheduled maintenance and repair activities on their lands.

Geology and Soil Resources

1. Silt fencing and floating silt curtains should be installed and maintained to prevent movement of soil and sediment and to minimize turbidity increases in water.
2. Implement routine road maintenance practices to avoid making wind rows with the soil once grading activities are complete and use any excess soil on site to raise and shape the road surface.
3. Only apply soil-binding agents during the late summer/early fall months to avoid impacts on federally listed species. Do not apply soil-binding agents in or near (within 100 feet) surface waters (e.g., wetlands, perennial streams, intermittent streams, washes). Only apply soil-binding agents to areas that lack any vegetation.
4. Obtain materials such as gravel, topsoil, or fill from existing developed or previously used sources that are compatible with the project area and are from legally permitted sites. Do not use materials from undisturbed areas adjacent to the project area.

Vegetation

1. Herbicide and pesticide applications must be made under the supervision of a licensed applicator. A log of the chemical used, amount used, and specific location must be maintained.
2. If mechanical methods are used to remove invasive plants, the entire plant should be removed and placed in a disposal area. If herbicides are used, the plants would be left in

place. All chemical applications on federally managed land must be used in coordination with the Federal land manager. Training to identify nonnative invasive plants would be provided for CBP personnel or contractors, as necessary.

3. If the tactical infrastructure maintenance and repair activities would take place on a Federal agency's land, the appropriate agency's herbicide policy, if it exists, must be followed for vegetation control. Contractors applying herbicides must verify that the appropriate agency's policy is being followed. This information should be requested from the Contracting Officer's Representative (COR).
4. New guidance from the USEPA on herbicide application in riparian areas is imminent. Check with COTR on the status of these regulations prior to applying herbicide in such areas.
5. Coordinate with the CBP environmental SME to determine if the maintenance activities occur in a highly sensitive area or an area that poses an unacceptable risk of transmitting diseases and invasive species. If it is determined that maintenance activities occur in such an area, follow the CBP cleaning protocol.
6. A fire prevention and suppression plan will be developed and implemented for all maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.
7. Identify fill material, sandbags, hay bales, and mulch brought in from outside the project area by its source location. Use sources that are sterile or weed-free.
8. Avoid the removal of mature trees providing shade or bank stabilization within the riparian area of any waterway during maintenance or repair activities.
9. If vegetation must be removed, allow natural regeneration of native plants by cutting vegetation with hand tools, mowing, trimming, or using other removal methods that allow root systems to remain intact.
10. Vegetation targeted for retention would be flagged for avoidance to reduce the likelihood of being treated.
11. Periodic inspections of tactical infrastructure by the CBP SME would be conducted to evaluate and document conditions, including erosion and to ensure that prescriptions are followed and performed in the appropriate community types. As necessary, maintenance will be scheduled to minimize erosion and correct other adverse conditions.

Wildlife

1. If hollow bollards are necessary, cover hollow bollards (i.e., those that will be filled with a reinforcing material such as concrete) to prevent wildlife from entrapment. Deploy covers (and ensure they remain fully functioning) from the time the posts or hollow bollards arrive on the site and are unloaded, until they are filled with reinforcing material.
2. Ensure temporary light poles and other pole-like structures used for maintenance activities have anti-perch devices to discourage roosting by birds.
3. Minimize animal collisions during maintenance and repair activities by not exceeding construction speed limits of 35 miles per hour (mph) on major unpaved roads (i.e., graded

with ditches on both sides) and 25 mph on all other unpaved roads. During periods of decreased visibility (e.g., night, poor weather, curves), do not exceed speeds of 25 mph.

4. Do not permit pets owned or under the care of the contractor or sector personnel inside the project boundaries, adjacent native habitats, or other associated work areas.
5. To prevent entrapment of wildlife species, ensure excavated, steep-walled holes or trenches are either completely covered by plywood or metal caps at the close of each work day or provided with one or more escape ramps (at no greater than 1,000-foot intervals and sloped less than 45 degrees) constructed of earth fill or wooden planks.
6. Each morning before the start of maintenance activities and before such holes or trenches are filled, ensure they are thoroughly inspected for trapped animals. Ensure that any animals discovered are allowed to escape voluntarily (by escape ramps or temporary structures), without harassment, before maintenance activities resume; or are removed from the trench or hole by a qualified person and allowed to escape unimpeded.

Threatened and Endangered Species and Other Protected Species

General BMPs

1. Coordinate with COR or CBP environmental SME to determine which threatened and endangered species could occur in the vicinity of maintenance activities. In areas where there are no threatened and endangered or other species concerns, the personnel performing the maintenance activity are responsible for monitoring the implementation of general maintenance and repair BMPs to avoid impacts on the environment.
2. To protect individuals of listed species within the project area, suspend work in the immediate vicinity of the individual until it moves out of harm's way on its own, or enlist a qualified specialist (individuals or agency personnel with a permit to handle the species) to relocate the animal to a nearby safe location in accordance with accepted species-handling protocols.
3. Develop and implement a training Project to inform TIMR maintenance personnel of the listed species that occur within the Project area, penalties for violation of state or Federal laws, implementation of included conservation actions/BMPS, and reporting requirements.
4. Check visible space underneath all vehicles and heavy equipment for listed species and other wildlife prior to moving vehicles and equipment at the beginning of each workday and after vehicles have sat idle for more than 15 minutes.
5. Coordinate with the CBP environmental SME to determine if the maintenance activities occur in a highly sensitive area or an area that poses an unacceptable risk of transmitting diseases and invasive species. If it is determined that maintenance activities occur in such an area, follow the CBP cleaning protocol.

Migratory Bird BMPs

1. Initial mechanical and chemical vegetation control and subsequent mechanical vegetation control should be timed to avoid the migration, breeding, and nesting timeframe of migratory birds (February 1 through September 1). Herbicide retreatments could occur

throughout the year. When initial mechanical and chemical vegetation control must be implemented during February 1 through September 1, a survey for nesting migratory birds will be conducted immediately prior to the start of activities. If an active nest is found, a buffer zone will be established around the nest and no activities will occur within that zone until nestlings have fledged and abandoned the nest.

2. A survey for migratory birds will also be conducted prior to all other maintenance and repair activities to be implemented during the nesting period in areas where migratory birds might be nesting.
3. If maintenance is scheduled during the migratory bird nesting season, take steps to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures, and use of various excluders (e.g., noise). Birds can be harassed to prevent them from nesting on the site. Once a nest is established, they cannot be harassed until all young have fledged and left the nest site. If nesting birds are found during the supplemental survey, defer intrusive maintenance activities until the birds have left the nest. Confirmation that all young have fledged should be made by qualified personnel.

Species-Specific BMPs

AMPHIBIANS AND REPTILES

Chiricahua Leopard Frog (*Lithobates chiricahuensis*)

1. Prior to any work within critical habitat of this species, CBP will consult with USFWS personnel at the New Mexico Ecological Services Office.
2. Prior to any activities within suitable habitat; including the dispersal range (1, 3, or 5 miles depending on persistence of water in the aquatic system) of the species, protocol level surveys will be conducted. If Chiricahua leopard frogs are detected, CBP will consult with USFWS personnel at the New Mexico Ecological Services Office. If Chiricahua leopard frogs are not detected during protocol level surveys, CBP will proceed without further coordination with USFWS.

New Mexico Ridge-nosed Rattlesnake (*Crotalus willardi obscurus*)

1. Maintenance vehicles would not exceed a speed of 15 to 20 mph during periods of elevated roaming and foraging activities from July through August within New Mexico ridge-nosed rattlesnake-occupied habitat, designated critical habitat, and suitable habitat (pine-oak woodlands at high elevations of 5,500 to 9,000 feet within the Animas and Peloncillos mountains).

BIRDS

Mexican Spotted Owl (*Strix occidentalis lucida*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

1. No maintenance and repair activities will be conducted within areas classified as protected activity centers of Mexican spotted owls during the nesting season. CBP will coordinate with the USFWS to update known locations of Mexican spotted owl on an annual basis.

2. Vegetation control in suitable habitat of threatened or endangered bird species (see **Table E-1** for a description of suitable habitat and nesting season for each species) will be limited to the minimum necessary to maintain drivable access roads and to maintain the functionality of other tactical infrastructure. This limited vegetation control will be conducted outside of the nesting season (see **Table E-1**). This restriction does not apply to areas where protocol surveys have been conducted and it has been determined that the area is not occupied and does not contain PCE.
3. For all other maintenance activities to be conducted within suitable habitat of a threatened or endangered bird species during the nesting season (see **Table E-1**), the following avoidance measures will apply. A qualified biologist will conduct a survey for threatened and endangered birds prior to initiating maintenance activities. If a threatened or endangered bird is present, a qualified biologist will survey for nests approximately once per week within 1,300 feet (Mexican spotted owl) or 500 feet (all other species) of the maintenance area for the duration of the activity. If an active nest is found, no maintenance will be conducted within 1,300 feet (Mexican spotted owl) or 300 feet (all other species) of the nest until the young have fledged.

Northern Aplomado Falcon (*Falco femoralis septentrionalis*)

1. CBP will coordinate with the USFWS to update known locations of northern aplomado falcon occupied habitat and nest sites on an annual basis.
2. Surveys for territorial falcons and their nests will be conducted prior to maintenance work to be implemented during the nesting season of northern aplomado falcons (date to date) within areas known or suspected to be occupied by this species. Surveys be conducted by qualified individuals in accordance with protocols that are recognized by the Service and/or the New Mexico Department of Game and Fish.
3. No maintenance activities will be conducted within two miles of active nests of northern aplomado falcons.
4. Northern aplomado falcons use nests constructed by other birds, mainly corvids such as ravens. Therefore, large nests constructed of sticks will be removed from towers and other infrastructure located within potential habitat for this species only when it is essential to do so to maintain the functionality of the infrastructure. Similarly, removal of agave with such nests will be avoided unless essential to maintaining drivable access roads and to maintain the functionality of other tactical infrastructure.
5. 2 miles to occupied aplomado falcon habitat, should be conducted during daylight hours to avoid noise and lighting issues. If construction or maintenance work activities must continue at night, all lights should be shielded to direct light only onto the work site, the minimum wattage needed should be used, and the number of lights should be minimized. Noise levels for day or night construction and maintenance should be minimized. All generators should an attached muffler or other noise-abatement equipment in accordance with industry standards.

Table E-1. Threatened and Endangered Bird Species Suitable Habitat and Nesting Season

Common Name	Suitable Habitat	Nesting Season
Mexican spotted owl	Closed-canopy forests [riparian, mixed conifer, pine-oak, and pinyon juniper woodland] and steep, narrow, entrenched, rocky canyons and cliffs within Mexican spotted owl protected activity centers	Mar 1–Jun 30
Northern aplomado falcon	Desert scrub, desert grasslands, and woodlands and coastal prairies of southern Texas	January 1 – June 30
Southwestern willow flycatcher	Dense riparian habitat along streams, rivers, lakesides, and other wetland	Mar 15–Sep 15

MAMMALS

Lesser Long-nosed Bat (*Leptonycteris yerbabuenae*) and Mexican Long-Nosed Bat (*Leptonycteris nivalis*)

1. CBP will coordinate with the USFWS to update known locations of Lesser long-nosed bat roost locations on an annual basis.
2. Removal of agave will be limited to the minimum necessary to maintain drivable access roads and to maintain the functionality of other tactical infrastructure. Prior to conducting any maintenance or repair activity outside of the existing disturbed footprint of tactical infrastructure within the range of this species, a qualified biologist will conduct a survey to identify and flag all agave to be avoided.
3. No maintenance and repair activities will be conducted between July through September within 0.5 miles of any important lesser long-nosed or Mexican long-nosed bat roost identified and agreed upon by the USFWS and CBP.
4. For maintenance and repair activities that will take place greater than 0.5 miles and less than 5 miles of important lesser long-nosed bat roost, limit activities to daylight hours only from July through mid-September to avoid effects to bats in bat roosts. If night lighting is unavoidable: (1) minimize the number of lights used; (2) place lights on poles pointed down toward the ground, with shields on lights to prevent light from going up into sky, or out laterally into landscape; and (3) selectively place lights so they are directed away from native vegetation.

Water Resources

1. The environmental SME must be consulted to validate the need for site-specific storm water pollution prevention plans (SWPPPs), spill protection plans, and regulatory approvals. Site-specific SWPPPs and spill protection plans would be prepared and regulatory approval sought, if necessary, in cases of highly sensitive work sites and large scopes of work that pose a significant risk. Where a site-specific SWPPP is not necessary, the personnel performing the maintenance would comply with a generic SWPPP and spill protection plan that covers most routine maintenance and repair

activities. Prior to arrival on the work site, key personnel would understand correct implementation of these BMPs and their responsibility to address deficiencies.

2. The environmental SME will provide locations that have the potential for wetlands or other waters of the United States. If no current existing U.S. Army Corps of Engineers (USACE) jurisdictional determination is available, a delineation will be conducted and jurisdictional determination will be obtained from the USACE. Prior to conducting any activities that would require filling of wetlands and other waters of the United States, all Federal and state Clean Water Act (CWA) Section 404 individual or applicable nationwide permits and 401 and other applicable permits will be obtained.
3. Prepare and implement an SWPPP prior to applicable maintenance activities (greater than 1 acre of exposed dirt or as required by property manager). Implement BMPs described in the SWPPP to reduce erosion. Consider areas with highly erodible soils when planning the maintenance activities and incorporate measures such as waddles, aggregate materials, and wetting compounds in the erosion-control BMPs.
4. Coordinate with the environmental SME to determine which maintenance activities occur within the 100-year floodplain. Maintenance activities within the 100-year floodplain would be conducted in a manner consistent with Executive Order 11988 and other applicable regulations.
5. All maintenance contractors and personnel would review the CBP-approved spill protection plan and implement it during maintenance and repair activities.
6. Contact the environmental SME to coordinate with waterway permitting agencies when performing work below the ordinary high water mark.
7. Wastewater from pressure washing must be collected. A ground pit or sump can be used to collect the wastewater. Wastewater from pressure washing must not be discharged into any surface water.
8. If soaps or detergents are used, the wastewater and solids must be pumped/cleaned out and disposed of in an approved facility. If no soaps or detergents are used, the wastewater must first be filtered or screened to remove solids before being allowed to flow off site. Detergents and cleaning solutions must not be oversprayed into or discharged into surface waters.
9. If the surrounding area has dense, herbaceous cover (primarily grasses) and there are no listed plant species or habitat for such, the wastewater (with or without detergent) could be discharged directly to the grassy area without collection or filtering as long as it is well dispersed and all the wastewater can percolate into the grass and soil. If wastewater runs off the grassy area, it must be filtered.
10. Prevent runoff from entering drainages or storm drains by placing fabric filters, sand bag enclosures, or other capture devices around the work area. Empty or clean out the capture device at the end of each day and properly dispose of the wastes.
11. Avoid contaminating natural aquatic and wetland systems with runoff by limiting all equipment maintenance, staging, laydown, and dispensing hazardous liquids (e.g., fuel and oil) to designated upland areas.

12. Avoid contamination of ground and surface waters by storing concrete wash water, and any water that has been contaminated (e.g., with construction materials, oils, equipment residue) in closed containers onsite until removed for disposal. In upland areas, storage tanks must be on-ground containers.
13. Avoid contamination of ground and surface waters by ensuring that water tankers that convey untreated surface water do not discard unused water where it has the potential to enter any aquatic or wetland habitat.
14. Cease work during heavy rains and do not resume work until conditions are suitable for the movement of equipment and materials.
15. Uncured concrete should not be allowed to enter the water.
16. Work should be done from the top of the bank or a floating barge, when practicable. Heavy equipment use within the active flowing channel should be avoided.
17. Floating dock components containing foam must be encapsulated to prevent the introduction of foam particles into the water.
18. For all in-water work in streams, sediment barriers would be used to avoid downstream effects of turbidity and sedimentation.
19. Do not pressure wash more than the area to be painted or treated (e.g., for graffiti removal) each day.
20. If the purpose of cleaning is for graffiti removal, spot clean, steam clean or scrape dirty areas rather than pressure washing entire sections of fence or levee wall.
21. Operate pressure-washing equipment according to manufacturer's recommendations.
22. Except for emergency repairs required to protect human life, limit work within drainages to dry periods to reduce effects on downstream water quality.
23. Rip-rap should be placed on a layer of geotextile fabric to prevent underlying sediment from being washed out through the openings of the rip-rap.
24. Rip-rap should be keyed into the wash/streambed to ensure its stability and effectiveness.

Air Quality

1. Good modern practices for earth moving/excavating activities would be implemented. These include using approved dust suppressants or adhesive soil stabilizers, paving, covering, landscaping, continuous wetting, or detouring maintenance and repair areas, barring access to maintenance and repair areas, or other acceptable means of reducing significant amounts of airborne dust. All Federal, state, county, and local ordinance would be adhered to during maintenance and repair of tactical infrastructure.

Noise

1. Follow all Occupational Safety and Health Administration requirements with respect to construction noise impacts. Ensure all motorized equipment possess properly working mufflers and are kept properly tuned to reduce backfires. Ensure all motorized generators

will be in baffle boxes (a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise-abatement methods in accordance with industry standards. For activities involving heavy equipment, seasonal restrictions might be required to avoid impacts on threatened or endangered species in areas where these species or their potential habitat occur. See species-specific BMPs.

Cultural Resources

1. If Native American human remains are discovered during maintenance and repair of tactical infrastructure CBP would consult with culturally affiliated tribes and the New Mexico Office of Historic Preservation regarding their management and disposition in compliance with Native American Graves Protection and Repatriation Act.
2. Obtain all pertinent training materials for cultural resources for the areas where maintenance and repair activities would occur. Prior to arrival on the work site, ensure key personnel are aware of the cultural resources potentially occurring in the project area and understand the proper BMPs to implement should cultural resources be encountered in the project area.

Roadways and Traffic

1. Access maintenance sites using designated, existing roads. Do not allow any off-road vehicular travel outside those areas. Ensure all parking is in designated disturbed areas. For longer-term projects, mark designated travel corridors with easily observed removable or biodegradable markers.
2. All contractors and maintenance personnel would operate within the designed/approved construction corridor.

Hazardous Materials and Waste Management

1. Where hazardous and regulated materials are handled, workers should collect and store all fuels, waste oils, and solvents in clearly labeled closed tanks and 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.
2. All paints and cleaning materials should be approved by the appropriate land manager.
3. Use a ground cloth or an oversized tub for paint mixing and tool cleaning. Properly dispose of the wastes.
4. Enclose spray-painting operations with tarps or other means to minimize wind drift and to contain overspray.
5. Clean paintbrushes and tools covered with water-based paints in sinks plumbed to a sanitary sewer or in portable containers that can be dumped into sanitary sewer drains. Never clean such tools in a natural drainage or over a storm drain.
6. Brushes and tools covered with non-water-based paints, finishes, thinners, solvents, or other materials must be cleaned over a tub or container and the cleaning wastes disposed of or recycled at an approved facility. Never clean such tools in a natural drainage or over a storm drain.

7. If maintenance activities would continue at night, direct shielded light only onto the area required for worker safety and productivity. Lights would not exceed 1.5-foot candles within the lit area.
8. Implement proper and routine maintenance of all vehicles and other maintenance equipment such that emissions are within the design standards of all maintenance equipment.
9. Use water-based paints instead of oil-based paints. Look for the words “Latex” or “Cleanup with water” on the label. Do not rinse into natural drainages (e.g., creeks, irrigation canals, wetlands) or storm drains.
10. Do not use paints more than 15 years old. They could contain toxic levels of lead.
11. Use ground or drop cloths underneath painting, scraping, sandblasting, and graffiti removal work. Properly dispose of the waste and scraps collected on the drop cloth.
12. Minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain on site more than 12 hours should be properly stored in closed containers until disposal.

Socioeconomic Resources, Environmental Justice, and Protection of Children

No BMPs were identified for socioeconomic resources, environmental justice, or the protection of children.

APPENDIX F

Soils Mapped within the Tactical Infrastructure Maintenance and Repair Region of Analysis



APPENDIX F
**Soils Mapped within the Tactical Infrastructure
Maintenance and Repair Region of Analysis**

Table F-1. Soil Properties of Soils Mapped within the Region of Analysis

Map Unit Name	Counties	Erosion Potential	Farmland Classification	Permeability
Akela-Rock Outcrop-Aftaden	Doña Ana	Moderate	None	Moderate to moderately rapid
Rock Outcrop-Motoqua	Doña Ana	Moderate	None	Slow
Rock Outcrop-Torriothers	Doña Ana	Moderate	None	Slow
Rough Broken Land-Rockland-Lehmans	Luna, Hidalgo	Moderate	None	Slow
Bluepoint-Onite	Luna	Moderate	None	Moderately rapid to rapid
Rock Land	Doña Ana	Moderate	None	Slow
Tres Hermanos-Upton-Nickel	Luna, Hidalgo	Slight to moderate	None	Slow to moderately slow
Eba	Luna	Moderate	None	Slow
Harrisburg-Simona-Wink	Doña Ana	Low to high	None	Moderately rapid
Nickel-Upton	Doña Ana	Slight	None	Moderately slow to moderate
Aladdin	Doña Ana	Moderate	None	Moderately rapid
Bluepoint	Doña Ana	Slight	None	Rapid
Pintura-Berino-Simona	Luna	Moderate to severe	None	Rapid
Eba-Cloverdale-Eicks	Hidalgo	Slight to moderate	None	Very slow to slow
Mohave-Stellar-Forrest	Luna, Hidalgo	Slight to moderate	None	Slow to moderately slow
Pintura-Wink	Doña Ana	High	None	Moderately rapid to rapid
Pajarito-Onite-Pintura	Doña Ana	High	None	Moderately rapid to rapid
Hondale-Mimbres-Bluepoint	Luna	Slight to severe	None	Slow to moderately slow
Mimbres	Luna	Slight	Farmland soil of Statewide Importance	Moderately slow
Mimbres-Verhalen	Luna	Slight	None	Slow

Map Unit Name	Counties	Erosion Potential	Farmland Classification	Permeability
Graham	Hidalgo	Severe	None	Slow
Tencee-Nickel	Doña Ana	Slight to severe	None	Moderate
Mimbres-Stellar	Doña Ana	Slight	None	Moderately slow
Yesum	Doña Ana	Slight to severe	None	Moderate
Yesum-Hollom	Doña Ana	Slight to severe	None	Moderate
Glendale-Harkey	Doña Ana	Moderate to high	None	Moderately slow to moderate
Verhalen-Glendale-Mimbres	Hidalgo	Slight	None	Slow to moderately slow
Hondale-Playas	Hidalgo	Slight to moderate	None	Very slow
Cacique-Cruces	Doña Ana	Slight to moderate	None	Moderate
Berino-Doña Ana	Doña Ana	Moderate	None	Moderate
Caliza-Bluepoint-Yturbide	Doña Ana	High	None	Moderately rapid to rapid
Mohave-Stellar	Luna	Slight to moderate	None	Slow to moderately slow
Sonita-Yturbide-Hap	Hidalgo	Moderate to severe	None	Moderate to moderately rapid
Duneland-Doña Ana	Doña Ana	High	None	Moderate
Marcial-Ubar	Doña Ana	Moderate	None	Slow
Mimbres-Glendale	Doña Ana	Moderate	None	Moderately slow
Sonoita-Pinaleno-Aladdin	Doña Ana	Moderate to severe	None	Moderate

Sources: USACE 1994b, CBP 2007b

APPENDIX G

Determination of Effects for State
Listed Sensitive, Threatened, and
Endangered Species and BLM
Listed Sensitive Species
That Occur Within
Doña Ana, Grant, Hidalgo, and
Luna Counties, New Mexico

APPENDIX G

Determination of Effects for State Listed Sensitive, Threatened, and Endangered Species and BLM Listed Sensitive Species That Occur Within Doña Ana, Grant, Hidalgo, and Luna Counties, New Mexico.

Table G-1. Determination of Effects for State Listed Sensitive (S), Threatened (T), and Endangered (E) Species and BLM Listed Sensitive (S) Species

Species	State Status	BLM Status	Habitat	Range	Determination
AMPHIBIANS					
Arizona toad <i>Anaxyrus microscaphus</i>	S	S	Gila National Forest and Rancho del Rio.	Grant and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts
Chiricahua leopard frog <i>Lithobates chiricahuensis</i>	S	-	Gila, San Francisco, Tularosa, and Blue Rivers; the Gila National Forest, Patterson Lake and the Guadalupe and Animas mountains.	Grant, Hidalgo, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts
Great Plains narrowmouth toad <i>Gastrophryne olivacea</i>	E	-	South-central Luna County in the vicinity of Hermanas along Highway 9.	Luna County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts
Lowland leopard frog <i>Lithobates yavapaiensis</i>	E	S	Along rocky stream courses in the Coronado and Gila National Forests.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts
Sonoran Desert toad <i>Incilius alvarius</i>	T	-	Along the Arizona border (northward to the vicinity of Rodeo) and eastward locally to near Animas and southeast of the Animas Mountains in lower Deer Creek.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
BIRDS					
Abert's towhee <i>Melospiza aberti</i>	T	-	Lower Gila Valley, San Simon Cienega in Hidalgo County, and Mogollon Creek in Grant County.	Hidalgo and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Aplomado falcon <i>Falco femoralis</i>	E	-	Grasslands interspersed with mesquite, cactus, and yucca.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Arctic peregrine falcon <i>Falco peregrinus tundrius</i>	T	-	Potential migrant in riparian woodlands and mountainous areas.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Arizona grasshopper sparrow <i>Ammodramus savannarum ammoregus</i>	E	S	Well-developed grasslands in the southern Animas and western Playas valleys.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Bald eagle <i>Haliaeetus leucocephalus</i>	T	S	Forested areas in close proximity to large rivers, lakes, and reservoirs.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Baird's sparrow <i>Ammodramus bairdii</i>	T	S	Desert grasslands.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Bell's vireo <i>Vireo bellii</i>	T	S	Dense shrubland or woodland along lowland stream courses characterized by willow, mesquite, and seepwillow.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Bendire's thrasher <i>Toxostoma bendirei</i>	-	S	Typically inhabits sparse desert shrubland & open woodland with scattered shrubs.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Black swift <i>Cypseloides niger</i>	S	-	Jemez Falls	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Boreal owl <i>Aegolius funereus</i>	T	-	High elevation, mature and old-growth spruce-fir forests.	Doña Ana	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Broad-billed hummingbird <i>Cyanthus latirostris</i>	T	-	Hackberry thickets in Guadalupe Canyon in Hidalgo County. Vagrants occur elsewhere in residential/developed areas near the Rio Grande and Pecos Basins.	Doña Ana, Hidalgo, and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Brown pelican <i>Pelecanus occidentalis</i>	E	-	Large lakes or along major rivers, including the San Juan, Gila, Rio Grande, and Pecos drainages.	Doña Ana, Grant, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Botteri's sparrow <i>Peucaea botterii</i>	S	-	Gray Ranch in stands of well developed giant sacaton.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Buff-collared nightjar <i>Antrostomus ridgwayi</i>	E	-	Guadalupe Canyon in Hidalgo County and Doña Ana Mountains in Doña Ana County.	Doña Ana, Grant, and Hidalgo counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Chestnut-collared longspur <i>Calcarius ornatus</i>	-	S	A native prairie specialist. Winters in grasslands, deserts & plateaus dominated by low grasses and forbs, where most vegetation is <0.5 m high. Dominant plants include grama grasses, dropseed, bluestems & needlegrass. In Chihuahuan desert, scattered soaptree yucca & low shrubs.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Common black-hawk <i>Buteogallus anthracinus</i>	T	-	Mature riparian forest stands in close proximity to perennial streams	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Common ground-dove <i>Columbina passerina</i>	E	-	Desert shrublands (dominated by mesquite, yucca, and cactus) and in riparian and wooded lowland areas.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Costa's hummingbird <i>Calypte costae</i>	T	-	Guadalupe Canyon in Hidalgo County.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Elegant trogon <i>Trogon elegans</i>	E	-	Riparian habitats in canyons in the Animas and Peloncillo mountains.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gila woodpecker	T	-	Gila Valley (northeast to Mogollon Creek in Grant County) and in Guadalupe Canyon (Hidalgo County).	Hidalgo and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gould's wild turkey <i>Meleagris gallopavo mexicana</i>	T	-	Peloncillo, Animas, and San Luis mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gray vireo <i>Vireo vicinior</i>	T	-	Desert scrub/rocky slopes and juniper savannahs near the Rio Grande and Pecos Basins	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Least tern <i>Sternula antillarum</i>	E	-	Flat, sandy areas relatively devoid of vegetation.	Doña Ana,	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Loggerhead shrike <i>Lanius ludovicianus</i>	S	-	Desert scrub/rocky slopes and juniper savannahs in montane regions.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Lucifer hummingbird <i>Calothorax lucifer</i>	T	-	Peloncillo Mountains	Grant, Hidalgo, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mexican spotted owl <i>Strix occidentalis lucida</i>	S	-	Mature, multi-layered, forested stands of montane regions.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mountain plover <i>Charadrius montanus</i>	S	-	Dry, open shortgrass prairie habitats. Also associated with heavily grazed areas.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Neotropic cormorant <i>Phalacrocorax brasilianus</i>	T	-	Large bodies of water (e.g. reservoirs) with stands of trees and/or shrubs in or near the water.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Northern beardless tyrannulet <i>Camptostoma imberbe</i>	E	-	Riparian and wooded lowland areas, including cienegas at the Gray Ranch, Hidalgo County.	Hidalgo and Grant counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Northern goshawk <i>Accipiter gentilis</i>	S	-	Mature, closed canopied forests of mountains or high mesas.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Painted bunting <i>Passerina ciris</i>	-	S	Primarily in riparian oases & surrounding desert shrub habitat; often nest in mesquite shrublands.	Doña Ana and Grant counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Peregrine falcon <i>Falco peregrinus anatum</i>	T	-	Large high cliffs where sufficient prey and water are available nearby.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Piñon jay <i>Gymnorhinus cyanocephalus</i>	-	S	Pinyon-juniper woodlands.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	E	-	Riparian habitats consisting of willow and or salt cedar.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Sprague's pipit <i>Anthus spragueii</i>	-	S	Prefers dry, open grasslands with native grass species. Wintering areas may include taller grass and some shrub cover.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Thick-billed kingbird <i>Tyrannus crassirostris</i>	E	-	Guadalupe Canyon, Antelope Wells, and the foothills of the Animas Mountains.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Varied bunting <i>Passerina versicolor</i>	T	-	Dense stands of mesquite (<i>Prosopis</i> spp.) and associated growth in canyon bottoms.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Violet-crowned hummingbird <i>Amazilia violiceps</i>	T	-	Low-elevation broadleaf riparian woodlands in Guadalupe Canyon in Hidalgo County. Vagrants may occur elsewhere in southwest New Mexico.	Doña Ana, Hidalgo, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	-	S	Dry, open, shortgrass, treeless plains, often associated with burrowing mammals. Also golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas, campuses, and fairgrounds.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
BIRDS (continued)					
Whiskered screech owl <i>Megascops trichopsis</i>	-	S	Pine-oak woodlands in the Peloncillo and Animas mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
White-eared hummingbird <i>Hylocharis leucotis</i>	T	-	Bear and Indian canyons in the Animas Mountains.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	S	S	Mature riparian habitats.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Yellow-eyed junco <i>Junco phaeonotus</i>	T	-	Animas, Peloncillo, and Big Hatchett mountains.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
FISH					
Chihuahua chub <i>Gila nigrescens</i>	E	-	Reaches of the Mimbres River in deep pools bordered by undercut banks or containing downed trees.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Desert sucker <i>Catostomus clarkii</i>	S	-	Gila Basin.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gila chub <i>Gila intermedia</i>	E	-	Formerly occurred in the Gila basin in the Tularosa River, Duck Creek, and St. Simon Cienega.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gila topminnow <i>Poeciliopsis occidentalis occidentalis</i>	T	-	Gila River Basin.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
FISH (continued)					
Gila trout <i>Oncorhynchus gilae</i>	T	-	Gila River Basin	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Headwater chubb <i>Gila nigra</i>	E	-	Gila River Basin.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Loach minnow <i>Rhinichthys cobitis</i>	E	-	Gila River from the East Fork to the Middle Box.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Roundtail chub (lower Colorado River populations) <i>Gila robusta</i>	E	-	San Juan and Gila drainages	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Sonora sucker <i>Catostomus insignis</i>	S	-	Gila Basin.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Spikedace <i>Meda fulgida</i>	E	-	Gila River system in Grant County: the lowermost West and Middle forks, the upper East Fork, the reach between Mogollon Creek and the head of the Middle Box.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
MAMMALS					
Allen's big-eared bat <i>Idio nycteris phyllotis</i>	S	S	Ponderosa pine and riparian habitats in the Gila National Forest	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Arizona Myotis <i>Myotis occultus</i>	S	--	In a variety of habitats, ranging from desert scrub to spruce-fir, but typically in close proximity to water.	Doña Ana and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
MAMMALS (continued)					
Arizona shrew <i>Sorex arizonae</i>	E	-	Mesic sites in forested zones in the Animas Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Big free-tailed bat <i>Nyctinomops macrotis</i>	S	-	Roosts in cracks and crevices in cliff faces and canyon walls.	Doña Ana and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Black-tailed prairie dog <i>Cynomys ludovicianus ludovicianus</i>	S	S	Plains-Mesa grasslands in southern New Mexico.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Cave Myotis <i>Myotis velifer</i>	S	-	Roosts in caves and forages in riparian habitats.	Hidalgo and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Common hog-nosed skunk <i>Conepatus leuconotus</i>	S	-	Creosote desert to pine-oak forest, but most common in riparian habitats.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Desert pocket gopher <i>Geomys arenarius arenarius</i>	S	-	Plains-mesa grasslands and sand scrub habitat.	Doña Ana and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Fringed Myotis <i>Myotis thysanodes</i>	S	-	Ranges from desert scrub to mountain pine communities. Roosts in caves and mines.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Greater western mastiff bat <i>Eumops perotis</i>	S	-	Roosts in cliff faces in the Peloncillo Mountains	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
MAMMALS (continued)					
Hooded skunk <i>Mephitis macroura</i>	S	-	Gila National Forest	Grant, Hidalgo, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Lesser long-nosed bat <i>Leptonycteris yerbabuena</i>	T	-	Peloncillo and Animas mountains	Hidalgo and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Long-eared Myotis <i>Myotis evotis</i>	S	-	Coniferous forests at moderate elevations in the Gila National Forest.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Long-legged Myotis <i>Myotis volans</i>	S	-	Open woods and mountainous areas. Roosts in buildings, crevices, and hollow trees; may use caves as night roosts.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mearns' pocket gopher <i>Thomomys bottae mearnsi</i>	S	-	Gray Ranch in Hidalgo County.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mexican gray wolf <i>Canus lupus baileyi</i>	E	-	Gila National Forest	Doña Ana, Grant, Hidalgo, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mexican long-nosed bat <i>Leptonycteris nivalis</i>	E	-	Peloncillo Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	S	S	Roosts in shallow caves in the Peloncillo Mountains. Forages in pine-oak woodlands and canyon bottoms.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
MAMMALS (continued)					
Pale Townsend's big-eared bat <i>Corynorhinus townsendii pallescens</i>	S	S	Ranges from desert scrub to pinyon-juniper woodlands. Roosts in caves or mines.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Pecos River muskrat <i>Ondatra zibethicus ripensis</i>	S	-	Creeks, rivers, lakes, drainage ditches, and canals; prefer shallow, fresh water with clumps of marshy vegetation, such as cattails, bulrushes, and sedges.	Doña Ana	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Red fox <i>Vulpes vulpes</i>	S	-	A variety of habitats from open woodlands, pasturelands, riparian, and agricultural lands	Doña Ana,	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Ringtail <i>Bassariscus astutus</i>	S	-	Extensive rocky areas and cliffs in grassland and woodland.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Southern pocket gopher <i>Thomomys umbrinus emotus</i>	T	-	Open slopes and forested ridges of the Animas Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Spotted bat <i>Euderma maculatum</i>	S	S	Ranges from desert scrub to pine forests at high elevations. Roost sites typically located in cracks and crevices of cliff faces.	Doña Ana and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Western red bat <i>Lasiurus blossevillii</i>	S	S	Roosts in riparian areas where mature cottonwood and sycamore are present	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Western small-footed Myotis <i>Myotis ciliolabrum</i>	S	-	Ranges from desert scrub to wooded areas. Roosts beneath rocks, underneath exfoliating bark, and in buildings.	Doña Ana, Hidalgo, and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
MAMMALS (continued)					
Western spotted skunk <i>Spilogale gracilis</i>	S	-	Gila National Forest.	Doña Ana, Hidalgo, Grant, and Luna counties.	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Western yellow bat <i>Lasiurus xanthinus</i>	S	S	Riparian areas. Roosts in deciduous trees along riparian courses.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
White-nosed coati <i>Nasua narica</i>	T	S	Woodlands, riparian corridors and canyons.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
White-sided jack rabbit <i>Lepus callotis</i>	T	S	Animas and South Playas valleys in Hidalgo County.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Yellow-nosed cotton rat <i>Sigmodon ochrognathus</i>	S	-	Rocky slopes with scattered shrubs and bunch grasses. Nests located at base of shrubs.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Yuma myotis <i>Myotis yumanensis</i>	S	-	Lowland habitats near open water.	Doña Ana, Hidalgo, and Grant counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
INVERTEBRATES					
Anthony blister beetle <i>Lytta mirifica</i>	-	S	Chihuahuan Desert.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Cooke's Peak woodlandsnail <i>Ashmunella macromphala</i>	T	-	Cooke's Peak in Cooke's Range.	Luna County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
INVERTEBRATES (continued)					
Doña Ana talussnail <i>Sonorella todsen</i>	T	-	Endemic to the Doña Ana Mountains	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Gila springsnail <i>Pyrgulopsis thermalis</i>	T	-	Hot springs along the Gila River in Grant County	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Hacheta Grande woodlandsnail <i>Ashmunella hebardi</i>	T	-	Big Hatchet Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Moore's fairy shrimp <i>Streptocephalus moorei</i>	S	S	Sparsely vegetated desert playas.	Doña Ana and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
New Mexico hot springsnail <i>Pyrgulopsis thermalis</i>	T	-	Hot springs along the Gila River in Grant County.	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Shortneck snaggletooth snail <i>Gastrocopta dalliana</i>	T	-	Indian Creek canyon on the northern slope of the Animas Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Socorro Mountainsnail <i>Oreohelix neomexicana</i>	S	-	Mountain ranges in Grant County	Grant County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
REPTILES					
Bleached earless lizard <i>Holbrookia maculata ruthveni</i>	S	-	Sparsely vegetated sand dunes.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
REPTILES (continued)					
Gray-checked whiptail (dixoni pop.) <i>Aspidoscelis tessellata</i>	E	S	Desert grasslands and sandy or gravelly creosotebush flats in the Animas and Peloncillo mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Green rat snake <i>Senticolis triaspis</i>	T	-	Associated with rocky canyon bottoms near streams in the Animas and Peloncillo mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Little white whiptail <i>Aspidoscelis inornata gypsi</i>	S	-	Sparsely vegetated sand dunes.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mexican gartersnake <i>Thamnophis eques</i>	E	S	Lower Gila Basin, with records along Duck and Mule creeks in Grant County and near Virden in Hidalgo County.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mountain skink <i>Plestiodon callicephalus</i>	T	-	Peloncillo Mountains in Clanton and Guadalupe canyons.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Narrow-headed gartersnake <i>Thamnophis rufipunctatus</i>	T	S	On and below the Mogollon Plateau, primarily in the Pacific drainage in Grant and Hidalgo counties.	Grant and Hidalgo counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
New Mexico ridgenose rattlesnake <i>Crotalus willardi obscurus</i>	E	-	Animas Valley and the Peloncillo Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Reticulate Gila monster <i>Heloderma suspectum suspectum</i>	E	S	Gila Valley (north and east to the vicinity of Redrock), the area from the Arizona border eastward to the foothills of the Peloncillo Mountains.	Doña Ana, Hidalgo, Grant, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
REPTILES (continued)					
Slevin's bunchgrass lizard <i>Sceloporus slevini</i>	T	-	Extreme southwest Hidalgo County in the grasslands and adjacent foothills in the southern end of the Animas Valley.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Southwestern fence lizard <i>Sceloporus cowlesi</i>	S	-	Dune fields	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Yaqui black-headed snake <i>Tantilla yaquia</i>	S	-	Guadalupe and Skeleton canyons in the Peloncillo Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
PLANTS					
Alamo beardtongue <i>Penstemon alamosensis</i>	-	S	Sheltered rocky areas, canyon sides and bottoms, on limestone.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Chihuahua scurf pea <i>Pediomelum pentaphyllum</i>	-	S	Hachita Valley in desert grassland or desert scrub among creosote bush or mesquite in sandy or gravelly loam soils.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Maguire's milkvetch <i>Astragalus cobrensis</i> var. <i>maguirei</i>	-	S	Dry creek beds, banks, canyon sides, generally dry, open slopes with oaks, juniper, and pine, in the Peloncillo Mountains.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Mimbres figwort <i>Scrophularia macrantha</i>	-	S	Steep, rocky, usually north-facing igneous cliffs and talus slopes, occasionally in canyon bottoms; piñon-juniper woodland and lower montane coniferous forest.	Grant and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Night-blooming cereus <i>Peniocereus greggii</i> var. <i>greggii</i>	-	S	Mostly in sandy to silty gravelly soils in gently broken to level terrain in desert grassland or Chihuahuan desert scrub.	Doña Ana, Hidalgo, Grant, and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Species	State Status	BLM Status	Habitat	Range	Determination
PLANTS (continued)					
Nodding cliff daisy <i>Perityle cernua</i>	-	S	Limestone or igneous cliffs in the Organ Mountains in Doña Ana County.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Parish's alkali grass <i>Puccinellia parishii</i>	-	S	Alkaline springs, seeps, and seasonally wet areas that occur at the heads of drainages or on gentle slopes.	Hidalgo County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Sand pricklypear <i>Opuntia arenaria</i>	-	S	Sandy areas, particularly semi-stabilized sand dunes among open Chihuahuan desert scrub, often with honey mesquite and a sparse cover of grasses.	Doña Ana and Luna counties	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Texas thelypodium <i>Thelypodium texanum</i>	-	S	Barren hillsides and creek beds in Doña Ana County.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.
Villard's pincushion cactus <i>Escobaria villardii</i>	-	S	Loamy soils of desert grassland with Chihuahuan desert scrub on broad limestone benches in mountainous terrain.	Doña Ana County	Long term negligible direct and indirect adverse impacts. Short term minor to no direct and indirect adverse impacts.

Sources:

NMDGF. Biota Information System of New Mexico. New Mexico Department of Game and Fish electronic database, BISON-M, Version January 2014, Santa Fe, New Mexico. Available online <http://www.bison-m.org/index.aspx>. Accessed August 20, 2014.

New Mexico Rare Plant Technical Council. 1999. New Mexico Rare Plants. Albuquerque, NM: New Mexico Rare Plants Home Page. <http://nmrareplants.unm.edu> (Latest update: 16 January 2014).

Allred, K.W and R.D. Ivey. 2012. Flora neomexicana III: An illustrated identification manual. Available: www.lulu.com.

Degenhardt, W. G., C. W. Painter, and A. H. Price. 1996. *Amphibians and Reptiles of New Mexico*. Albuquerque, New Mexico. University of New Mexico Press.

APPENDIX H

TIMR Right-of-Way Las Cruces BLM District Road Maintenance Stipulations



APPENDIX H

TIMR Right-of-Way Las Cruces BLM District Road Maintenance Stipulations

MAINTENANCE PLANS

- 1) CBP would operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with these stipulations (and plan of development if applicable) and the terms and conditions of the right-of-way grant. Any relocation, additional construction, or use that is not in accord with the approved stipulations, would not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations, would be made available on the right-of-way area during maintenance, operation, and termination to the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.
- 2) CBP would submit a plan or plans of development that describe in detail the operation, maintenance, and termination of the right-of-way and its associated improvements and/or facilities. The degree and scope of these plans would vary depending upon (1) the complexity of the right-of-way or its associated improvements and/or facilities, (2) the anticipated conflicts that require mitigation, and (3) additional technical information required by the authorized officer. The plans would be reviewed, and if appropriate, modified and approved by the authorized officer. An approved plan of development would be made a part of the right-of-way grant.
- 3) CBP would contact the authorized officer at least 5 days prior to the anticipated start of any surface disturbing activities within the existing road footprint. As necessary, the authorized officer may require and schedule a pre-maintenance conference with CBP prior to CBP's commencing surface disturbing activities on the existing road footprint. CBP and/or his representative, contractors, and agents will attend the pre-maintenance conference to review the stipulations of the grant including the plans(s) of development.
- 4) CBP would designate a representative(s) who would have the authority to act upon and to implement instructions from the authorized officer. CBP's representative would be available for communication with the authorized officer within a reasonable time when maintenance or other surface disturbing activities are underway.
- 5) CBP would contact the authorized officer at least 30 days prior to work that exceeds typical maintenance work - both within the existing footprint or outside of the existing footprint within the ROW or outside of the ROW. The installation of culverts, bringing in fill or gravel beyond simple pot hole repair, increasing or lowering the height of the road, installing lateral water drainages, and staging areas are examples that would require a 30 day notice to the BLM authorized officer. An NTP from BLM would be required before work could proceed.

- 6) All culverts must be sized in accordance with accepted engineering practices and any special environmental concerns. The minimum size culvert in any installation is 18 inches. Drainage crossings and culverts should be designed for a 25-year or greater storm frequency. Culvert inlets and outlets would be armored with rip-rap that is properly sized to prevent soil erosion.
- 7) Low-Water crossings can be effectively accomplished by dipping the road down to the bed of the drainage. Site-specific designs and the construction of gravel, rip-rap, or concrete bottoms may be required in some situations. In no case should the low-water crossing fill the drainage so that water would be impounded. Low-water crossings that are not surfaced should not be used in wet conditions. Low-water crossings, in combination with culverts, may be utilized if the crossing is designed such that the structure is stable and self-cleaning.
- 8) Maintenance and repair of roads crossing low lying, non-channelized draws and bottomlands (i.e. tobosa draws) will be designed in a manner that will not alter patterns or amounts of overland flows. The use of culverts and turnouts will be designed so that ponding of overland flow is minimal and drains quickly. Measures will be taken to spread the water on the downstream side to re-spread the water to resemble the natural overland flow pattern. No maintenance and repair activities shall be conducted in a manner that alters in-channel or over-land water flow characteristics without prior written approval from the Authorized Officer; including, but not limited to, alteration of drainage ditches, culverts, erosion control structures, and raising or lowering of the road bed.

WORK LIMITS

- 9) CBP would utilize accepted minimum standards for road design, including the BLM Manual Section or the BLM Gold Book for any significant road maintenance work.
- 10) For road work within the existing footprint exceeding typical maintenance, CBP would submit standard or typical cross sections of the existing road segments as directed by the authorized officer. The cross sections should include, but are not limited to, the proposed road width, ditch dimensions, cut and fill slopes, and typical culvert installation.
- 11) CBP would place slope stakes, culvert location and grade stakes, and other maintenance control stakes as deemed necessary by the authorized officer to ensure maintenance work in accordance with the plan of development. If stakes are disturbed, they would be replaced before proceeding with maintenance.
- 12) CBP would survey and clearly mark the centerline and/or exterior limits of the right-of-way, as determined by the authorized officer. For maintenance purposes, the exterior limit of the right-of-way is the existing road/ancillary facility footprint.
- 13) No construction or routine maintenance activities would be performed during periods when the soil is too wet to adequately support construction equipment.

- 14) Maintenance holes left open overnight would be covered. Covers would be secured in place and would be strong enough to prevent livestock or wildlife from falling through and into a hole.
- 15) All design, material, operation, maintenance, and termination practices would be in accordance with safe and proven engineering practices.
- 16) Materials encountered on the project and needed for select borrow, surfacing, riprap, or other special needs would be conserved.
- 17) Specific areas as identified by the authorized officer (e.g., archaeological sites, areas with threatened and endangered species, or fragile watersheds) where maintenance equipment and vehicles would not be allowed would be clearly marked onsite by CBP before any maintenance or surface disturbing activities begin. CBP would be responsible for assuring that maintenance personnel are well trained to recognize these markers and understand the equipment movement restrictions involved.
- 18) CBP would provide for the safety of the public entering the right-of-way.
- 19) CBP would permit free and unrestricted public access to and upon the right-of-way for all lawful purposes except for those specific areas designated as restricted by the authorized officer to protect the public, wildlife, livestock, or facilities constructed within the right-of-way.

WILDERNESS STUDY AREA (WSA)

- 20) No construction, operation, maintenance, and termination activities would occur in any Wilderness Study Area. The road berm on the WSA side shall not be moved or pushed into the WSA as it is the WSA boundary.

FENCES AND GATES

- 21) CBP would minimize disturbance to existing fences, pipelines and other improvements on public lands. CBP is required to promptly repair impacted improvements to at least their former state. CBP would contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence would be braced on both sides of the passageway prior to cutting of the fence. No permanent gates would be allowed unless approved by the Authorized Officer.
- 22) Fences, gates, and brace panels would be reconstructed to appropriate BLM standards and/or specifications as determined by the authorized officer.
- 23) When maintenance activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, the gap, thus opened, would be fenced to prevent the drift of livestock. The subject natural barrier would be identified by the authorized officer and fenced by CBP as per instruction of the authorized officer.

INDUSTRIAL AND TOXIC WASTE DISPOSAL

- 24) The ROW site would be maintained in a sanitary condition at all times; waste materials at those sites would be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
- 25) CBP would comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, CBP would comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 would be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances would be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

CULTURAL

- 26) Any cultural and/or paleontological resource (historical or prehistoric site or object) discovered by CBP, or any person working on his behalf, on public or Federal land would be immediately reported to the Authorized Officer. Holder would suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery would be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. CBP would be responsible for the cost of evaluation of any decision as to proper mitigation measures would be made by the Authorized Officer after consulting with CBP.
- 27) Operation, maintenance, and termination activities within sites identified on a cultural resources report dated February 2014 and titled "A Cultural Resources Survey of 25.49 Miles of Access Roads for the U.S. Customs and Border Protection, Hidalgo and Luna Counties, New Mexico" would not occur until BLM issues a written Notice to Proceed (NTP). NTP would not be issued until all treatment requirements are met. This requirement applies to all segments of road regardless of surface ownership.

PALEONTOLOGICAL

- 28) Prior to the commencement of operation, and maintenance of facilities, improvements, and structures, CBP would complete a paleontological survey in Potential Fossil Yield Classification areas 3 or 4. Based on the results of the analysis, the BLM may stipulate further mitigations to protect paleontological resources. Operation, maintenance, and termination activities within sites identified as sensitive in the survey would not occur until the BLM issues a written Notice to Proceed (NTP).

- 29) CBP would immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operation under this authorization. CBP would suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and would protect the discovery from damage or looting. CBP may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer would evaluate, or would have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources would be determined by the Authorized Officer after consulting with CBP. Within 10 days, CBP would be allowed to continue maintenance through the site, or would be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

AIR AND DUST CONTROL

- 30) CBP would meet Federal, State, and local emission standards for air quality.
- 31) CBP would furnish and apply water or other means satisfactory to the authorized officer for dust control.

SURVEY MONUMENTS

- 32) CBP would protect all survey monuments found within the ROW. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, CBP would immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management ROW monuments or references are obliterated during operations, CBP would secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. CBP would record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, CBP would be responsible for the survey cost.

NOXIOUS WEED CONTROL

- 33) CBP would be responsible for weed control on disturbed areas within the limits of the site. CBP is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods, which include following EPA and BLM requirements and policy.

- 34) Power or high-pressure clean all equipment of all mud, dirt, and plants immediately prior to moving into the project area. Any gravel or fill to be used would come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources. No soil spoil that could potentially contain noxious weed seeds would be transported out of the area where it is created.
- 35) The project applicants would be responsible for conducting a survey for and control of noxious weeds along the route proposed for construction. If during construction noxious weeds are identified that were not originally encountered during the survey, the project applicant would avoid driving vehicles and equipment through or over the infested area. If avoidance measures cannot be taken within the area originally cleared, construction would cease and the project inspector (PI) or the authorized officer (AO) contacted.
- 36) Any use of herbicides/pesticides would comply with the applicable Federal and State laws. Herbicides/pesticides would be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder would obtain from the AO written approval of a plan showing the type and quantity of materials to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides would be approved in writing by the AO prior to use.

WILDLIFE

The 2013 TIMR ROW grant proposal and road maintenance/repair proposed action included roads that pass through occupied habitat for aplomado falcon and Chihuahua scurfpea.

- 37) Aplomado Falcon The Ruckman Hills Road is in the active breeding territory of aplomado falcons. Include the following stipulations for Ruckman Hills Road:
 - i. No road repair, maintenance or vegetation removal shall occur between January 15 and October 31 of each year on Ruckman Hills Road.
 - ii. No herbicide application will occur along Ruckman Hills Road.
 - iii. TIMR work will not remove or disturb potential nest or hunting perch substrate vegetation along Ruckman Hills Road. Nest substrate and hunting perch vegetation includes any plant that is 5 feet or taller in height
- 38) Chihuahua Scurfpea: Doyle Road and Mingas (Public Access) Roads pass through occupied Chihuahua scurfpea habitat and through a proposed Area of Critical Environmental Concern designed to protect the species. Red Lake Access Road is relatively close to the extant habitat, is in an area that has not been surveyed and that may contain soils suitable to the species. For the entire lengths of Doyle and Red Lakes Access Roads and the segment of Mingas (Public Access) Road from the intersection with Doyle Road to the southwest, across Hachita Draw, to the point where it intersects Witch Well Road and turns in a southeasterly direction (Mingas Road segments to which

the protective measures apply are in Twp 29S, Rng 15W, Sec 34 and T 30S, Rng 15W, Sec's 4, 9, 16):

- i. No road repair or maintenance work will occur outside the existing disturbed area. Disturbed area is defined as bare soil with no vegetation present due to past road and road drainage work.
- ii. No road maintenance or repair work will occur that changes in any way, the overland water flow pattern on the areas along and near the roads.
- iii. No herbicide application will occur along Doyle, Red Lakes Access and the segment of Mingas Road located in Twp 29S, Rng 15W, Sec 34 and T 30S, Rng 15W, Sec's 4, 9, 16.

OTHER

- 39) CBP would comply with the practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Clean Water Act. If the proposed action exceeds the parameters of the nationwide permit, CBP would obtain an individual permit from the appropriate office of the Army Corps of Engineers and provide the authorized officer with a copy of same. Failure to comply requirement would be cause for suspension or termination of this ROW grant.
- 40) CBP is responsible to obtain all required private, Federal, State, and local government licenses, permits, rights-of-way, easements, or other forms of permission to conduct construction, operation, maintenance, and termination activities associated with this right-of-way.

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ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE U.S. BORDER PATROL TUCSON SECTOR, ARIZONA



ABBREVIATIONS AND ACRONYMS

ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AGFD	Arizona Game and Fish Department
AMA	Active Management Area
ANHP	Arizona Natural Heritage Program
AO	Area of Operation
BLM	Bureau of Land Management
BMP	Best Management Practices
CAA	Clean Air Act
CBP	Customs and Border Protection
CEQ	Council on Environmental Quality
CFE	Comision Federal de Electricidad
CFR	Code of Federal Regulations
CNF	Coronado National Forest
CWA	Clean Water Act
dBA	A-weighted decibels
DHS	Department of Homeland Security
DNL	Day-Night average sound Level
EA	Environmental Assessment
ECISO	Engineering Construction Support Office
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GSRC	Gulf South Research Corporation
HPS	high pressure sodium lights
IA	Illegal Alien
INS	Immigration and Naturalization Service
IIRIRA	Immigration Reform and Illegal Immigrant Responsibility Act
I-19	Interstate-19
JTF-6	Joint Task Force-6 (now JTF-N)
JTF-N	Joint Task Force North (formerly JTF-6)
MD	Management Directive
MBTA	Migratory Bird Treaty Act
MSO	Mexican spotted owl
(mWh)	Megawatt Hour
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NPS	National Park Service
P.L.	Public Law

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DRAFT FINDING OF NO SIGNIFICANT IMPACT
For The Proposed Construction, Operation, and Maintenance
Of Tactical Infrastructure
U.S. Border Patrol
Tucson Sector, Arizona

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PROJECT HISTORY: United States (U.S.) Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP), a component of U.S. Department of Homeland Security (DHS). USBP’s priority mission is to prevent the entry of terrorists and terrorist weapons and to enforce the laws that protect the U.S. homeland by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the U.S.

During recent years, illegal aliens (IAs) and illegal entry into the U.S. along the U.S.-Mexico border in southern Arizona has been a severe problem. Consequently, USBP focused on accomplishing its goal of effective control of the border, and is working to implement the right combination of personnel, technology and infrastructure, and thus deter illegal entries through improved enforcement. Deterrence is achieved when USBP has the ability to create and convey the immediate, credible, and absolute certainty of detection and apprehension. As such, tactical infrastructure (TI) components, such as fencing and roads, are a critical element in the current enforcement strategy. Developing trends, such as the recognition of environmental preservation concerns and the increase of criminal cross-border activities, continue to pose a border enforcement challenge and compound the need for tactical infrastructure along the international border.

USBP Tucson Sector’s, Nogales Station, proposes to construct 7.6 miles of primary pedestrian fence and unimproved road along the U.S.-Mexico border on the east side of the DeConcini Port-of-Entry (POE), Nogales Arizona. Past projects have resulted in a total of 3 miles of pedestrian fence construction in between and on both sides of the Mariposa and DeConcini POEs. More recently in 2007, 2.4 miles of primary pedestrian fence was approved for construction west of the Mariposa POE. In addition, all-weather patrol road with lighting is currently under construction approximately 1 mile east of the DeConcini POE and overlapping with 0.5 mile of the western-most portion of the current project. The all-weather patrol road and lighting were addressed in the May 2007 Finding of No Significant Impact (FONSI) and *Supplemental Environmental Assessment (EA) and for Nogales Infrastructure Improvements, USBP, Tucson Sector, Nogales Station, Santa Cruz County, Arizona*. USBP has also installed 2.7 miles of temporary vehicle barriers (TVBs) along the border in several areas to the east and west of the Mariposa and DeConcini POEs. Installation of these TVBs was addressed in the December 2004 FONSI and *Final EA for Temporary Vehicle Barriers, Tucson Sector, Pima Santa Cruz, and Cochise Counties, Arizona*.

Due to the recent Federal legislation and shifts in IA traffic, CBP/USBP recognized a need to construct additional primary pedestrian fence. An EA is needed to address the impacts of this additional fence construction. Due to the similarity and proximity of past

DRAFT FINDING OF NO SIGNIFICANT IMPACT
For The Proposed Construction, Operation, and Maintenance
Of Tactical Infrastructure
U.S. Border Patrol
Tucson Sector, Arizona

1 projects to the proposed project, applicable information from several EAs within and
2 near the current project, is incorporated by reference to the extent practicable.

3
4 **PROJECT LOCATION:** The project corridor is located in southern Santa Cruz County,
5 Arizona, in USBP Nogales Station's Area of Operation, along the U.S.-Mexico border. It
6 begins approximately 1 mile east of the DeConcini POE and extends eastward for a
7 total of 7.6 miles. The project corridor lies entirely within lands that are privately owned.

8
9 **PURPOSE AND NEED:** The purpose of the Proposed Action is to increase border
10 security within USBP Tucson Sector through the construction, operation, and
11 maintenance of TI in the form of fences, roads, and supporting technological and
12 tactical assets. USBP Tucson Sector has identified areas along the border that
13 experience high levels of illegal cross-border activity. This activity occurs in areas that
14 are remote and not easily accessed by USBP agents, near POEs where concentrated
15 populations might live on either side of the border, or have quick access to U.S.
16 transportation routes.

17
18 The Proposed Action is needed to provide USBP agents with the tools necessary to
19 strengthen their control of the U.S. borders between the ports of entry in the USBP
20 Tucson Sector. The Proposed Action would deter illegal cross-border activities within
21 the USBP Tucson Sector by improving enforcement, preventing terrorists and terrorists'
22 weapons from entering the U.S., reducing the flow of illegal drugs, and enhancing the
23 response time, while providing a safer work environment for USBP agents.

24
25 **ALTERNATIVES:** Three alternatives were considered: The No Action Alternative, the
26 Proposed Action Alternative, and the Secure Fence Act Alternative.

27
28 **No Action Alternative:** Under the No Action Alternative, the fence would not be
29 constructed and 2.7 miles of TVBs and 0.5 mile of all-weather patrol road with lighting
30 would remain in place. The No Action Alternative would serve as a baseline against
31 which the impacts of the Proposed Action Alternative and the Secure Fence Act
32 Alternative can be evaluated.

33
34 **Proposed Action Alternative:** The Proposed Action Alternative is to construct primary
35 pedestrian fence starting 1 mile east of the DeConcini POE and extending eastward for
36 a total of 7.6 miles. Primary pedestrian fence would be installed approximately 3 feet
37 north of the U.S.-Mexico border. Tucson Sector proposes to construct a bollard style
38 fence design due to its low maintenance requirements, durability, and structural
39 integrity. Regardless of the fence design selected for construction, all fence designs
40 must meet the specific preliminary design performance measures that dictate that the
41 fence must: extend 15 to 18 feet above ground and 3 to 6 feet below ground; be
42 capable of withstanding an impact from a 10,000 pound gross weight vehicle traveling
43 at 40 miles per hour; be semi-transparent, as dictated by operational need; be designed

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1 to survive extreme climate changes of a desert environment; be designed to allow
2 movement of small animals from one side to the other; and not impede the natural flow
3 of water.

4
5 A maintenance road would be constructed adjacent to the border to allow installation of
6 the fence; therefore, construction would encompass the entire 60-foot wide project
7 corridor. TVBs currently within the project corridor would be relocated to other areas of
8 the U.S.-Mexico border or dismantled and recycled.

9
10 In order to facilitate operation of equipment, staging of materials, and construction
11 access to the project corridor, four temporary staging areas and three existing access
12 roads would be used.

13
14 **Secure Fence Act Alternative:** The Secure Fence Act of 2006 (Public Law. 109-367)
15 authorized the construction of at least two layers of reinforced fencing along the U.S.-
16 Mexico border. Under this alternative, two layers of fence, known as primary and
17 secondary pedestrian fence, would be constructed approximately 130 feet apart along
18 the same route as the Proposed Action Alternative. The project corridor would be large
19 enough to accommodate all TI components, construction activities, access, equipment
20 staging, and future maintenance between the primary and secondary pedestrian fences.
21 The design of the fence and lighting would be similar to the Proposed Action Alternative.

22
23 **ENVIRONMENTAL CONSEQUENCES:** The Proposed Action Alternative meets the
24 strategic needs and objectives of CBP. Therefore, the Proposed Action Alternative is
25 considered CBP/USBP's preferred alternative, as it appears to be the most strategically
26 effective, and strikes the best balance between CBP/USBP enforcement needs and
27 protection of sensitive resources. The following description of environmental
28 consequences and mitigation are based on implementation of the Proposed Action
29 Alternative.

30
31 Rights-of-entry were not obtainable within the required schedule for this EA; therefore
32 pedestrian surveys of the project corridor were not conducted. Consequently, definitive
33 statements about specific resources are based on a combination of a literature review, a
34 map reconnaissance, and past surveys conducted within and near the project corridor
35 on similar USBP projects.

36
37 The Proposed Action Alternative would result in direct impacts to land use, soils, water
38 resources, vegetation, wildlife, threatened and endangered species, noise levels, and
39 aesthetic and visual resources within the project corridor and the Region of influence
40 (ROI). However, all of these potential impacts would be insignificant or minimized
41 through the use of mitigation measures and/or compensation. Furthermore, many of
42 the adverse impacts would be offset as a result of beneficial effect of reduced illegal
43 activity within the ROI.

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1
2 Land use impacts would result from the loss of 55 acres of rangeland, yet would be offset
3 by the benefits of greater protection of lands north of the project corridor. Land owners
4 would be compensated at fair market values for their property. The loss of 55 acres of
5 common soils would be insignificant to the biological productivity within the ROI.
6 Applicable Section 404/401 and regulatory floodplain permit(s) would mitigate and/or
7 compensate minor impacts to 0.3 acre of potentially jurisdictional Waters of the U.S
8 (WUS) and 3 acres of floodplains. The loss of approximately 52 acres of general
9 vegetation and wildlife habitat would be insignificant to the ROI. The loss of 3 acres of
10 sensitive riparian habitat associated with 0.3 acre of aquatic habitat would be minimized
11 through appropriate mitigation, and/or compensation. The potential to adversely impact
12 Federally-listed species and non-Federal special status species would be determined
13 through Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS).
14 Aesthetic resources would be altered by the presence of primary pedestrian fence;
15 however, beneficial impacts resulting from the reduction of illegal traffic would offset any
16 adverse impacts. Mitigation measures through Section 106 consultation would include
17 avoidance and/or monitoring on any known cultural resource sites; therefore, no adverse
18 impacts would occur to known eligible cultural resources sites.

19
20 The Proposed Action Alternative would also result in temporary impacts. An additional 26
21 acres would be temporarily impacted through the use of staging areas. This would result
22 in a temporary, negligible to minor impact to soils and vegetation. A one-time water
23 usage (7.6 acre-feet) for construction would result in a negligible to minor impact to the
24 availability of water in the ROI. Minor increases in fugitive dust emissions would be
25 temporary and not result in permanent air quality impacts. Increases in vehicle-related
26 noise levels would likely occur within residential areas during construction. Any increase
27 in noise would be temporary and minor, and would not result in substantial permanent
28 increases in ambient noise levels.

29
30 The potential exists for IA traffic to shift to other locations without TI and could result in
31 indirect adverse impacts to resources outside of the project corridor. However, because
32 the proposed TI would act as a force multiplier allowing USBP to deploy agents
33 efficiently and effectively to areas lacking TI; these indirect impacts would be reduced.
34 Indirect beneficial impacts to all resources would result from the reduction in illegal
35 traffic due to implementation of the Proposed Action Alternative.

36
37 Through the use of mitigation measures addressed in Section 5 of this EA, no
38 significant adverse effects to the natural or human environment, as defined in 40 Code
39 of Federal Regulation, Section 1508.27 of the Council on Environmental Quality's
40 Regulations for Implementing the National Environmental Policy Act, are expected upon
41 the completion of the Proposed Action Alternative.

42

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1 **MITIGATION:** Mitigation measures are presented for each resource category that would
2 be potentially affected. Many of these measures have been incorporated as standard
3 operating procedures by USBP on past projects. It is USBP's policy to mitigate adverse
4 impacts through the sequence of avoidance, minimization, and finally, compensation.
5 These environmental design measures will be incorporated into the current Project
6 Management Plan to be carried forward. Mitigation measures to be implemented by
7 USBP as part of the Proposed Action Alternative of this EA include:

8
9 **General Construction Activities:** Best Management Practices (BMPs) will be
10 implemented as standard operating procedures during all construction activities. These
11 BMPs will include proper handling, storage, and disposal of hazardous and regulated
12 materials. To minimize potential impacts from hazardous and regulated materials, all
13 fuels, petroleum oils and liquids, and solvents will be collected and stored in tanks or
14 drums within a secondary containment system that consists of an impervious floor and
15 bermed sidewalls capable of containing the volume of the largest container stored therein.
16 The refueling of machinery will be completed following accepted guidelines, and all
17 vehicles will have drip pans during storage to contain minor spills and drips. Although it
18 will be unlikely for a major spill to occur, any spill of reportable quantities will be contained
19 immediately within an earthen dike, and the application of an absorbent (e.g., granular,
20 pillow, sock, etc.) will be used to absorb and contain the spill. Furthermore, spillage of
21 any petroleum liquids (e.g., fuel) or material listed in 40 Code of Federal Regulations
22 (CFR) 302 Table 302.4 of a reportable quantity must be cleaned up and reported to the
23 appropriate Federal and state agencies. Reportable quantities of those substances listed
24 on 40 CFR 302 Table 302.4 will be included as part of a Spill Prevention, Control and
25 Countermeasures Plan (SPCCP). A SPCCP will be in place prior to the start of
26 construction, and all personnel will be briefed on the implementation and responsibilities
27 of this plan.

28
29 All waste oil and solvents will be recycled, if possible. All non-recyclable hazardous and
30 regulated wastes will be collected, characterized, labeled, stored, transported, and
31 disposed of in accordance with all Federal, state, and local regulations, including proper
32 waste manifesting procedures.

33
34 Solid waste receptacles will be maintained at staging areas, and non-hazardous solid
35 waste (trash and waste construction materials) will be collected and deposited in on-site
36 receptacles. Solid waste will be collected and disposed of by a local waste disposal
37 contractor.

38
39 Soils: Vehicular traffic associated with the construction activities will remain on
40 established roads to the maximum extent practicable. Upon completion of the
41 construction activities, rehabilitation of the staging areas will include loosening compacted
42 soils, re-vegetating or the distribution of geological materials (i.e., boulders and rocks)
43 over the disturbed area to reduce erosion while allowing the area to naturally vegetate.

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1 Erosion control measures and appropriate BMPs, as required and promulgated through a
2 Stormwater Pollution Prevention Plan (SWPPP), will be implemented before, during, and
3 after construction activities.

4
5 Road construction and maintenance will avoid, to the extent practicable, making wind
6 rows with the soils once grading activities are completed. Any excess soils not used
7 during construction of the proposed TI will be distributed throughout the project corridor.

8
9 Ground/Surface Water Resources and Waters of the U.S: Verification of the existence
10 of jurisdictional WUS will be required. As appropriate, applicable Department of the
11 Army Section 404 permit procedures, including Section 401 Water Quality Certifications,
12 will be completed prior to initiation of the construction activities within drainages.
13 Mitigation and compensation measures will be implemented, as appropriate, through
14 the permit process to ensure no net loss of WUS functions and that surface water
15 conveyance is not impeded.

16
17 A SWPPP will be prepared and submitted to Arizona Department of Water Resources as
18 part of the National Pollutant Discharge Elimination System permit process. The SWPPP
19 will identify BMPs that will be implemented before, during, and after construction.

20
21 Floodplains: In order to ensure compliance with EO 11988 and local floodplain
22 regulations, coordination with the Santa Cruz Public Works Department and USIBWC will
23 be required to ensure that construction activities do not adversely impact floodplains.
24 The bid/build contractor will be required to acquire the appropriate floodplain permits to
25 ensure fence and road design remain in compliance with local floodplain regulations
26 *Santa Cruz Floodplain and Erosion Hazard Management Ordinance, No. 2001-03.*
27 Information required for submittal of floodplain permit applications will include but are not
28 limited to: specific site plans; an engineering Hydrology and Hydrologic analysis that
29 incorporates fence and road designs; and debris clearing maintenance plan. As deemed
30 necessary to ensure that the provisions of the local floodplain management ordinance are
31 met, the fence and road design may require subsequent alterations prior to construction.
32 In addition to local permit requirements, the NEPA process will be used as a tool to
33 ensure that an eight-step floodplain management planning process is conducted to
34 ensure compliance with EO 11988.

35
36 Vegetation: Native seeds or plants, which are compatible with the enhancement of
37 protected species, will be used to the extent feasible, as required under Section 7(a)(1) of
38 the ESA, to revegetate staging areas. In addition, organic material will be collected and
39 stockpiled during construction to be used for erosion control after construction while the
40 areas naturally revegetate. Construction equipment will be cleaned at the temporary
41 staging areas, in accordance with BMPs, prior to entering and departing the project
42 corridor, to minimize the spread and establishment of non-native invasive plant species.

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1 Wildlife and Aquatic Resources: Migratory bird nesting surveys will be conducted prior to
2 construction if clearing and grubbing activities take place during the breeding/nesting
3 season (typically March 1 through September 1) to ensure that construction activities do
4 not result in the take of nesting migratory birds. Night time construction activities will be
5 conducted only when absolutely necessary for adequate concrete pours or, in the case of
6 an accelerated construction schedule, to meet Federal mandates. Applicable,
7 Department of the Army Section 404 permit procedures will serve the purpose of
8 minimizing impacts, protecting both water resources and aquatic habitats.

9
10 Threatened and Endangered Species: CBP/USBP are conducting Section 7
11 consultation with the USFWS on affects to the jaguar (*Panthera onca*), lesser long-
12 nosed bat (*Leptonycteris curasoae yerbabuena*), and Pima pineapple cactus
13 (*Coryphantha scheeri* var. *robustispina*) within Tucson Sector. Through early and
14 ongoing coordination with USFWS, a more definitive list of protected species with the
15 potential to occur within the project corridor will be developed. Surveys will be
16 completed in order to confirm/refute the presence or absence of these species or
17 suitable habitat that could support these species. If such surveys reveal evidence of the
18 presence of protected species, appropriate BMPs (as presented in Appendix D of the
19 referenced EA) would be implemented. As appropriate, CBP/USBP will implement any
20 conservation recommendations identified as a result of the consultation process.
21 Coordination with Arizona Game and Fish Department staff regarding avoidance and/or
22 conservation measures, as appropriate, to minimize adverse impact to state-protected
23 species, will occur prior to the start of construction.

24
25 Cultural Resources: Pedestrian surveys and completion of the Section 106 process with
26 Arizona SHPO, as well as coordination with the USIBWC, will be completed prior to
27 construction in order to document the presence or absence of historic properties. Upon
28 completion of the Section 106 process and implementation of any requirements identified
29 in that coordination, all construction and construction activities will be kept within
30 previously surveyed areas.

31
32 A temporary barrier will be placed around the monuments during construction activities. If
33 any cultural material is discovered during the construction efforts, the Arizona State
34 Historic Preservation Officer (SHPO) will be notified immediately and all activities halted
35 until a qualified archaeologist assesses the cultural remains. Based on past CBP actions,
36 USIBWC will be allowed maintenance access to the monuments, and the line of sight
37 view from monument to monument would not be obstructed.

38
39 Air Quality: Standard construction BMPs, such as routine watering of the construction
40 and access roads, will be used to control fugitive dust during the construction phases of
41 the proposed project. Additionally, all construction equipment and vehicles will be
42 required to be kept in good operating condition to minimize exhaust emissions.

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1 Noise: Standard noise attenuation equipment, such as mufflers, shall be used on all
2 construction equipment and vehicles, and will be maintained in good operating condition,
3 free from leaks. Because of the increased noise sensitivity along transport routes,
4 transport operations will be limited to daylight hours and weekdays for transportation of
5 heavy equipment and materials. Deviations to this schedule will be coordinated with the
6 Santa Cruz County Public Works Department-Transportation Division on a case by case
7 basis.

8
9 Hazardous Materials: Prior to start of construction activities, a site survey or Phase 1
10 environmental site assessment of the project corridor will be conducted to confirm the
11 presence of existing hazardous material. As appropriate, any *Recognized*
12 *Environmental Conditions* will be removed and the site cleaned as appropriate.

13
14 Roadways and Traffic: Prior to the start of construction activities, the bid/build
15 contractor will coordinate and comply with transportation requirements and safety
16 measures identified by the Santa Cruz County Public Works Department-Transportation
17 Division to ensure safe and efficient movement of equipment and materials to the
18 project corridor.

19
20 **FINDING:** Despite the fact that rights-of-entry could not be obtained and pedestrian field
21 surveys could not be conducted, the analysis within the referenced EA remains reliable.
22 Therefore, based on the results of the referenced EA, a commitment to conduct pre-
23 construction surveys, and a commitment to perform the appropriate mitigation measures
24 and BMPs as part of the Proposed Action Alternative, it has been concluded that the
25 Proposed Action Alternative will have no significant effect on the environment. No further
26 environmental impact analysis is warranted.

27
28
29
30
31 _____
32 Robert F. Janson
33 Acting Executive Director
34 Asset Management
35 U.S. Customs and Border Protection

_____ Date

36
37
38
39
40 _____
41 Craig Weinbrenner
42 Assistant Chief Patrol Agent
43 Office of Border Patrol
Tucson Sector Headquarters

_____ Date

COVER SHEET

DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE U.S. BORDER PATROL TUCSON SECTOR, ARIZONA

Responsible Agencies: U.S. Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP).

Cooperating Agencies: U.S. Army Corps of Engineers (USACE) Los Angeles District and the U.S. Section of the International Boundary and Water Commission (USIBWC).

Affected Location: U.S.-Mexico international border in Santa Cruz County, Arizona.

Proposed Action: The Proposed Action includes the construction, maintenance, and operation of tactical infrastructure, to include a primary pedestrian fence and an unimproved construction/maintenance road, starting 1.0 mile east of the DeConcini Port of Entry in Nogales, Arizona and extending eastward for a total of 7.6 miles. Primary pedestrian fence would be installed approximately 3 feet north of the U.S.-Mexico border and the construction and maintenance road would be constructed parallel to the proposed fence.

Report Designation: Draft Environmental Assessment (EA).

Abstract: CBP proposes to construct, maintain, and operate approximately 7.6 miles of tactical infrastructure, including fence, and unimproved road along the U.S.-Mexico international border in Santa Cruz County, Arizona. The proposed tactical infrastructure would encroach on the first 60 feet of U.S. land north of the border comprised of parcels held by multiple private owners.

The EA will analyze and document potential environmental consequences associated with the Proposed Action. If the analyses presented in the EA indicate that implementation of the Proposed Action would not result in significant environmental or socioeconomic impacts, then a Finding of No Significant Impact (FONSI) will be prepared. If potential environmental concerns arise that cannot be mitigated to insignificance, a Notice of Intent to prepare an Environmental Impact Statement (EIS) would be required.

Throughout the National Environmental Policy Act (NEPA) process, the public may obtain information concerning the status and progress of the Proposed Action and the EA via the project Web site at www.BorderFenceNEPA.com; by emailing information@BorderFenceNEPA.com; or by written request to Mr. Charles McGregor, Environmental Manager, U.S. Army Corps of Engineers, Fort Worth District, Engineering Construction Support Office, 814 Taylor Street, Room 3B10, Fort Worth, TX 76102, Fax: (225) 761-8077.

You may submit written comments to CBP by contacting the SBI Tactical Infrastructure Program Office. To avoid duplication, please use only one of the following methods:

- (a) Electronically through the Web site at *www.BorderFenceNEPA.com*
- (b) By email to TSEAComments@BorderFenceNEPA.com
- (c) By Mail to Mr. Charles McGregor, Environmental Manager, U.S. Army Corps of Engineers, Fort Worth District, Engineering Construction Support Office, 814 Taylor Street, Room 3B10, Fort Worth, TX 76102
- (d) By fax to (757) 761-8077.

Privacy Notice

Your comments on this document are due by February 16, 2008. Comments will normally be addressed in the EA and made available to the public. Any personal information included in comments will therefore be publicly available.

DRAFT

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED CONSTRUCTION, OPERATION
AND MAINTENANCE OF
TACTICAL INFRASTRUCTURE
U.S. BORDER PATROL
TUCSON SECTOR, ARIZONA**

January 2008

Lead Agency: U.S. Department of Homeland Security
U.S. Customs & Border Protection
Office of Finance, Asset Management
1300 Pennsylvania Ave NW
Washington, D.C. 20229

Point of Contact: George Hutchinson
U.S. Department of Homeland Security
U.S. Customs and Border Protection, Headquarters
1300 Pennsylvania Ave NW, Room 3.4-D
Washington, D.C. 20229

Cooperating Agencies: U.S. International Boundary and Water Commission
U.S. Army Corps of Engineers-Los Angeles District

EXECUTIVE SUMMARY

BACKGROUND

United States (U.S.) Customs and Border Protection (CBP) and U.S. Border Patrol (USBP) propose to construct, operate, and maintain approximately 7.6 miles of tactical infrastructure (TI) along the U.S.-Mexico International border in Santa Cruz County, Arizona east of the City of Nogales, Arizona. TI would consist of primary pedestrian fence, construction/maintenance road, and improvements to existing roads within the USBP's Tucson Sector. The proposed TI would be located within 60 feet of the U.S.-Mexico border, all of which is privately owned. The Proposed Action would occur within the USBP Nogales Station's Area of Operations.

PURPOSE AND NEED FOR THE PROPOSED PROJECT

The purpose of the Proposed Action is to increase border security within USBP Tucson Sector through the construction, operation, and maintenance of TI in the form of fences, roads, and supporting technological and tactical assets. USBP Tucson Sector has identified two distinct areas along the border that experience high levels of illegal cross-border activity. This activity occurs in areas that are remote and not easily accessed by USBP agents, near Ports of Entry (POEs) where concentrated populations might live on either side of the border or have quick access to U.S. transportation routes.

The Proposed Action is needed to provide USBP agents with the tools necessary to strengthen their control of the U.S. borders between the POEs in the USBP Tucson Sector. The Proposed Action would deter illegal cross-border activities within the USBP Tucson Sector by improving enforcement, preventing terrorists and terrorist weapons from entering the U.S., reducing the flow of illegal drugs, and enhancing response time, while providing a safer work environment for USBP agents.

PROPOSED ACTION ALTERNATIVE (PREFERRED ALTERNATIVE)

The Proposed Action Alternative is to construct primary pedestrian fence starting 1 mile east of the DeConcini POE and extending eastward for a total of 7.6 miles. Primary pedestrian fence would be installed approximately 3 feet north of the U.S.-Mexico border. USBP proposes to construct a bollard style fence. The performance measures of such a design dictate that the fence must: extend 15 to 18 feet above ground and 3 to 6 feet below ground; be capable of withstanding an impact from a 10,000 pound gross weight vehicle traveling at 40 miles per hour; be semi-transparent, as dictated by operational need; be designed to survive extreme climate changes of a desert environment; be designed to allow movement of small animals from one side to the other; and not impede the natural flow of water.

A maintenance road would be constructed adjacent to the border to allow installation of the fence; therefore, construction of the Proposed Action Alternative would encompass the entire 60-foot wide project corridor. Temporary vehicle barriers currently within the project corridor would be relocated to other areas of the U.S.-Mexico border or

1 dismantled and recycled. In order to facilitate operation of equipment, staging of
2 materials, and construction access to the project corridor, four temporary staging areas
3 and three existing access roads would be used.

4
5 The Council of Environmental Quality's implementing regulation 40 Code of Federal
6 Regulations (CFR) 1502.14(c) instructs Natural Environmental Policy Act (NEPA)
7 preparers to "identify the agency's preferred alternative or alternatives, if one or more
8 exists, in the draft statement and identify such alternative in the final statement unless
9 another law prohibits the expression of such a preference." CBP/USBP has identified
10 its Preferred Alternative as the Proposed Action Alternative.

11 **ALTERNATIVES CONSIDERED**

12
13 In addition to the Proposed Action Alternative, two other alternatives (the No Action
14 Alternative and the Secure Fence Act Alternative) were considered during the
15 preparation of this Environmental Assessment (EA). Under the No Action Alternative,
16 no primary pedestrian fence components would be constructed. The No Action
17 Alternative will serve as a baseline against which the impacts of the other two action
18 alternatives can be evaluated. However, the No Action Alternative does not satisfy the
19 purpose and need or Congressional mandates.

20
21 The Secure Fence Act Alternative would consist of two layers of fence, known as
22 primary and secondary pedestrian fences, constructed approximately 130 feet apart
23 along the same route as that of the Proposed Action Alternative. This alternative would
24 also include construction and maintenance of access and patrol roads. The patrol road
25 would be located between the primary and secondary pedestrian fences and the
26 maintenance road would be on the north side of the secondary pedestrian fence.

27 **ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION ALTERNATIVE**

28
29 Rights-of-entry were not obtainable within the required schedule for this EA; therefore
30 pedestrian surveys of the project corridor were not conducted. Consequently, definitive
31 statements about specific resources are based on a combination of a literature review, a
32 map reconnaissance, and past surveys conducted within and near the project corridor
33 on similar USBP projects.

34
35 The Proposed Action Alternative would result in direct impacts on land use, soils, water
36 resources, vegetation, wildlife, threatened and endangered species, noise levels, and
37 aesthetic and visual resources within the project corridor and the Region of Influence
38 (ROI). However, all of these potential impacts would be insignificant or minimized
39 through the use of mitigation measures and/or compensation. Furthermore, many of
40 the adverse impacts would be offset as a result of the beneficial effects of reduced
41 illegal activity within the ROI.

42
43 Land use impacts would result from the loss of 55 acres of rangeland, yet would be
44 offset by the benefits of greater protection of lands north of the project corridor. Land
45 owners would be compensated at fair market values for their property. The loss of 55

1 acres of common soils would be insignificant to the biological productivity within the
2 ROI. Applicable Section 404/401 and regulatory floodplain permit(s) would mitigate
3 and/or compensate for minor effects on 0.3 acre of potentially jurisdictional Waters of
4 the U.S (WUS) and 3 acres of floodplains. The loss of approximately 52 acres of
5 common vegetation and wildlife habitat would be insignificant to the ROI. The loss of 3
6 acres of sensitive riparian habitat associated with 0.3 acre of aquatic habitat would be
7 minimized through appropriate mitigation and/or compensation. The potential to
8 adversely impact Federally-listed species and non-Federal special status species would
9 be determined through ongoing Section 7 consultation with the U.S. Fish and Wildlife
10 Service (USFWS). Aesthetic resources would be altered by the presence of primary
11 pedestrian fence; however, the beneficial effects of the reduction of illegal traffic would
12 offset any adverse impact. Mitigation measures through Section 106 consultation would
13 include avoidance and/or monitoring of any known cultural resource sites; therefore, no
14 adverse impact would occur on known eligible cultural resources sites.

15
16 The Proposed Action Alternative would also have temporary impacts. An additional 26
17 acres would be temporarily affected by the use of staging areas. This would result in a
18 temporary, negligible to minor impact on soils and vegetation. A one-time water usage
19 (7.6 acre-feet) for construction would result in a negligible to minor impact on the
20 availability of water in the ROI. Minor increases in fugitive dust emissions would be
21 temporary and not result in permanent impact on air quality. Increases in vehicle-
22 related noise levels would likely occur within residential areas during construction. Any
23 increase in noise would be temporary and minor, and would not result in substantial
24 permanent increases in ambient noise levels.

25
26 The potential exists for IA traffic to shift to other locations without TI, which could result
27 in an indirect adverse impact on resources outside of the project corridor. However,
28 because the proposed TI would act as a force multiplier, the impact would be reduced.
29 Indirect beneficial impacts on all resources would result from the reduction in illegal
30 traffic due to implementation of the Proposed Action Alternative.

31
32 **CONCLUSION**

33 Despite the fact that of rights-of-entry could not be obtained and pedestrian field
34 surveys could not be conducted for the purpose of making definitive statements about
35 specific resources, this analysis remains reliable. Furthermore, CBP/USBP has
36 committed to conduct pre-construction surveys and implement appropriate Best
37 Management Practices (BMPs) and mitigation measures as part of the Proposed Action
38 Alternative. Therefore, it has been concluded that the Proposed Action Alternative will
39 have no significant effect on the environment and no further environmental impact
40 analysis is warranted.

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SECTION 1.0
INTRODUCTION



1 **1.0 INTRODUCTION**

2
3 United States (U.S.) Customs and Border Protection (CBP) and U.S. Border Patrol
4 (USBP) propose to construct, operate and maintain approximately 7.6 miles of tactical
5 infrastructure (TI) along the U.S.-Mexico international border in Santa Cruz County,
6 Arizona, east of the City of Nogales, Arizona (Figure 1-1). TI is a term used by USBP to
7 describe physical structures that facilitate enforcement activities. These items typically
8 include, but are not limited to, roads, fences, lights, gates, boat ramps, and barriers. TI
9 would consist of primary pedestrian fence, minor improvements to existing roads, and
10 construction of new unimproved construction/maintenance roads within 60 feet of the
11 U.S.-Mexico border. The Proposed Action would occur within the USBP Tucson Sector,
12 Nogales Station Area of Operations (AO).

13
14 This Environmental Assessment (EA) is tiered from the Immigration and Naturalization
15 Service's (INS's) *Supplemental Programmatic Environmental Impact Statement (SPEIS)*
16 *for the Continuation of Immigration and Naturalization Service and Joint Task Force Six*
17 *Activities along the Southwestern Border* (INS 2001). The SPEIS addressed past and
18 proposed infrastructure projects for USBP along the entire southwestern border. Future
19 infrastructure projects, such as those described herein, were identified in the SPEIS,
20 and a commitment was made to prepare site-specific documents, such as this EA, as
21 the need for future projects is identified. This EA incorporates by reference much of the
22 information from several previous EAs within the project corridor and Region of
23 Influence (ROI). For the purposes of this EA, the ROI is defined as the southern portion
24 of the Tucson Sector, within the Nogales Station's AO and the general vicinity of
25 Nogales, Arizona (see Figure 1-1). Many of these past projects consisted of similar
26 types of TI within the ROI. The following paragraphs provide a brief description of each
27 of these documents and their relationship to the current project.

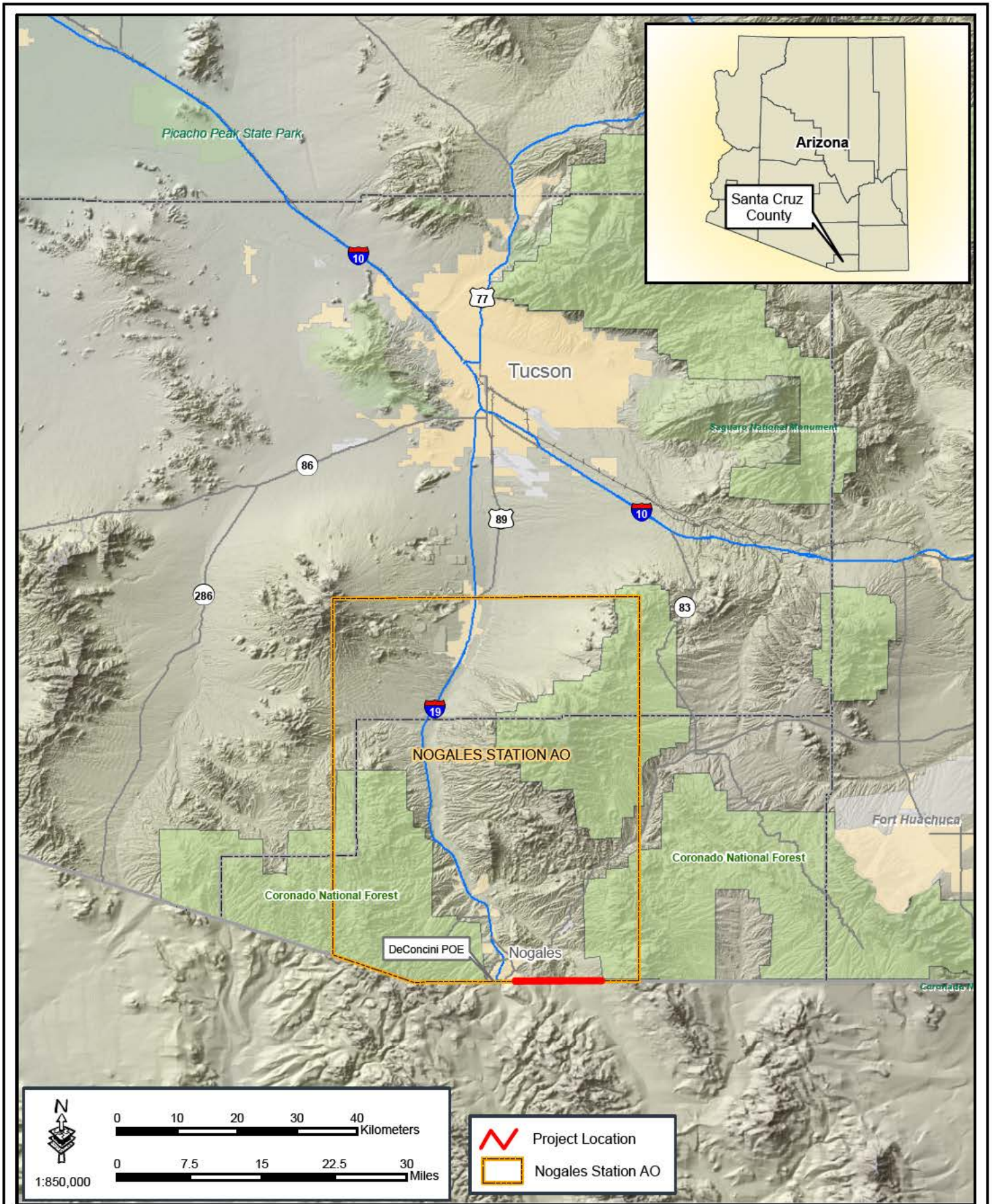


Figure 1-1: Vicinity Map



January 2008

BW1 FOIA CBP (over)

1 In October 2003, CBP issued a signed Finding of No Significant Impact (FONSI) and
2 *Final EA for Nogales Infrastructure Improvements, USBP, Tucson Sector, Nogales*
3 *Station, Santa Cruz County, Arizona* (CBP 2003). This EA addressed the continued
4 operation of up to 60 portable lights, construction of 1.5 miles of all-weather patrol roads
5 and improvements to 0.5 mile of roadway, installation of 1 mile of primary pedestrian
6 fence, and installation and operation of 15 remote video surveillance systems (CBP
7 2003). All proposed TI was located east of the DeConcini Port of Entry (POE) in
8 Nogales, Arizona. A short segment of the proposed lighting and all-weather patrol road
9 overlapped with the western-most portion of the current project corridor. In May 2007,
10 CBP issued a signed FONSI and a Final Supplemental Environmental Assessment
11 (SEA), *Nogales Infrastructure Improvements, USBP, Tucson Sector, Nogales Station,*
12 *Santa Cruz County, Arizona*, herein referred to as the 2007 SEA (CBP 2007a). This
13 SEA addressed proposed all-weather patrol road realignments to 0.34 mile of road and
14 relocation of 55 permanent lights (CBP 2007a). The all-weather patrol road and
15 permanent lights were proposed approximately 150 feet north of the U.S.-Mexico
16 border.

17
18 In December 2004, USBP issued a signed FONSI and *Final EA for Temporary Vehicle*
19 *Barriers (TVB), Tucson Sector, Pima, Santa Cruz, and Cochise Counties, Arizona* (CBP
20 2004a), herein referred to as the 2004 TVB EA. The 2004 TVB EA addressed 37 miles
21 of TVBs in 21 different locations throughout the Tucson Sector AO, of which 2.7 miles of
22 TVBs currently overlap with proposed primary pedestrian fence alignments. The
23 existing TVBs would be removed and either dismantled and recycled or placed in other
24 border areas.

25
26 Two other EAs addressing projects in the ROI, and from which information is
27 incorporated by reference, include the March 2007 FONSI and *Final EA for the*
28 *Construction of New Patrol and Drag Roads, Office of Border Patrol, Nogales Station,*
29 *Santa Cruz County, Arizona* (CBP 2007b), herein referred to as the 2007 Road EA, and
30 the November 2007 FONSI and *Final EA for Construction of 2.4 miles of Primary*
31 *Pence, USBP, Tucson Sector, Nogales Station, Santa Cruz County, Arizona* (CBP

1 2007c), herein referred to as the 2007 Fence EA. These two EAs included construction
2 of 3 miles of all-weather patrol roads and 2.4 miles of primary pedestrian fence
3 approximately 1 mile west of the Mariposa POE. The purpose of these projects was to
4 address USBP agent safety issues and enhance enforcement effectiveness in the area.
5

6 This EA has been prepared in accordance with the National Environmental Policy Act
7 (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing
8 NEPA (Title 40 of the U.S. Code of Federal Regulations [CFR], Parts 1500-1508), and
9 U.S. Department of Homeland Security (DHS) Management Directive (MD) 5100.1.
10 The analysis identifies, documents, and evaluates potential environmental effects of the
11 proposed construction of approximately 7.6 miles of primary pedestrian fence, lighting,
12 and maintenance road. All primary pedestrian fence construction would occur within 3
13 feet of the U.S.-Mexico border. Gulf South Research Corporation (GSRC) prepared this
14 EA for U.S. Army Corps of Engineers (USACE), Fort Worth District on behalf of CBP
15 and USBP, Tucson Sector.
16

17 This EA addresses potential impacts on the affected environment within the project
18 corridor for the three alternatives outlined in Section 2 of this document. This report is
19 organized into seven major sections, including this introduction and four appendices.
20 Section 2 describes all alternatives considered for the project. Section 3 describes, in
21 detail, the existing environmental conditions and potential environmental impacts of
22 each alternative. Section 4 discusses potential cumulative and other impacts of
23 implementation of the Proposed Action, combined with foreseeable future actions.
24 Section 5 discusses potential mitigation measures to reduce adverse effects. Sections
25 6 and 7 provide a list of references and preparers for the EA, respectively.
26

27 **1.1 BACKGROUND**

28

29 The mission of CBP is to prevent terrorists and terrorist weapons from entering the U.S.,
30 while also facilitating the flow of legitimate trade and travel. In supporting CBP's

1 mission, USBP is charged with establishing and maintaining effective control of the
2 border of the U.S. USBP's mission strategy consists of five main objectives:

- 3
- 4 • Establish substantial probability of apprehending terrorists and their
5 weapons as they attempt to enter illegally between the POEs
- 6 • Deter illegal entries through improved enforcement
- 7 • Detect, apprehend, and deter smugglers of humans, drugs, and other
8 contraband
- 9 • Leverage "smart border" technology to multiply the effect of enforcement
10 personnel
- 11 • Reduce crime in border communities and consequently improve quality of
12 life and economic vitality of targeted areas
- 13

14 USBP has nine administrative sectors along the U.S.-Mexico border. Each sector is
15 responsible for implementing an optimal combination of personnel, technology, and
16 infrastructure appropriate to its operational requirements. Border areas under the
17 Tucson Sector's responsibility include Cochise, Pima, and Santa Cruz Counties in
18 Arizona. The areas affected by the Proposed Action include the southern-most portion
19 of Santa Cruz County, east of the City of Nogales, Arizona.

20

21 **1.2 PURPOSE AND NEED**

22

23 The purpose of the Proposed Action is to increase border security within the USBP
24 Tucson Sector through the construction, operation, and maintenance of TI in the form of
25 fences and roads and other supporting technological and tactical assets. The USBP
26 Tucson Sector has identified areas along the border that experience high levels of
27 illegal cross-border activity. This activity occurs in areas that are not easily accessed by
28 USBP agents, contain thick vegetation that can provide concealment, near POEs where
29 concentrated populations might live on either side of the border, or have quick access to
30 U.S. transportation routes.

31

32 The Proposed Action is needed to provide USBP agents with the tools necessary to
33 strengthen their control of the U.S. borders between POEs in the USBP Tucson Sector.

1 The Proposed Action would help to deter illegal cross-border activities within the USBP
2 Tucson Sector by improving enforcement, preventing terrorists and terrorist weapons
3 from entering the U. S., reducing the flow of illegal drugs, and enhancing response time,
4 while providing a safer work environment for USBP agents.

6 **1.3 PROPOSED ACTION**

7
8 USBP proposes to construct, operate, and maintain approximately 7.6 miles of primary
9 pedestrian fence and construction/maintenance road along the U.S.-Mexico border in
10 USBP Tucson Sector. TI would begin approximately 1 mile east of the DeConcini POE
11 and extend eastward across the Santa Cruz River and end near the western boundary
12 of the Coronado National Forest (CNF), Sierra Vista Ranger District. The proposed
13 locations of TI are based on a USBP Tucson Sector assessment of local operational
14 requirements where such infrastructure would assist USBP agents in reducing illegal
15 cross-border activities.

16 The Fiscal Year (FY) 2007 DHS Appropriations Act (Public Law [P.L.] 109-295)
17 provided \$1,187,565,000 under the Border Security Fencing, Infrastructure, and
18 Technology appropriation for the installation of fencing, infrastructure, and technology
19 along the border (Congressional Research Service 2006). Figure 1-2 illustrates the
20 location of the proposed TI within the Tucson Sector noted as segments D-5b (5.2 miles
21 and D-6 (2.4 miles). Details of the Proposed Action are included in Section 2.2.2.

23 **1.4 FRAMEWORK OF ANALYSIS**

24
25 The process for implementing the NEPA is codified in 40 CFR Parts 1500–1508,
26 *Regulations for Implementing the Procedural Provisions of the National Environmental*
27 *Policy Act*, and DHS’s related MD 5100.1, *Environmental Planning Program*. CEQ was
28 established under NEPA to implement and oversee Federal policy in this process.

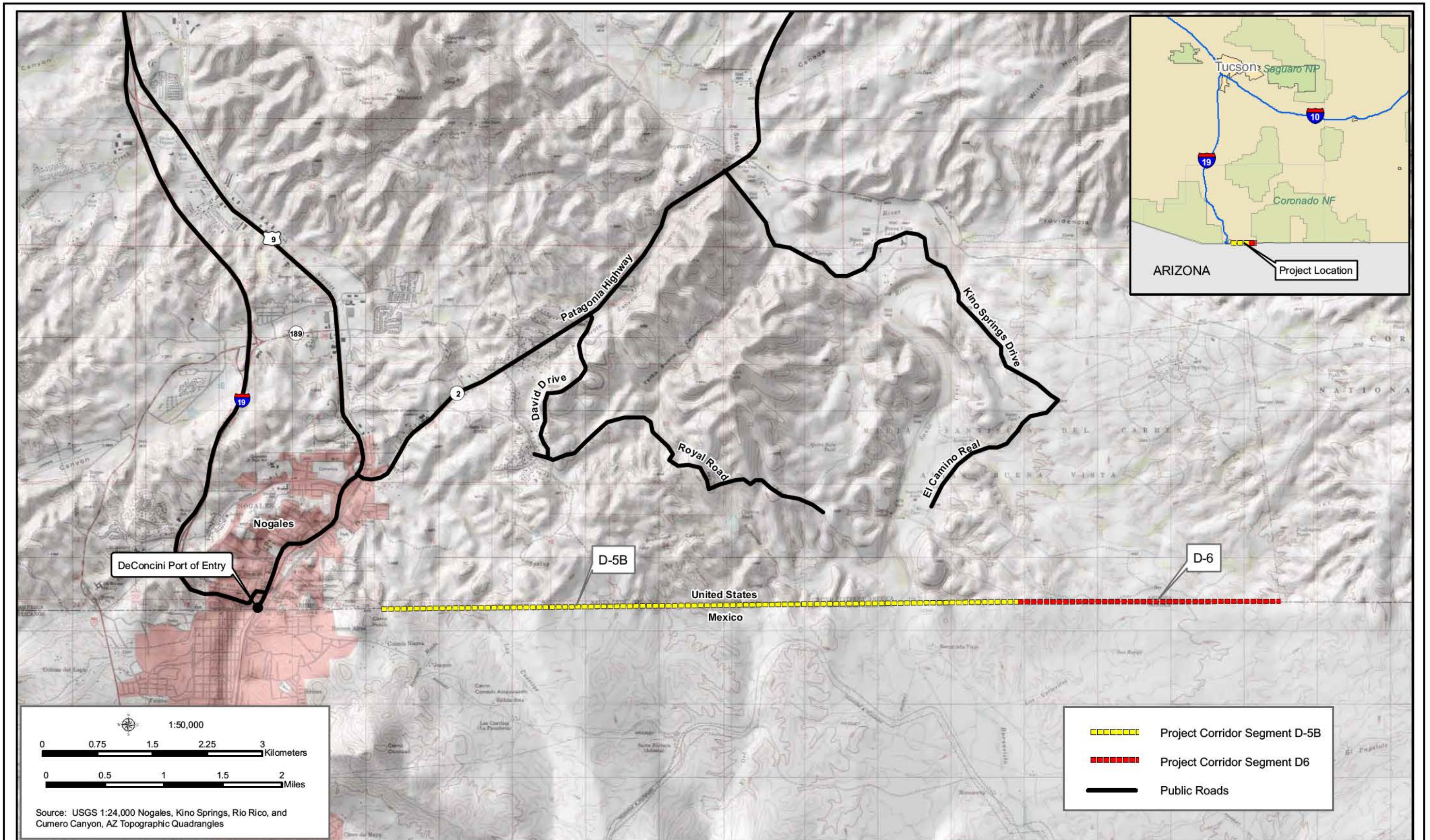


Figure 1-2: Project Location

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1 An EA is prepared when a proposed action is anticipated to have potentially “significant”
2 environmental impacts, or a proposed action is environmentally controversial. CEQ
3 regulations specify that the following must be accomplished when preparing an EA:

- 4
- 5 • Briefly provide evidence and analysis for determining whether to prepare
6 an Environmental Impact Statement (EIS) or a Finding of No Significant
7 Impact (FONSI);
- 8 • Aid in an agency’s compliance with NEPA when an EIS is unnecessary;
9 and
- 10 • Facilitate preparation of an EIS when one is necessary.
11

12 To comply with NEPA, the planning and decision-making process for actions proposed
13 by Federal agencies involves a study of other relevant environmental statutes and
14 regulations. The NEPA process, however, does not replace procedural or substantive
15 requirements of other environmental statutes and regulations. It addresses them
16 collectively in the form of an EA or EIS, which enables the decision-maker to have a
17 comprehensive view of major environmental issues and requirements associated with
18 the Proposed Action. According to CEQ regulations, the requirements of NEPA must
19 be integrated “with other planning and environmental review procedures required by law
20 or by agency so that all such procedures run concurrently rather than consecutively.”
21

22 Within the framework of environmental impact analysis under NEPA, additional
23 authorities that may be applicable include the Clean Air Act (CAA), Clean Water Act
24 (CWA) (including a National Pollutant Discharge Elimination System [NPDES] Storm
25 Water Discharge permit and Section 404 permit), Section 10 of the River and Harbor
26 Act of 1899, Noise Control Act, Endangered Species Act (ESA), Migratory Bird Treaty
27 Act (MBTA), National Historic Preservation Act (NHPA), Archaeological Resources
28 Protection Act (ARPA), Resource Conservation and Recovery Act (RCRA), Toxic
29 Substances Control Act (TSCA), and various Executive Orders (EOs). A summary of
30 EOs that might be applicable to the Proposed Action include EO 11988 (Floodplain
31 Management), EO 11990 (Protection of Wetlands), EO12088 (Federal Compliance with
32 Pollution Control Standards), EO 12580 (Superfund Implementation), EO 12898
33 (Federal Actions to Address Environmental Justice in Minority Populations and Low-

1 Income Populations), EO 13045 (Protection of Children from Environmental Health
 2 Risks and Safety Risks), EO 13423 (Strengthening Federal Environmental, Energy, and
 3 Transportation Management), EO 13175 (Consultation and Coordination with Indian
 4 Tribal Governments), EO 13148 (Greening the Government through Leadership in
 5 Environmental Management), EO 13186 (Responsibilities of Federal Agencies to
 6 Protect Migratory Birds), EO 11514 (Protection and Enhancement of Environmental
 7 Quality, as amended by EO 11991), EO 12114 (Environmental Effects Abroad of Major
 8 Federal Actions), EO 13101 (Greening the Government through Waste Prevention,
 9 Recycling, and Federal Acquisition), EO 13123 (Greening the Government through
 10 Efficient Energy Management), EO 13148 (Greening the Government through
 11 Leadership in Environmental Management), and EO 13149 (Greening the Government
 12 through Federal Fleet and Transportation Efficiency).

13

14 Table 1-1 lists major Federal and state permits, approvals, and interagency coordination
 15 required to construct, maintain, and operate the proposed TI.

16

17 **Table 1-1. Major Permits, Approvals, and Interagency Coordination**

Agency	Permit/Approval/Coordination
U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> - Section 7 ESA consultation - MBTA coordination
U.S. Environmental Protection Agency (USEPA)	<ul style="list-style-type: none"> - CWA NPDES permit
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> - CWA Section 404 permit
Arizona Department of Environmental Quality	<ul style="list-style-type: none"> - CWA Section 401 State Water Quality Certification - CAA permit consultation
Arizona Game and Fish Department (AGFD)	<ul style="list-style-type: none"> - Arizona Endangered Species coordination
Arizona State Historic Preservation Officer (SHPO)	<ul style="list-style-type: none"> - NHPA Section 106 consultation
Federally recognized American Indian Tribes	<ul style="list-style-type: none"> - Consultation regarding potential effects on cultural resources
Advisory Council on Historic Preservation (ACHP)	<ul style="list-style-type: none"> - NHPA Section 106 consultation

18

19

1 **1.5 PUBLIC INVOLVEMENT**

2
3 Agency and public involvement in the NEPA process promotes open communication
4 between the public and the government and enhances the decision-making process. All
5 persons or organizations having a potential interest in the Proposed Action are
6 encouraged to participate in the decision-making process.

7
8 NEPA and implementing regulations from the President’s CEQ and DHS direct
9 agencies to make their EAs and EISs available to the public during the decision-making
10 process and prior to actions being taken. The premise of NEPA is that the quality of
11 Federal decisions will be enhanced if proponents provide information to the public and
12 involve the public in the planning process.

13
14 Through the public involvement process, USBP notified relevant Federal, state, and
15 local agencies of the Proposed Action and requested input regarding environmental
16 concerns they might have regarding the Proposed Action. The public involvement
17 process provides USBP with the opportunity to cooperate with the public and consider
18 state and local views of its decision regarding implementation of this Federal proposal.
19 As part of the EA process, USBP has coordinated with agencies such as Bureau of
20 Land Management (BLM); USEPA; USFWS; Arizona SHPO; and other Federal, state,
21 and local agencies (see Appendix A). Input from agency responses has been
22 incorporated into the analysis of potential environmental impacts.

23
24 A Notice of Availability (NOA) for this EA and proposed FONSI has been published in
25 the *Arizona Daily Star newspaper*. This is done to solicit comments on the Proposed
26 Action Alternative and involve the local community in the decision-making process.
27 Comments from the public and other Federal, state, and local agencies will be
28 incorporated into the Final EA and included in Appendix A.

1 Throughout the NEPA process, the public may obtain information concerning the status
2 and progress of the EA via the project web site at www.BorderFenceNEPA.com; by
3 emailing information@BorderFenceNEPA.com; by written request to Mr. Charles
4 McGregor, Environmental Manager, USACE, Fort Worth District, Engineering
5 Construction Support Office (ECSO), 819 Taylor Street, Room 3B10, Fort Worth, TX
6 76102; or by facsimile at 225-761-8077.

8 **1.6 COOPERATING AND COORDINATING AGENCIES**

9
10 The U.S. Section, International Boundary and Water Commission (USIBWC) and
11 USACE-Los Angeles District Regulatory Functions Branch have decision-making
12 authority for components of the Proposed Action and are therefore participating as
13 cooperating agencies. CEQ regulations implementing NEPA instruct agencies to
14 combine environmental documents in compliance with NEPA to reduce duplication and
15 paperwork (40 CFR 1506.4).

16
17 One of USIBWC's missions is to maintain the international boundary between Mexico
18 and the U.S. As part of this mission, USIBWC is required to ensure that any
19 construction along the international border does not adversely affect International
20 Boundary Monuments (including their line of sight) or substantially impede floodwater
21 conveyance within international drainages.

22
23 USACE-Los Angeles District will act on applications for Department of the Army
24 permits, as appropriate, pursuant to Section 10 of the River and Harbor Act of 1899 (33
25 United States Code [U.S.C.] 403), and Section 404 of the CWA (33 U.S.C. 1344).

26
27 Section 7 of the ESA (P.L. 93-205, December 28, 1973) states that any project
28 authorized, funded, or conducted by any Federal agency should not "jeopardize the
29 continued existence of any endangered species or threatened species or result in the
30 destruction or adverse modification of habitat of such species which is determined ... to
31 be critical." While USFWS will not participate as a cooperating agency on this Proposed

1 Action Alternative, it will coordinate with CBP to assist in the determination of whether
2 any Federally listed or proposed endangered or threatened species or their designated
3 critical habitats would be adversely impacted by the Proposed Action Alternative, to
4 identify the nature and extent of potential effects, and to jointly develop measures that
5 would avoid or reduce potential effects on the species. CBP has initiated and is
6 currently in consultation with USFWS, pursuant to Section 7 of the Endangered Species
7 Act, on potential impacts to protected species within the USBP Tucson Sector. If
8 appropriate, CBP and USFWS will enter formal Section 7 consultation regarding any
9 potentially affected listed species, and USFWS will issue a Biological Opinion on the
10 potential for jeopardy. If USFWS determines that the project is not likely to jeopardize
11 any listed species, it can also issue an incidental take statement as an exception to the
12 prohibitions in Section 9 of the ESA.

13

14 The CNF was also invited to be a cooperating agency since there is a potential for
15 indirect impact on adjacent CNF lands. However, on October 30, 2007 the Nogales
16 District responded to CBP, declining to be a cooperating agency, since no actions would
17 occur on National Forest System lands. A copy of this letter is provided in Appendix A.

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SECTION 2.0
PROPOSED ACTION AND ALTERNATIVES

2.0 PROPOSED ACTION AND ALTERNATIVES

This section provides detailed information on CBP's proposal to construct, operate, and maintain TI along the U.S.-Mexico border in the USBP Tucson Sector, Arizona. The range of reasonable alternatives considered in this EA is constrained to those that would meet the purpose and need described in Section 1.2 to provide USBP agents with the tools necessary to achieve effective control of the border in the USBP Tucson Sector. Such alternatives must also meet essential technical, engineering, and economic threshold requirements to ensure that each is environmentally sound, economically viable, and complies with governing standards and regulations.

The screening alternatives are described in Section 2.1, followed by the analysis of the No Action Alternative (Section 2.2.1), the Proposed Action Alternative (Section 2.2.2), and the Secure Fence Act Alternative (Section 2.2.3). Other alternatives that were considered during the preparation of the EA, including those that were ultimately eliminated, are discussed in subsequent subsections.

2.1 SCREENING CRITERIA FOR ALTERNATIVES

The following screening criteria were used to develop the Proposed Action and evaluate potential alternatives. USBP Tucson Sector is working to develop the right combination of personnel, technology, and infrastructure to meet its objective to gain effective control of the border in the USBP Tucson Sector.

- *USBP Operational Requirements*. The selected alternative must support USBP mission needs to hinder or delay individuals crossing the border illegally. Once individuals have entered an urban area or suburban neighborhood, it is much more difficult for USBP agents to identify and apprehend suspects engaged in unlawful border entry. In addition, around populated areas it is relatively easy for cross-border violators to find transportation into the interior of the U.S.

- 1 • Threatened or Endangered Species and Critical Habitat. The selected
2 alternative would be designed to minimize adverse impact on threatened
3 or endangered species and their critical habitat to the maximum extent
4 practical. USBP is working with USFWS to identify potential conservation
5 and mitigation measures.
- 6 • Wetlands and Floodplains. The selected alternative would be designed to
7 avoid and minimize impact on wetlands, surface waters, and floodplain
8 resources to the maximum extent practicable. USBP is working with the
9 USACE-Los Angeles District to avoid, minimize, and mitigate potential
10 impacts on wetlands, surface waters, and floodplains.
- 11 • Cultural and Historic Resources. The selected alternative would be
12 designed to minimize impact on cultural and historic resources to the
13 maximum extent practicable.
- 14 • Suitable Landscape. Some areas of the border have steep topography or
15 highly erodible soils, are in a floodway, or have other characteristics that
16 could compromise the integrity of a fence or other tactical infrastructure.
17 For example, in areas susceptible to flash flooding, fence and other
18 tactical infrastructure might be prone to erosion that could undermine the
19 fence's integrity. Areas with suitable landscape conditions would be
20 prioritized.

21 22 **2.2 ALTERNATIVES ANALYSIS**

23 24 **2.2.1 Alternative 1: No Action Alternative**

25 CEQ regulations require inclusion of the No Action Alternative. Under the No Action
26 Alternative, fence and road improvements would not be constructed. The No Action
27 Alternative will serve as a baseline against which the impacts of the Proposed Action
28 Alternative and the Secure Fence Act Alternative can be evaluated. However, the No
29 Action Alternative does not satisfy the purpose and need or Congressional mandates.

30 31 **2.2.2 Alternative 2: Proposed Action Alternative (Preferred Alternative)**

32 USBP Tucson Sector proposes to construct primary pedestrian fence starting 1 mile
33 east of the DeConcini POE and extending eastward for a total of 7.6 miles (see Figure
34 2-1). Currently, USBP envisions that the primary pedestrian fence would be installed
35 approximately 3 feet north of the U.S.-Mexico border.

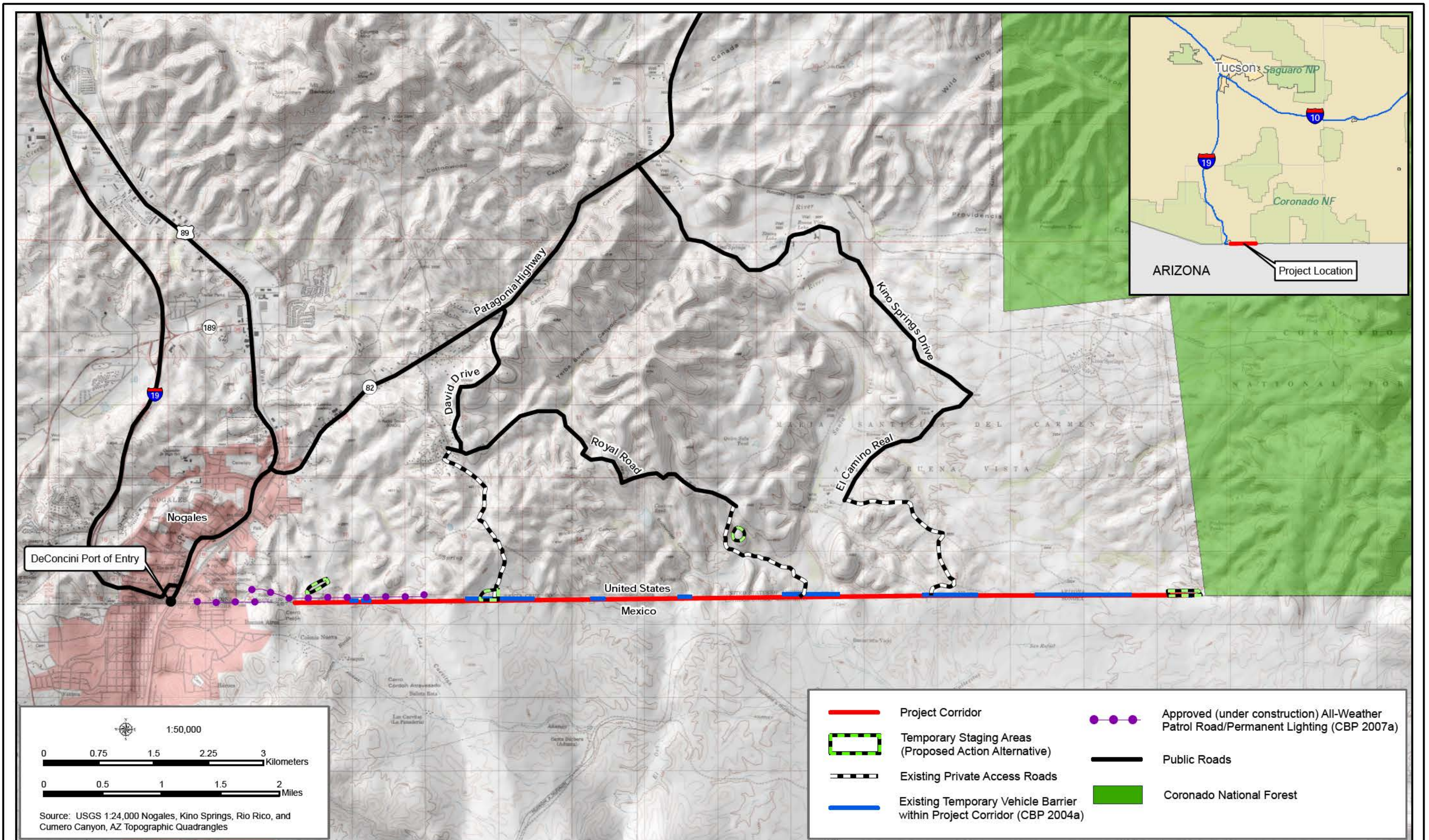


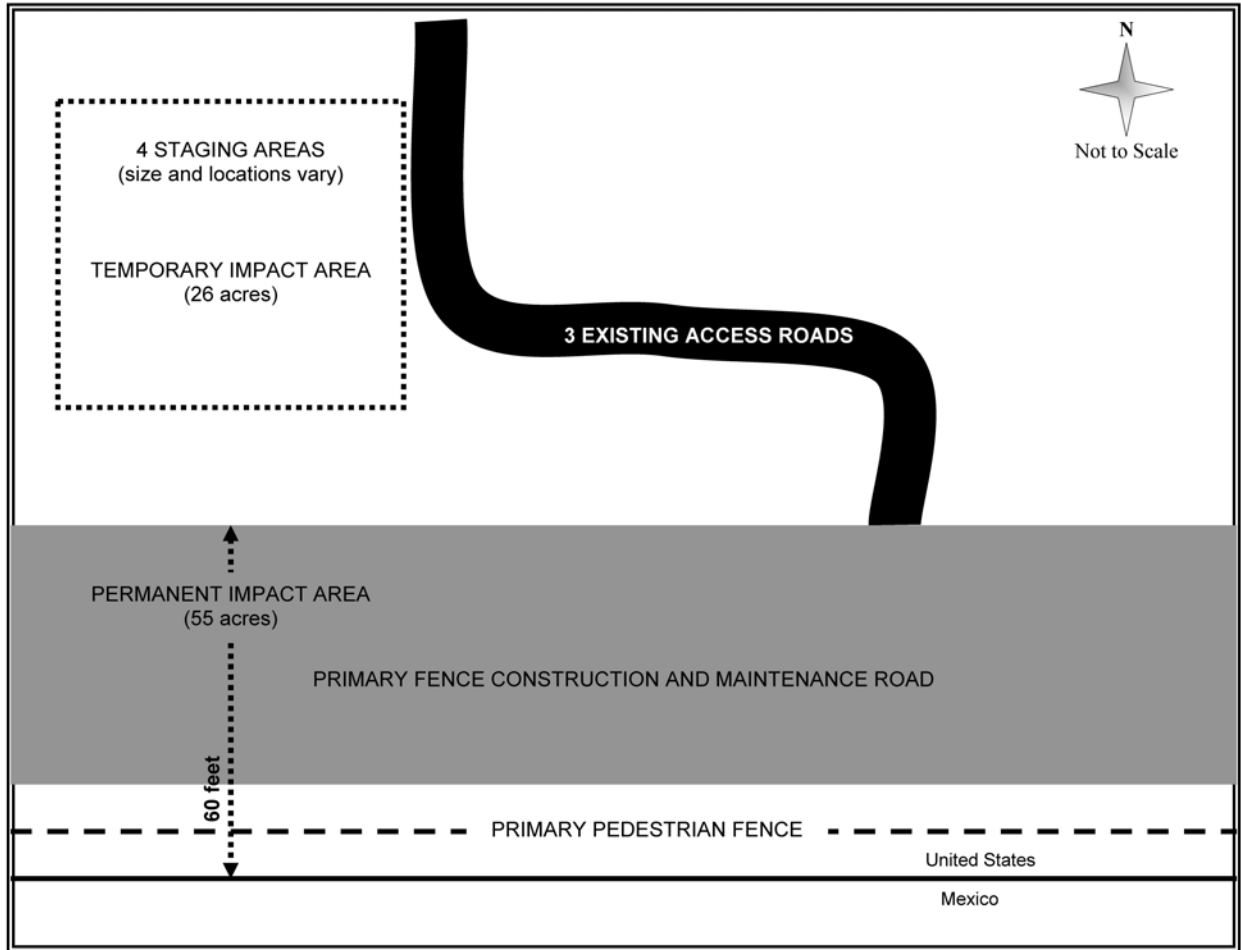
Figure 2-1: Project Corridor

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1 Figure 2-2 shows a typical schematic of TI positions as well as permanent and
 2 temporary impact areas for this alternative. Each of the proposed TI components is
 3 furthered described in the follow paragraphs.

4
 5

Figure 2-2. Schematic of Proposed Impact Areas—Alternative 2



6
 7

8 Dependant on location, terrain, and the specific tactical need of USBP operations,
 9 several primary pedestrian fence designs are available as a “tool box” of fence designs
 10 from which to select the best suited fence at any given location along the U.S.-Mexico
 11 border. However, Tucson Sector proposes to construct a bollard-style fence design due
 12 to its low maintenance requirements, durability, and structural integrity. The specific
 13 design schematic for this bollard-style fence is provided in Appendix B. As for any

1 pedestrian fence design selected by USBP, preliminary design performance measures
2 dictate that the fence must:

- 3
- 4 • extend 15 to 18 feet above ground and 3 to 6 feet below ground;
- 5 • be capable of withstanding an impact from 10,000-pound gross weight
- 6 vehicle traveling at 40 miles per hour;
- 7 • be semi-transparent, as dictated by operational need;
- 8 • be designed to survive extreme climate changes of a desert environment;
- 9 • be designed to allow movement of small animals from one side to the
- 10 other; and
- 11 • not impede the natural flow of water.
- 12

13 In order to facilitate operation of equipment, staging of materials, and construction
14 access to the project corridor, four temporary staging areas, totaling 26 acres, and three
15 existing access roads have been identified along the project corridor. Vegetation would
16 be cleared and grading may occur where needed in the staging areas. Upon
17 completion of construction activities, the temporary staging areas would be
18 rehabilitated. No improvements to existing access roads are anticipated, as these
19 roads are currently maintained through use agreements between USBP and
20 landowners. These minor maintenance activities are expected to continue, yet are not
21 expected to be a result of construction activities.

22

23 Additionally, in washes, arroyos, and the Santa Cruz River, the fence would be
24 designed and constructed, as appropriate, to ensure proper conveyance of floodwaters
25 and to eliminate the potential to cause ponding on either side of the border. Portable
26 lights with generators would be used during nighttime construction.

27

28 The existing TVBs currently within the project corridor were constructed off-site,
29 transported into the border corridor, and placed using cranes and forklifts. This action
30 required minimal clearing of vegetation and ground disturbance. Similar construction
31 techniques are not feasible for the installation of the primary pedestrian fence, and
32 construction/maintenance road. Consequently, a road would need to be constructed
33 adjacent to the border to allow installation of the fence. Construction of the Proposed

1 Action Alternative would encompass a 60-foot-wide project corridor beginning at the
2 U.S.-Mexico border and extending northward.

3
4 Nighttime construction activities would occur only when absolutely necessary for
5 adequate concrete pours or in the case of an accelerated construction schedule to meet
6 Federal mandates. Therefore, to account for heat restrictions for adequate concrete
7 drying and curing processes, most concrete pours for low-water crossings, other
8 drainage structures, and fencing would need to take place during the pre-dawn hours of
9 summer months. However, the possibility exists that work would have to occur on a 24-
10 hour basis. A 24-hour schedule would be implemented only when additional efforts are
11 needed in order to maintain the work task schedule due to weather or other unforeseen
12 situations. In order to facilitate construction activities during these work hours, portable
13 lights would be used. It is estimated that no more than 10 lights would be in operation
14 at any one time at each project site.

15
16 A 6-kilowatt self-contained diesel generator powers these lights (Photograph 2-1). Each
17 unit typically has four 400 to 1000-watt lamps. The portable light systems can be towed
18 to the desired construction location, as needed. Upon completion of construction
19 activities, all portable lights would be removed from
20 the project corridor. Lights would be oriented to
21 illuminate the work area. The area affected by
22 illumination is limited to 200 feet from the light
23 source. Also, the lights may or may not have
24 shields placed over the lamps to reduce or eliminate
25 the effects of backlighting because they are work
26 lights and would not be deployed specifically for
27 providing lighting for enforcement purposes.



Photograph 2-1. Portable lights

28
29 It is anticipated that private contractors would perform the work. Upon signature of a
30 FONSI, and only if deemed appropriate, it is anticipated that construction would begin in
31 March 2008 and be completed by December 2008. It is estimated that approximately 8

1 months of work (approximately 1 mile of TI constructed per month) would be needed to
2 complete the construction. Equipment anticipated to be used during the construction
3 would include bulldozers, dump trucks, portable light generators, graders, cement
4 trucks, front-end loaders or forklifts, and flatbed trucks.

6 **2.2.3 Alternative 3: Secure Fence Act Alternative**

7 The Secure Fence Act of 2006 (P.L. 109-367) authorized the construction at least two
8 layers of reinforced fencing along the U.S.-Mexico border. Two layers of bollard-style
9 fence, known as primary and secondary pedestrian fence, would be constructed
10 approximately 130 feet apart along the same route as that of the Proposed Action
11 Alternative.

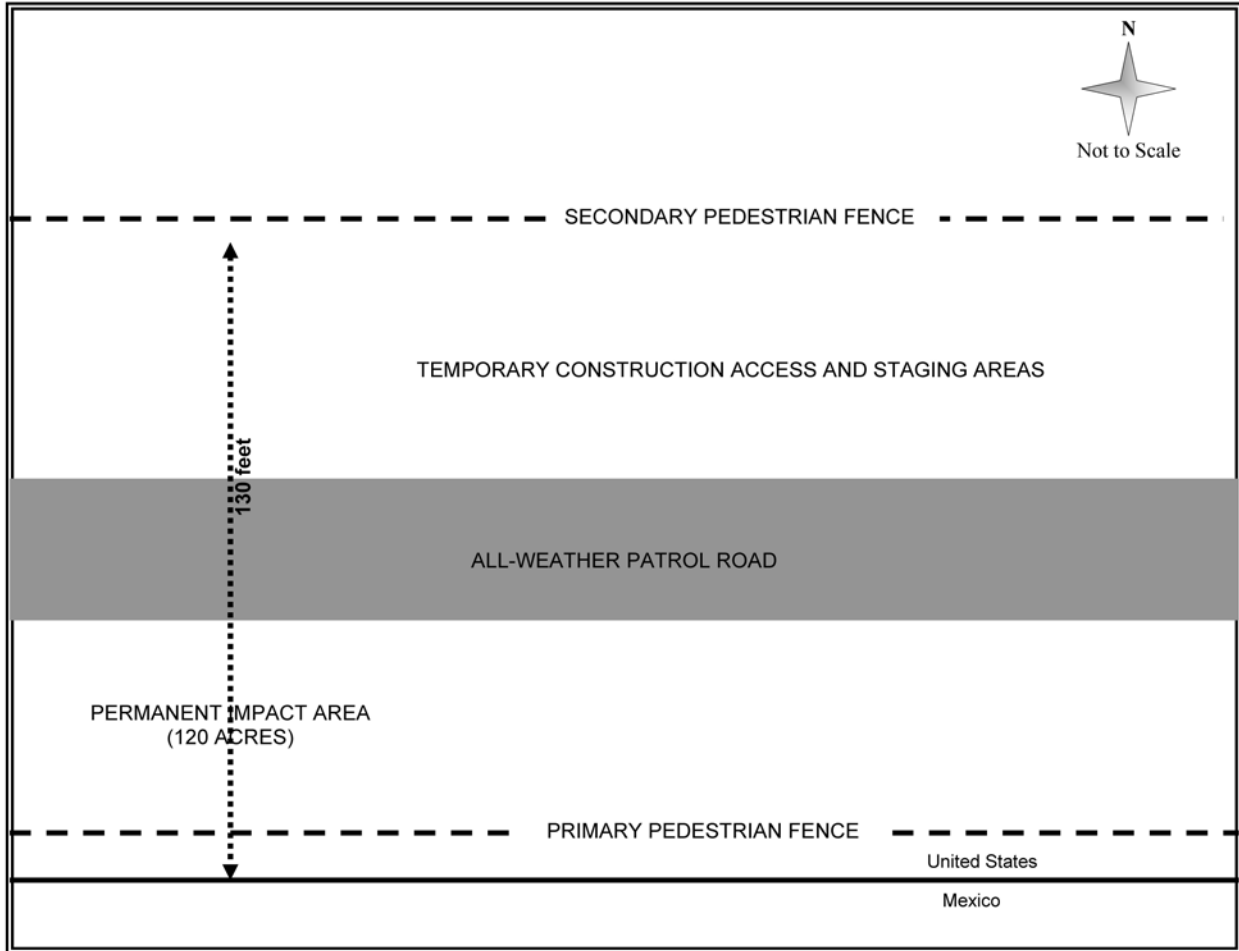
12
13 This alternative would also include construction and maintenance of access and all-
14 weather patrol roads. The patrol road and all TI components would be located between
15 the primary and secondary pedestrian fences. Figure 2-3 shows a typical schematic of
16 impact areas for this alternative; no temporary construction footprint would be required.
17 The design of the fence and road would be similar to that of the Proposed Action
18 Alternative.

20 **2.3 OTHER ALTERNATIVES EVALUATED BUT ELIMINATED FROM** 21 **CONSIDERATION**

22
23 Several other alternatives to the Proposed Action Alternative were evaluated but
24 eliminated from further consideration due to impediments to construction or failure to
25 meet the purpose and need for the project. These are discussed in the following
26 subsections.

1

Figure 2-3. Schematic of Proposed Impact Areas—Alternative 3



2

3

2.3.1 Vehicle Fence in Lieu of Primary Pedestrian Fence

The option to construct vehicle fence in lieu of the proposed primary pedestrian fence would restrict vehicles from illegally entering the U.S.; however, a vehicle fence would not be an impediment to potential terrorists, IAs, or drug smugglers entering the U.S. on foot. For these reasons, construction of a vehicle fence, rather than a primary pedestrian fence, was eliminated from further consideration.

10

2.3.2 Additional USBP Agents in Lieu of Tactical Infrastructure

USBP maintains an aggressive hiring program and a cadre of well-trained and disciplined agents. The physical presence of an increased number of agents may provide an enhanced level of deterrence against illegal entry into the U.S. However,

1 additional agents alone, in lieu of the proposed tactical infrastructure, would not provide
2 a practical solution to achieving effective control of the border in USBP Tucson Sector.
3 Furthermore, this alternative would result in additional USBP agents working under
4 conditions that are not as safe, effective, or efficient as the conditions would be with the
5 construction of the proposed TI. As such, this alternative will not be carried forward for
6 further analysis.

7
8 **2.3.3 Technology in Lieu of Tactical Infrastructure**

9 Under this alternative, USBP would use radar, cameras, lights, and other technology to
10 identify illegal border crossings. The use of technology in certain sparsely populated
11 areas is a critical law enforcement component and an effective force multiplier that
12 allows USBP to monitor large areas and deploy agents to where they will be most
13 effective. However, within and near the more densely populated areas within the
14 Tucson Sector, physical barriers represent the most effective means to control illegal
15 entry into the U.S. The use of technology alone would not provide a practical solution to
16 achieving effective control of the border in USBP Tucson Sector. Therefore, this
17 alternative would not meet the purpose and need as described in Section 1.2, and will
18 not be carried forward for further analysis.

19
20 **2.4 SUMMARY**

21
22 Only three alternatives, the No Action Alternative, the Proposed Action Alternative, and
23 the Secure Fence Act Alternative will be carried forward for analysis. A summary matrix
24 (Table 2-1) shows how each of the alternatives satisfies the purpose and need of this
25 project. Table 2-2 presents a summary matrix of the potential impacts and how they
26 may affect the environmental resources in the ROI.

1

Table 2-1. Alternatives Matrix

Purpose and Need	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative	Alternative 3: Secure Fence Act Alternative
To comply with the Federal legislation.	○	●	●
To provide USBP agents with the tools necessary to prevent terrorists and terrorist weapons from entering the U.S.	⊙	●	●
To provide a safer work environment for USBP agents.	○	●	●
To enhance the response time of USBP agents and to reduce the flow of illegal drugs.	○	●	●

2

Legend: ○ NO ● YES ⊙ PARTIALLY

Table 2-2. Summary Matrix of Potential Impacts

Affected Environment	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative	Alternative 3: Secure Fence Act Alternative
LAND USE	No impact.	Minor direct impact on land use, as 55 acres of rangeland would be converted to TI and law enforcement zone.	Moderate direct impact on land use in the ROI, as 120 acres of rangeland would be converted to TI.
SOILS	No direct impact; indirect impact would continue from IA traffic and consequent enforcement activities.	Minor impact on soils, as approximately 55 acres of soils would be removed from biological production. An additional 26 acres within temporary staging areas would be disturbed yet stabilized and allowed to revegetate following construction activities.	Moderate impact on soils, as approximately 120 acres of soils would be removed from biological production.
HYDROLOGY AND GROUNDWATER	No impact.	A one-time water usage of 7.6 acre-feet of water would result in a temporary, negligible to minor impact on the availability of water in the region.	A one-time water usage of 15.2 acre-feet of water would result in a moderate impact on the availability of water in the region.
SURFACE WATERS AND WATERS OF THE U.S.	No direct impact; indirect impact would continue as illegal foot traffic and USBP apprehension activities would continue to cause erosion and sedimentation into washes, arroyos, and other drainages.	Construction would cause a minor and temporary impact on surface water resources from sedimentation and erosion. Impact would be minimized through required mitigation measures. Direct impact on approximately 27 potentially jurisdictional WUS (0.3 acre) would be offset through mitigation plans as required by the appropriate Department of the Army Section 404 permit and Section 401 Water Quality Certification.	Impact similar to that of the Proposed Action Alternative. Impact on approximately 0.5 acre of potentially jurisdictional WUS would be minimized through required mitigation measures and appropriate permits.
FLOODPLAINS	No direct impact; indirect impact would continue as illegal foot traffic and USBP apprehension activities would continue to cause erosion and sedimentation into washes, arroyos, and other drainages.	There would be a direct impact on approximately 3 acres of jurisdictional floodplains. However, the fence/road would be designed and constructed to ensure that flood elevations, risks, or velocities are not increased, in compliance with EO 11988. Local floodplain regulations would also ensure that any potential adverse impact on the beneficial value of the floodplain is offset.	Direct impact on approximately 6 acres of jurisdictional floodplains. However, the fence/road would be designed and constructed to ensure that flood elevations, risks, or velocities are not increased, in compliance with EO 11988. Compliance with local floodplain regulations would offset any adverse impact.

Table 2-2, continued

Affected Environment	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative	Alternative 3: Secure Fence Act Alternative
VEGETATIVE HABITAT	No direct impact; IA traffic would continue to indirectly impact vegetation communities.	Approximately 49 acres of Scrub-Grassland, 3 acres of Riparian Deciduous Forest and Woodland, and 3 acres of Cottonwood - Willow communities would be lost. Indirect benefits of reduced illegal traffic would offset any adverse impact on these communities.	There would be a permanent loss of 108 acres of Scrub-Grassland, 6 acres of Riparian Deciduous Forest and Woodland, and 6 acres of Cottonwood - Willow communities. While the loss of Cottonwood - Willow series is expected to be twice that of the Proposed Action Alternative, indirect benefits of reduced illegal traffic would offset any adverse impact on this community.
WILDLIFE AND AQUATIC RESOURCES	No direct impact; IA traffic would continue to damage vegetation and aquatic habitat, thereby causing adverse impact on wildlife.	Minor direct impact on land use, as 55 acres of rangeland would be converted to TI and law enforcement zone.	While direct impact would be greater, as 120 acres of wildlife (120 acres) and aquatic (0.6 acre) habitat would be lost, moderate impact within the ROI is expected. Beneficial impact would be the same as described for the Proposed Action Alternative.
THREATENED AND ENDANGERED SPECIES	Indirect impact due to IA traffic trampling habitat and threatened and endangered plant species would continue.	Section 7 consultation with USFWS and subsequent conservation measures and best management practices (BMPs) would ensure that the Proposed Action Alternative does not jeopardize the continued existence of any species. Coordination with AGFD would occur to identify measures to minimize impacts on sensitive species. Protection of threatened and endangered species is likely to occur as an indirect result of this alternative.	The potential impact, required Section 7 consultation, and AGFD coordination would be the same as those of the Proposed Action Alternative.

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Table 2-2, continued

Affected Environment	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative	Alternative 3: Secure Fence Act Alternative
CULTURAL RESOURCES	No direct impact.	No adverse impact; mitigation measures through Section 106 consultation would include avoidance and/or monitoring.	The potential impact would be similar to that of the Proposed Action Alternative. There is a potential to affect additional sites, as the project corridor is wider than the Proposed Action Alternative. However, mitigation measures through Section 106 consultation would include avoidance and/or monitoring.
AIR QUALITY	No direct impact.	There would be a minor and temporary impact on air quality during construction; air emissions would remain below <i>de minimis</i> levels.	There would be a minor and temporary impact on air quality during construction; air emissions would remain below <i>de minimis</i> levels.
NOISE	No direct impact.	There would be minor temporary increases to ambient noise during construction activities. Upon completion of construction and/or maintenance operations, noise levels would return to ambient conditions.	The potential impact would be the same as that of the Proposed Action Alternative.
AESTHETIC AND VISUAL RESOURCES	No direct impact; IA traffic would continue to detract from the general appearance of CNF areas by creating trails and discarding trash.	Minor temporary impact would be associated with the presence of construction equipment. Minor permanent impact would be associated with the fence, which would be conspicuous from adjacent hilltops. Beneficial effects, such as reduced vandalism, habitat degradation, debris left by IAs, and wildfires, would be expected.	The potential impact would be the same as that of the Proposed Action Alternative, yet greater in magnitude. Under this alternative, installation of two fences would result in moderate impact on the appearance of nearby areas compared to a single fence.
HAZARDOUS MATERIAL	No direct impact; indirect impact from unregulated solid waste generated by IA traffic would continue.	No significant hazard is expected from the transport, use, or disposal of unregulated or regulated material.	The potential impact would be the same as that of the Proposed Action Alternative.
ROADWAYS AND TRAFFIC	No direct impact.	Impact on public roadways and traffic would be insignificant on the local and regional level and would return to near-normal conditions following the construction period.	The potential impact would be the same as that of the Proposed Action Alternative.

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Table 2-2, continued

Affected Environment	Alternative 1: No Action Alternative	Alternative 2: Proposed Action Alternative	Alternative 3: Secure Fence Act Alternative
SOCIOECONOMICS	No direct impact.	There would be a minor long-term adverse economic impact on the Santa Cruz County tax base as a result in the loss of 55 acres of private land. Temporary insignificant increases in population from the addition of construction crews in the area would occur. Direct beneficial effects on the local area would result from procurement of materials.	The potential impact would be the same as that of the Proposed Action Alternative, yet greater in magnitude. The loss of property taxes would double when compared to the Proposed Action Alternative. There would be a greater demand in temporary housing. However, temporary beneficial effects would result from an increase in purchased materials. A net beneficial, long-term impact on the ROI from a reduction in illegal activities would offset additional adverse impacts.

1 **2.5 IDENTIFICATION OF THE ENVIRONMENTALLY PREFERRED ALTERNATIVE**

2
3 CEQ's implementing regulation 40 CFR 1502.14(c) instructs NEPA preparers to
4 "identify the agency's preferred alternative or alternatives, if one or more exists, in the
5 draft statement and identify such alternative in the final statement unless another law
6 prohibits the expression of such a preference." CBP/USBP has identified its Preferred
7 Alternative as the Proposed Action Alternative.

8
9 Implementation of the Proposed Action Alternative would meet USBP's purpose and
10 need described in Section 1.2. The No Action Alternative would not meet USBP's
11 purpose and need. The Secure Fence Act Alternative would meet USBP's purpose and
12 need but would have greater environmental impact compared to the Preferred
13 Alternative. USBP might need to implement this alternative at some point in the future,
14 depending on future IA traffic and USBP operational needs and strategies. At the
15 present time, however, USBP believes that this level of TI is not necessary. Still, it will
16 be carried forward for evaluation as a viable alternative.

SECTION 3.0
AFFECTED ENVIRONMENT AND CONSEQUENCES

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 PRELIMINARY IMPACT SCOPING

This section of the EA describes the natural and human environment that exists in the project corridor and its ROI and addresses potential impacts of each of the alternatives. Only those parameters that have the potential to be affected by the alternatives are described, as per CEQ guidance (40 CFR 1501.7 (3)). Some topics are limited in scope due to the lack of potential effect of the Proposed Action Alternative on the resource, or because that particular resource is not located within the project corridor. Therefore, resources such as climate, designated Wild and Scenic Rivers, utilities, geology, prime farmlands, environmental justice and protection of children, and human health and safety are not addressed for the following reasons:

- Climate: The project would not affect or be affected by the climate.
- Wild and Scenic Rivers: The proposed project would not affect any designated Wild and Scenic Rivers, because no such rivers are located within or near the project corridor.
- Utilities: No utilities (e.g., sewer, transmission lines) would be affected by the proposed action. Negligible amounts of energy (fuel) would be required to construct, install, and maintain the infrastructure proposed for this project.
- Geology: The proposed project would only disturb topsoil layers. While some digging, scraping, or post drilling would be required for installation of fence posts, any resulting impacts would be localized and negligible, as there are no geologic outcrops of particular significance or containing any unique features, and underlying geologic formations are pervasive and common throughout the general area.
- Prime Farmlands: No soils exist within the project corridor that satisfy the criteria for prime farmland soils (U.S. Department of Agriculture [USDA] 1979).
- Environmental Justice and Protection of Children: There are no residential areas or persons living in the vicinity of the project corridor; therefore, it is not likely that minority, low-income communities, or children, would be affected by the implementation of the Proposed Action.

- Human Health and Safety: Due to the remote location of the project corridor, the likelihood of this project impacting the health and safety of humans other than USBP agents and contractors or military personnel performing the road improvements is extremely low. All occupational safety standards and BMPs, as outlined in Section 5.0 of this document, would be implemented.

An impact (consequence or effect) is defined as a modification to the human or natural environment that would result from the implementation of an action. Impacts can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. The effects can be temporary, short-term, long-term or permanent. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). Whether an impact is significant depends on the context in which the impact occurs and the intensity of the impact.

Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. Significant impacts are those effects that will result in substantial changes to the environment (40 CFR 1508.27) and should receive the greatest attention in the decision-making process. Insignificant impacts are those that would result in minimal changes to the environment.

As discussed in Section 2.2.2, the primary pedestrian fence would be positioned approximately 3 feet north of the U.S.-Mexico border, with an unimproved maintenance road immediately adjacent to the north side of the proposed fence. The anticipated direct permanent and temporary impacts from the proposed TI construction for Alternatives 2 and 3 are summarized in Table 3-1. Construction activities would be restricted to the footprint of the project corridor and the temporary staging areas located along the border.

1

Table 3-1. Summary of Impacted Acreage

Alternatives	Impacted Acreage		
	Permanent Impacts	Temporary Impacts	Total Impacts
Alternative 2: Proposed Action Alternative (60 feet wide x 7.6 miles)	55	26	81
Alternative 3: Secure Fence Act Alternative (130 feet wide x 7.6 miles)	120	0	120

2

3 Due to the limited width of the project corridor under Alternative 2, an additional 26
4 acres would be temporarily required to facilitate equipment and material staging during
5 construction, as noted in Figure 2-2 and Table 3-1. However, as noted previously in
6 Figure 2-3, the 130-foot-wide project corridor needed for Alternative 3 would
7 accommodate construction access and material staging.

8

9 Because rights-of-entry were not obtainable within the required schedule for this EA,
10 site-specific surveys of the project corridor were not conducted; therefore, the basis of
11 the impact analysis is a combination of the literature review, map reconnaissance,
12 general knowledge of the area, and past surveys conducted within and near the project
13 corridor on similar USBP projects. Portions of the project corridor have been surveyed
14 for biological and cultural resources in recent years. In November 2004, a
15 reconnaissance survey was conducted to delineate vegetation communities present in
16 the vicinity of the project corridor. This survey was performed in support of the
17 December 2004 TVB EA (CBP 2004a). Most recently, in January 2007, a pedestrian
18 survey was conducted in support of the 2007 SEA. This survey overlapped the
19 western-most 0.5 mile segment of the project corridor. While general resource
20 conditions were analyzed, biologists concentrated their efforts on the presence of
21 protected species, wetlands, and general biological conditions (CBP 2003).

22

23 No recent biological or cultural surveys have been conducted for the entire boundaries
24 of the project corridor. Such surveys will be conducted prior to initiation of construction

1 to confirm the presence of any sensitive resource. Therefore, supplemental NEPA
2 documentation to identify, evaluate, and disclose any additional effects not addressed in
3 this document may be required.

4 5 **3.2 LAND USE**

6 7 **3.2.1 Affected Environment**

8 The major land uses in the region include agriculture, rangeland, urban, forest,
9 recreation or special use, water, and border security. Federal agencies that control
10 large land areas in Santa Cruz County are U.S. Forest Service (USFS) and BLM
11 (Arizona Department of Commerce 2007). The major state agencies controlling large
12 areas of land are Arizona State Land Department, AGFD, and Arizona State Parks.
13 The remaining land ownership category includes land controlled by other Federal
14 agencies, such as National Park Service (NPS), along with county and municipal lands.

15
16 Land use within the project corridor is currently open cattle rangeland under private
17 ownership. USBP routinely uses existing roads along the U.S.-Mexico border as patrol
18 roads, and maintains approximately 2.7 miles of intermittently positioned TVBs along
19 the U.S.-Mexico border to control illegal vehicle traffic.

20 21 **3.2.2 Environmental Consequences**

22 **3.2.2.1 Alternative 1: No Action Alternative**

23 Under the No Action Alternative, no construction would occur; therefore, no impact on
24 land use would occur. Although land use would not change, IA pedestrian traffic in the
25 project corridor would continue and could potentially increase.

26 27 **3.2.2.2 Alternative 2: Proposed Action Alternative**

28 There would be a minor insignificant direct impact on land use upon implementation of
29 the Proposed Action Alternative, as 55 acres of private rangeland would be converted to
30 TI and law enforcement zone. There would be a temporary direct impact on 26 acres of
31 land used for equipment staging, but the land would return to its original functions

1 following the construction period. Land would be acquired through lease, easement, or
2 fee title to the government. Landowners would be compensated at fair market values.

3
4 There could be indirect effects outside of the project corridor as IAs attempt to
5 circumvent the proposed infrastructure. These effects cannot be quantified at this time
6 because IA patterns and migration routes are completely out of USBP's control.
7 However, the primary pedestrian fence would act as a force multiplier and allow for
8 USBP to deploy agents to areas without fence; thus, the potential adverse indirect
9 impact could be minimized. Indirect beneficial effects are expected as a result of
10 decreased illegal traffic north of the project corridor. By reducing illegal traffic within and
11 adjacent to the project corridor, damage to grazing lands north would also be reduced
12 or possibly eliminated by affording greater protection from the IAs, smugglers and
13 terrorists to private lands.

14 15 **3.2.2.3 Alternative 3: Secure Fence Act Alternative**

16 Potential impacts on land use would be similar to that of the Proposed Action
17 Alternative. There would be a moderate direct impact on land use in the ROI, as 120
18 acres of rangeland would be converted to TI and law enforcement zone. Similar to the
19 Proposed Action Alternative, Alternative 3 would not significantly affect those resources
20 that are required for support of, or to benefit, the current land use.

21 22 **3.3 SOILS**

23 24 **3.3.1 Affected Environment**

25 The soils in the vicinity of the project corridor were described in detail in the 2004 TVB
26 EA, and those discussions are incorporated herein by reference (CBP 2004a). Two soil
27 associations are present within the project corridor: the Comoro-Pima and the
28 Caralampi-White House-Hathaway.

29
30 The Comoro-Pima soil association consists of deep sandy loams and clay loams.
31 These soils are found on the Santa Cruz River floodplain; they comprise only 1 percent

1 of the entire county and account for 10 percent of the project corridor. These soils
2 formed in recent alluvium and tend to be more than 60 inches deep. They exhibit only a
3 slight erosion potential, likely due to the low-lying areas in which they exist.

4
5 The Caralampi-White House-Hathaway soil association consists of gravelly loams or
6 gravelly sandy loams (USDA 1979). This association can be found on deeply dissected
7 old alluvial fans and piedmonts. These soils have a slight to high erosion potential
8 depending on the slope. This association comprises approximately 3 to 6 percent of
9 soils within the county and makes up the remaining 90 percent of the project corridor.

11 **3.3.2 Environmental Consequences**

12 **3.3.2.1 Alternative 1: No Action Alternative**

13 Soils in the project corridor would not be directly impacted by the No Action Alternative
14 because there would be no ground disturbance. However, indirect impacts from IA
15 activity to soils within the project corridor, as well as areas located to the north, would
16 continue. Soils in this area have been, and would continue to be, susceptible to erosion
17 caused by trampling as a result of illegal traffic, creation of trails, and alteration of
18 drainage patterns.

20 **3.3.2.2 Alternative 2: Proposed Action Alternative**

21 Soil disturbance required under the Proposed Action Alternative would permanently
22 remove 55 acres from biological production. Approximately 3 acres of Comoro-Pima
23 soils within the Santa Cruz River floodplain and 52 acres of Caralampi-White House-
24 Hathaway soils in the remaining portions of the project corridor would be converted into
25 a maintenance road and primary pedestrian fence. An additional 26 acres of
26 Caralampi-White House-Hathaway soils located within temporary staging areas would
27 likely be scraped and bladed to accommodate material staging. Upon completion of
28 construction activities, the soils would be stabilized and allowed to revegetate, resulting
29 in only minor temporary impact. These soil associations comprise a small percentage
30 of soils existing within Santa Cruz County and none are considered prime farmland
31 soils; thus, there would be only a negligible adverse impact.

1 A Stormwater Pollution Prevention Plan (SWPPP) and Notice of Intent under the Clean
2 Water Act's NPDES would be required for the Proposed Action Alternative (33 U.S.C.
3 §1342). The SWPPP would identify BMPs that would be implemented to minimize or
4 avoid erosion and downstream sedimentation during and after construction.
5

6 **3.3.2.3 Alternative 3: Secure Fence Act Alternative**

7 Soil disturbance required under Alternative 3 would permanently remove 120 acres from
8 biological production, including approximately 6 acres of Comoro-Pima soils, and 114
9 acres of Caralampi-White House-Hathaway soils. No temporary disturbance would
10 occur, as all staging would be accomplished within the project corridor. While there is a
11 greater impact on biological productivity, the permanent removal of soils from biological
12 production would comprise a small percentage of soils existing within Santa Cruz
13 County and, thus, adverse impacts would remain minor. Appropriate BMPs identified in
14 the SWPPP would be implemented as described in the Proposed Action Alternative.
15

16 **3.4 HYDROLOGY AND GROUNDWATER**

17

18 **3.4.1 Affected Environment**

19 The groundwater resources of Santa Cruz County were discussed in detail in the 2004
20 TVB EA and are incorporated herein by reference (CBP 2004a). Groundwater
21 resources affected in the project corridor are located in the Santa Cruz Active
22 Management Area (AMA) (Arizona Department of Water Resources [ADWR] 2007).
23 This AMA consists of 716 square miles located in the Basin and Range physiographic
24 province and includes groundwater and surface water resources in the Santa Cruz
25 River Valley. Water quality assessments for the affected region indicate that the major
26 causes of surface water non-attainment include heavy metals, ammonia, low dissolved
27 oxygen, turbidity, total dissolved solids, and fecal coliform bacteria. Groundwater
28 resources in the Upper Santa Cruz River Valley form three aquifer units: the Nogales
29 formation, older alluvium, and younger alluvium (ADWR 2007). According to the ADWR
30 Third Management Plan (1999), the average total recharge within the Upper Santa Cruz
31 AMA was approximately 98,800 acre-feet/year. In 1995, the total use of groundwater

1 within the AMA by the municipal, agricultural, and industrial sectors totaled
2 approximately 21,000 acre-feet. The projected withdrawal of groundwater from the
3 Santa Cruz AMA for year 2010 is 56,100 acre-feet (ADWR 2007); thus, the recharge in
4 the Upper Santa Cruz AMA exceeds the withdrawal from the aquifer. Sustained yield
5 management of water resources within the AMA includes plans for greater use of
6 effluent as recharge so the reserve of good-quality water is preserved.

8 **3.4.2 Environmental Consequences**

9 **3.4.2.1 Alternative 1: No Action Alternative**

10 The No Action Alternative would not have a direct impact on surface water or
11 groundwater resources because no new construction would occur. Illegal traffic and
12 subsequent USBP apprehension activities would continue to cause erosion and
13 sedimentation into washes, arroyos, and other drainages.

15 **3.4.2.2 Alternative 2: Proposed Action Alternative**

16 Water required for construction purposes (e.g., fugitive dust control and concrete pours)
17 would be obtained from the City of Nogales municipal water supply and trucked to the
18 project corridor. Depending on the method employed for fence construction,
19 construction activities could require as little as 10,000 gallons of water per mile (dust
20 suppression only) or up to 325,000 gallons per mile (equivalent of 1 acre-foot) for
21 concrete footing, dust suppression and limited soil compaction. These estimated
22 amounts would have a negligible to minor impact on the availability of water in the
23 region. Since no more than 7.6 acre-feet of water usage would be required for
24 construction (worst-case scenario), no significant impact on regional groundwater
25 supplies or quality is anticipated.

27 **3.4.2.3 Alternative 3: Secure Fence Act Alternative**

28 Additional water supplies required to construct a secondary pedestrian fence parallel to
29 the primary pedestrian fence would result in only a moderate increase in impacts on the
30 regional water supply as compared to the Proposed Action Alternative. Based on use
31 estimates for the Proposed Action Alternative and a similar worst-case assumption (an

1 additional 1 acre-foot per mile), only 15.2 acre-feet would be required for construction.
2 While this assumption essentially doubles the water requirements of the Proposed
3 Action, the majority of the water requirements are for fugitive dust suppression and not
4 concrete needs. While the water requirement for Alternative 3 would result in the
5 greatest increase in water usage, the total usage would remain substantially less than
6 the recharge potential within the Santa Cruz Basin. Therefore, Alternative 3 would not
7 significantly impact groundwater resources.

8 9 **3.5 SURFACE WATERS AND WATERS OF THE U.S**

10 11 **3.5.1 Affected Environment**

12 The Santa Cruz River is the primary surface waterway influencing the project corridor
13 and ROI. The Santa Cruz River is characterized as an intermittent stream that contains
14 perennial and effluent dominated reaches. Within the project corridor and ROI, it is
15 considered a perennial stream. The river flows south into Mexico from its head waters
16 in the San Rafael Valley, located approximately 15 miles east of the project corridor.
17 From Mexico, it meanders back northward and re-enters Arizona 5 miles east of
18 Nogales, within the project corridor, at which point the river continues northward
19 towards Tucson, Arizona.

20
21 Water supply and quality issues for this river system were described in detail in the
22 2004 TVB EA and are incorporated herein by reference (CBP 2004a). In summary,
23 elevated levels of turbidity, copper, and cadmium have been documented as issues of
24 concern between the U.S.-Mexico border and the Nogales Waste Water Treatment
25 Facility in Nogales (USEPA 2004a). The river typically supports most uses within the
26 ROI; however, aquatic ecosystems and warm water fisheries are only partially
27 supported (USEPA 2004a and 2004b).

28
29 Because ROEs were not obtained within the required schedule for this EA, pedestrian
30 surveys of the project corridor were not conducted. However, recent review of aerial
31 photographs and USGS topographic maps suggest a total of 27 ephemeral and

1 perennial streams bisect the project corridor. Figure 3-1 identifies all of the potential
2 surface water crossings located within the project corridor. All of these streams are
3 likely to be classified as jurisdictional waters of the U.S. (WUS) by the USACE Los
4 Angeles District, Arizona/Nevada Area Office.

6 **3.5.2 Environmental Consequences**

7 **3.5.2.1 Alternative 1: No Action Alternative**

8 The No Action Alternative would not result in a direct impact on surface water resources
9 because no new construction would occur. Illegal traffic and subsequent USBP
10 apprehension activities would continue to cause erosion and sedimentation into
11 washes, arroyos, and other drainages.

13 **3.5.2.2 Alternative 2: Proposed Action Alternative**

14 Implementation of the Proposed Action Alternative would result in a minor, temporary
15 impact on surface water resources from sedimentation and erosion caused by
16 construction. However, this impact would be minimized through the use of pre- and
17 post-construction BMPs as specified in the SWPPP.

19 The construction of 7.6 miles of fence and maintenance road could impact 27 potentially
20 jurisdictional WUS. The amount of impact would be accurately quantified after specific
21 delineations are conducted and designs are completed. However, for the purposes of
22 this EA, it is assumed that 20 of the 27 potential WUS are 5 feet wide, six are 10 feet
23 wide, and one (Santa Cruz River) is 40 feet wide, including adjacent potential
24 jurisdictional wetland areas. Using these assumptions, the 60-foot-wide construction
25 footprint would impact approximately 0.3 acre of potential wetland.

27 This would fall within the threshold for Nationwide Permit 14 or 18. However, a
28 jurisdictional determination would be required. Therefore, pedestrian surveys and
29 road/fence designs for these potential stream crossings would be required prior to
30 coordination and preparation of applicable permits. If it is determined that an individual

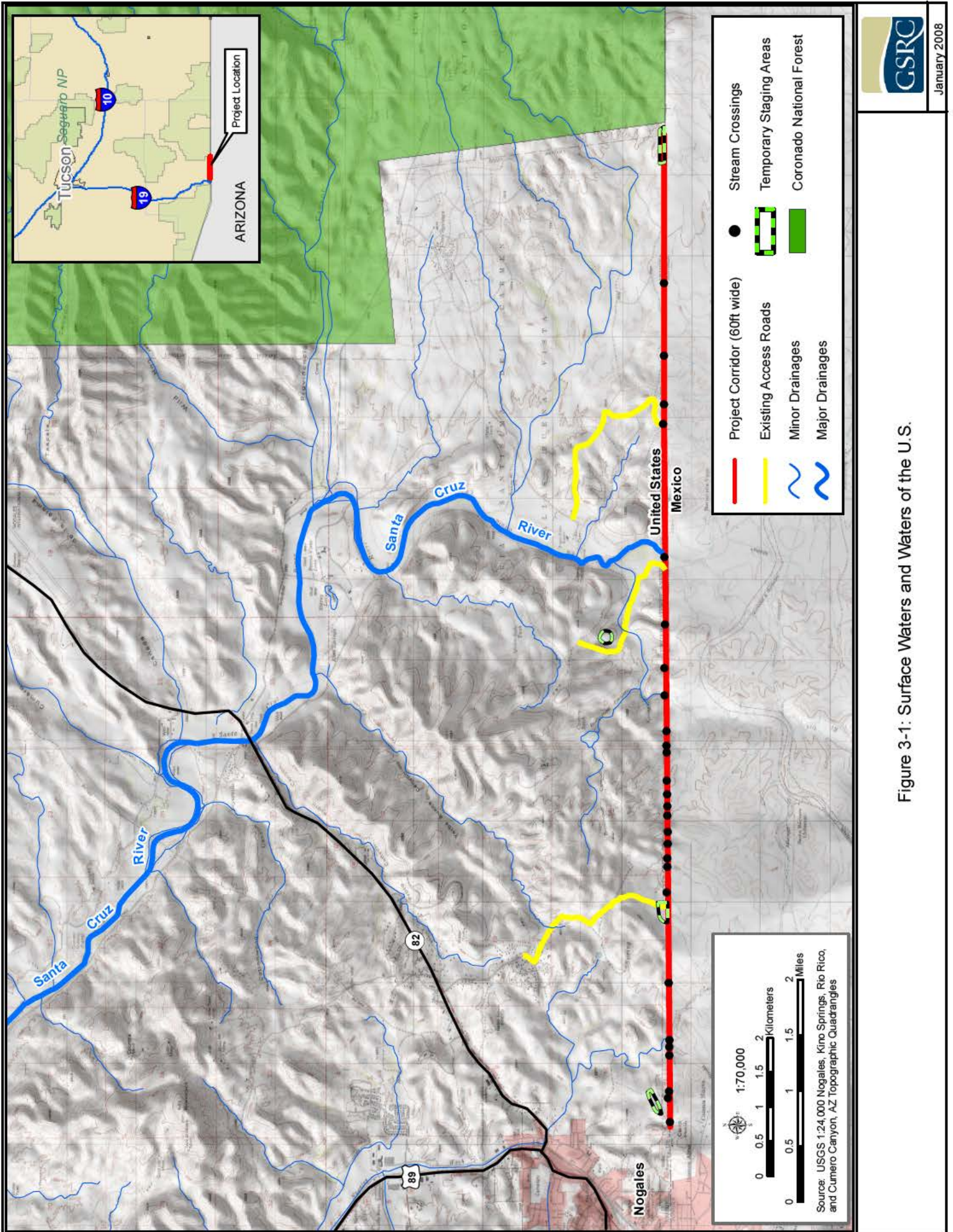


Figure 3-1: Surface Waters and Waters of the U.S.

1 permit is required, it is expected that effects would be offset by appropriate mitigation
2 plans, as required by the Department of the Army Section 404 permit and Section 401
3 Water Quality Certification.

4
5 The bid/build contractor would be the responsible party for obtaining any applicable
6 permits. In areas where primary pedestrian fencing must cross a wash, fences would
7 be designed to ensure that the normal flow of water is not impeded. Regular
8 maintenance of the fence would occur to remove any debris or snags that could block
9 normal flows. Energy dissipation measures, as prescribed by the SWPPP, would be
10 installed at each wash crossing to prevent long-term erosion and sedimentation.

11
12 To prevent any contamination from the accidental spill of petroleum, oil and lubricants
13 (POL) into surface waters, equipment and maintenance activities would not be staged
14 within 100 feet of any surface water resources. In addition, a Spill Prevention, Control
15 and Countermeasures Plan (SPCCP) would be put in place prior to the start of
16 construction, and all personnel would be briefed on the implementation and
17 responsibilities of this plan. The bid/build contractor would be required to prepare and
18 implement the SPCCP.

19
20 **3.5.2.3 Alternative 3: Secure Fence Act Alternative**

21 Under Alternative 3, placement of primary and secondary pedestrian fences is likely to
22 result in additional erosion and sedimentation effects on surface water resources as
23 compared to the Proposed Action Alternative. Similar to the Proposed Action
24 Alternative, BMPs prescribed by the required SWPPP and SPCCP would ensure that
25 impact on surface waters would remain less than significant.

26
27 Alternative 3 would produce a similar, yet potentially greater, impact on the same 27
28 potentially jurisdictional WUS described in the Proposed Action Alternative, since the
29 width of the Alternative 3 project corridor is 130 feet as opposed to 60 feet. Using the
30 assumptions presented previously for the stream widths, the 130-foot-wide construction
31 corridor proposed under this alternative would impact up to 0.6 acre of potential

1 jurisdictional WUS. However, since each of the 27 crossings would be granted
2 independent utility, the potential impact on any one crossing would be less than 0.5 acre
3 and thus fall within the threshold for Nationwide Permit 14. As with the Proposed Action
4 Alternative, coordination and a jurisdictional determination would be required prior to
5 preparation of applicable permits. If required by the appropriate Department of the
6 Army permitting process, mitigation plans would offset any impact.

8 **3.6 FLOODPLAINS**

10 **3.6.1 Affected Environment**

11 Pursuant to the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et
12 seq.), and the Flood Disaster Protection Act of 1973 (P.L. 93-234, 87 Stat. 975), EO
13 11988, floodplain management requires that each Federal agency take actions to
14 reduce the risk of flood loss, minimize the impact of floods on human safety, health and
15 welfare, and preserve the beneficial values which floodplains serve. EO 11988 requires
16 that agencies evaluate the potential effects of actions within a floodplain and to avoid
17 floodplains unless the agency determines that there is no practicable alternative.
18 Where the only practicable alternative is to site in a floodplain, a planning process is
19 followed to ensure compliance with EO 11988. In summary, this process includes the
20 following eight steps:

- 21
- 22 • Determine whether or not the action is in the regulatory floodplain;
- 23 • Conduct early public notice;
- 24 • Identify and evaluate practicable alternatives, if any;
- 25 • Identify the impacts of the action;
- 26 • Minimize the impacts;
- 27 • Reevaluate alternatives;
- 28 • Present the findings and a public explanation; and
- 29 • Implement the action.
- 30

31 This process is further outlined on the Federal Emergency Management Agency's
32 (FEMA's) Environmental Planning and Historic Preservation Program web site (FEMA
33 2006). As a planning tool, the NEPA process incorporates floodplain management
34 through analysis and public coordination, ensuring that the floodplain management

1 planning process is adhered to. In addition, floodplains are managed at the local
2 municipal level through the assistance and oversight of FEMA. The Santa Cruz County
3 Public Works Department is tasked with regulating developments within a floodplain
4 through a variety of flood control and natural resource management activities.

5
6 According to the FEMA floodplain maps (FEMA 1981), approximately 1,510 linear feet
7 of the project corridor, specifically the Santa Cruz River floodplain, are bisected by a
8 jurisdictional floodplain (Figure 3-2). Therefore, any action within these areas would
9 require appropriate coordination and evaluation of the potential effects.

11 **3.6.2 Environmental Consequences**

12 **3.6.2.1 Alternative 1: No Action Alternative**

13 The No Action Alternative would not result in a direct impact on floodplains or be
14 inconsistent with EO 11988, as no new construction would occur.

16 **3.6.2.2 Alternative 2: Proposed Action Alternative**

17 Due to the general north/south orientation of floodplains within the project corridor and
18 the need to place infrastructure parallel to the U.S.-Mexico border, the Proposed Action
19 Alternative would result in the unavoidable direct impact on approximately 3 acres of
20 jurisdictional floodplains. However, compliance with EO 11988 and adherence to local
21 floodplain regulations would ensure that any potential adverse impact on the beneficial
22 value of the floodplain is offset.

23
24 The bid/build contractor would be required to acquire the appropriate floodplain permits
25 from the Santa Cruz Public Works Department that ensure fence and road designs do
26 not impede conveyance or increase flood elevations, frequencies, and durations. As
27 outlined in Section 4.0 of the Santa Cruz Floodplain and Erosion Hazard Management
28 Ordinance No. 2001-03 (Santa Cruz County 2001), information required for submittal of
29 floodplain permit applications includes but is not limited to specific site plans, an
30 engineering hydrology and hydrologic analysis that incorporates fence and road
31 designs, and a debris clearing maintenance plan. As deemed necessary to ensure that

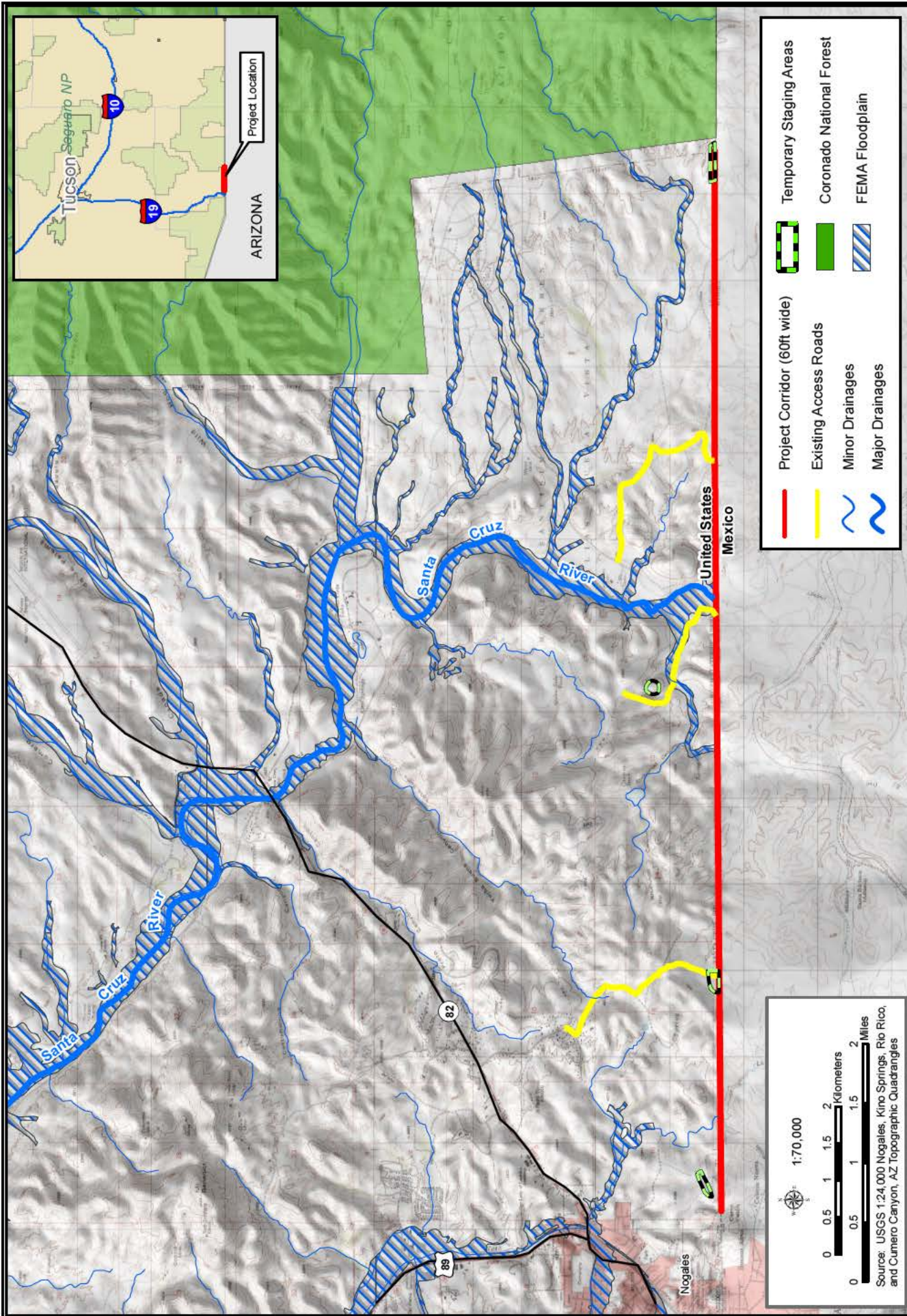


Figure 3-2: FEMA Floodplain Map

1 provisions of the local floodplain management ordinance are met, the fence and road
2 design may require subsequent alterations prior to construction. However, any
3 alteration or design change is expected to be minor and would further minimize any
4 potential adverse impact on floodplains.

5
6 CBP has determined that there is no other practicable alternative to constructing
7 sections of fence and road within a floodplain, as the border bisects the floodplain and
8 the proposed fence and road must be located on the border. However, by design, the
9 bollard-style fence would minimize potential impacts on flood flows, as it would allow for
10 free flow of flood waters. Routine maintenance operations would further ensure that
11 accumulated debris is removed on a regular basis. By ensuring that the provisions of
12 the local floodplain ordinance are met, the Proposed Action Alternative would remain in
13 compliance with EO 111988.

14 15 **3.6.2.3 Alternative 3: Secure Fence Act Alternative**

16 Alternative 3 would result in an unavoidable impact on approximately 6 acres of
17 jurisdictional floodplains. However, the compliance process with EO 11988 and local
18 floodplain regulations would be similar to that described for the Proposed Action
19 Alternative; therefore, any potential adverse impact on jurisdictional floodplains would
20 be minimized.

21 22 **3.7 VEGETATIVE HABITAT**

23 24 **3.7.1 Affected Environment**

25 Past biological and reconnaissance surveys within and near the project corridor have
26 identified three Chihuahuan desert communities that exist in and near the project
27 corridor. The classification of these communities follows Brown (1994) and utilizes
28 variation in general species composition and appearance. The following discussions
29 are summaries of the communities described in the 2004 TVB EA, which are
30 incorporated by reference (CBP 2004a). Without data obtained from pedestrian
31 surveys, delineation of habitat transitions must be estimated; therefore, percentages

1 and acreages noted within the following subsections are estimates based on aerial
2 photograph interpretation and general knowledge of the area.

3
4 **3.7.1.1 Interior Southwestern, Cottonwood—Willow Series**

5 Dominated by Fremont cottonwood (*Populus fremontii*) and narrow-leaf cottonwood (*P.*
6 *angustifolia*), this series is typically found in open riparian canyons or on bajadas.
7 Vegetation communities of the Cottonwood - Willow series are exposed to full sunlight
8 and warm, dry air. The typical forest structure in this series is an open crowned forest
9 with lower shrub and forb layers. Within the project corridor, this series is limited to the
10 Santa Cruz floodplain and one of its major tributaries and comprises approximately 5
11 percent of the entire project corridor.

12
13 **3.7.1.2 Riparian Deciduous Forest and Woodland, Mixed Broadleaf Series**

14 These highly diverse vegetation communities are typically associated with riparian
15 canyons and washes. Forest structure consists of a canopy of deciduous broadleaf
16 trees having broad crowns with abundant shrub and forb layers. This series is limited to
17 moist areas of other washes that bisect the project corridor, and comprises
18 approximately 5 percent of the entire project corridor.

19
20 **3.7.1.3 Scrub-Grassland (Semidesert), Mixed Grass Series**

21 Found on a variety of soils at elevations, this community is the most important grassland
22 series in Arizona and is quite diverse. Native bunch-grasses and fire-tolerant species of
23 this series have suffered from cattle grazing and fire suppression, thus permitting the
24 proliferation of invasive shrubs and cacti. The community is typically made up of
25 shrubs and succulents scattered among mixed stands of perennial bunch-grasses and
26 annual grasses of uniform height. It is the most widely distributed community within the
27 project corridor, and is composed of grassy landscapes broken up by widely scattered
28 scrub trees. This community comprises the remaining 90 percent of the project corridor
29 and 100 percent of the temporary staging areas.

3.7.2 Environmental Consequences

3.7.2.1 Alternative 1: No Action Alternative

Natural vegetation communities would not be directly impacted under the No Action Alternative. Illegal traffic has resulted in the trampling of plants, creation of trails, and alteration of drainage patterns, and these effects would be expected to continue. Illegal foot and vehicle traffic would continue to passively promote the establishment of non-native and invasive plant species. IAs can carry propagules (*i.e.*, seeds or spores) of non-native invasive plant species into the project corridor. Accidental wildfires caused by IAs also have devastating effects in native habitats not adapted to a regular fire regime.

3.7.2.2 Alternative 2: Proposed Action Alternative

The Proposed Action Alternative would result in the permanent loss of 55 acres of vegetation, which includes 49 acres of Scrub-Grassland, 3 acres of Riparian Deciduous Forest and Woodland, and 3 acres of Cottonwood - Willow. Scrub-Grassland is dominated by herbaceous species, therefore would be the most resistant to disturbance. While not as abundant due to its affinity for washes, Riparian Deciduous Forest and Woodland is common both locally and regionally; thus, degradation or loss of a small portion of this community would not be significant within a local or regional context. Cottonwood - Willow is rather unique to major washes and southwestern river systems. This community is important habitat to many riparian wildlife and aquatic species; therefore, the loss of any such community, regardless of size, is undesirable. However, the loss of 3 acres of such habitat would be offset by the indirect benefits to this community from preventing the impact of illegal traffic as discussed in Alternative 1. It is also likely that the losses to these communities would require compensatory mitigation under the Section 404 permit process.

Storage of equipment and materials at the temporary staging areas would result in the temporary disturbance of 26 acres of the common Scrub-Grassland community. Upon completion of construction activities, natural vegetation would be allowed to regenerate from the existing seed bank, undamaged root stocks of shrubs, and stem segments of

1 cacti, or undergo active rehabilitation if deemed necessary. Therefore, there would be
2 no significant impact within staging areas.

3
4 Operation of temporary lighting would result in only negligible indirect impact on
5 vegetation adjacent to the project corridor. The impact on vegetation communities from
6 temporary lighting would not inhibit ecological processes, population size, or individual
7 fecundity of any plant species adjacent to the project corridor.

8 9 **3.7.2.3 Alternative 3: Secure Fence Act Alternative**

10 Effects under Alternative 3 would be similar to that of the Proposed Action Alternative,
11 yet greater in magnitude in terms of impacted acres. To accommodate construction of
12 the primary and secondary pedestrian fences, roads, and staging areas, Alternative 3
13 would result in the permanent loss of 120 acres of vegetation, including 108 acres of
14 Scrub-Grassland, 6 acres of Riparian Deciduous Forest and Woodland, and 6 acres of
15 Cottonwood - Willow series. Compensation for the loss of the Cottonwood - Willow
16 series would be expected to be required under the Section 404 permit process. The
17 impacts on Scrub-Grassland and riparian communities would still be considered
18 insignificant given their local and regional abundance.

19
20 The same mitigation measures as those outlined for the Proposed Action Alternative
21 would be followed to ensure that impact on vegetation communities would not be
22 significant and the construction activities and subsequent operations do not inhibit
23 ecological processes of any species within the project corridor.

24 25 **3.8 WILDLIFE AND AQUATIC RESOURCES**

26 27 **3.8.1 Affected Environment**

28 The native faunal components of southeastern Arizona include 370 species of birds,
29 109 mammal species (Lowe 1964, Hoffmeister 1986), 23 amphibian species (Lowe
30 1964, Lowe and Holm 1992), and 72 species of reptiles (Lowe 1964, U.S. Department
31 of Interior [USDOI] 1989, USACE 1990). Fish diversity in the major river basins and

1 springs of the study area is relatively low and many species are not native (Minckley
2 1973; Rinne and Minckley 1991; Robbins *et al.* 1991). The Santa Cruz River system is
3 known to support 12 fish species.

4
5 Numerous wildlife and aquatic species have been documented within and near the
6 project corridor and its ROI as a result of past biological surveys. In-depth discussions
7 of the wildlife and aquatic resources that occur within the ROI and project corridor are
8 provided in the 2004 TVB EA and the 2007 Fence EA (CBP 2004a and 2007), and
9 those discussions are incorporated herein by reference. In summary, some of the more
10 common birds observed include: white-winged dove (*Zenaida asiatica*), Chihuahuan
11 raven (*Corvus cryptoleucus*), Mexican jay (*Aphelocoma ultramarine*), northern harrier
12 (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco*
13 *sparverius*), turkey vulture (*Cathartes aura*), Gambel's quail (*Callipepla gambelii*),
14 scaled quail (*Callipepla squamata*), ash-throated flycatcher (*Myiarchus cinerascens*),
15 western kingbird (*Tyrannus verticalis*), black-throated sparrow (*Amphispiza bilineata*),
16 and lark sparrow (*Chondestes grammacus*). Mammals observed include desert
17 cottontail (*Sylvilagus auduboni*), antelope jackrabbit (*Lepus alleni*) and mule deer
18 (*Odocoileus hemionus*). The Sonoran spotted whiptail (*Aspidoscelis sonorae*) is the
19 only reptile species observed during recent surveys.

20
21 Among the habitats found in the vegetation types described in the previous subsection,
22 those occurring in riparian areas (Cottonwood - Willow and Riparian Deciduous Forest
23 and Woodland) are the most important for supporting wildlife. These riparian-
24 associated communities are particularly important to vertebrates, whose density and
25 diversity within these communities are two to three times greater than in the surrounding
26 habitats (CBP 2004a).

27 28 **3.8.2 Environmental Consequences**

29 **3.8.2.1 Alternative 1: No Action Alternative**

30 There would be no direct impact on wildlife as a result of the No Action Alternative.
31 However, IAs crossing the border would continue to degrade the wildlife habitat within

1 the project corridor by eroding hillsides and riparian zones, destroying vegetation, and
2 creating illegal trails. Illegal traffic and related activities could disturb nesting birds and
3 rare wildlife species located north of the project corridor, affecting their reproduction.
4

5 **3.8.2.2 Alternative 2: Proposed Action Alternative**

6 Direct impact on wildlife would occur as a result of the loss of 55 acres of habitat due to
7 construction of the primary pedestrian fence and maintenance road. This impact would
8 be negligible due to existing disturbances and the vast areas of similar habitat north of
9 the project corridor. Additionally, some displacement of wildlife would occur due to
10 construction-related disturbances (*e.g.*, noises and temporary nighttime lighting). Such
11 effects would likely occur at any active construction site or access route within the 55-
12 acre project corridor, as well as the 26 acres proposed for equipment staging.
13 However, these effects would be considered insignificant due to the similar habitat
14 adjacent to the project corridor and because of the short duration of construction
15 activities.
16

17 There would be a moderate impact associated with restriction of transboundary
18 movement of wildlife. While a primary pedestrian fence would serve as a physical
19 barrier to many wildlife species, particularly large mammals such as mule deer that
20 migrate north and south of the U.S.-Mexico border, corridors for wildlife movement
21 would still exist. By design, the proposed bollard-style fence would contain openings
22 that are large enough to allow transboundary migration of small mammals and reptiles.
23 Thus, the primary pedestrian fence would not affect the genetic variability of such
24 species, especially since they are regionally common. The loss of 0.3 acre of aquatic
25 habitat, as discussed in Section 3.5.2.2, would be offset by the indirect benefits of
26 reduced illegal traffic and any mitigation required under the Section 404 permit process.
27

28 Although the primary pedestrian fence would preclude transboundary migration of larger
29 mammals (*e.g.*, mule deer), and thus fragment habitat within the project corridor, this
30 impact would be considered minor. Habitat fragmentation typically affects species with
31 small population sizes or that are dependent upon migration to obtain spatially- or

1 temporally-limited resources. No significant adverse effects are anticipated, as most
2 large mammals are regionally common in both the U.S. and Mexico.

3
4 There would be a temporary impact on wildlife species from increased noise during
5 construction. Physiological responses from noise range from minor responses, such as
6 an increase in heart rate, to more damaging effects on metabolism and hormone
7 balance. Long-term exposure to noise can cause excessive stimulation to the nervous
8 system and chronic stress that is harmful to the health of wildlife species and their
9 reproductive fitness (Fletcher 1990). Behavioral responses vary among species of
10 animals and even among individuals of a particular species. Variations in response
11 may be due to temperament, sex, age, or prior experience. Minor responses include
12 head-raising and body-shifting, and more disturbed mammals will usually travel short
13 distances. Panic and escape behavior results from more severe disturbances, causing
14 the animal to leave the area (Busnel and Fletcher 1978). Since, the highest period of
15 movement for most wildlife species occurs during night time or low daylight hours, and
16 construction activities would be conducted during daylight hours to the maximum extent
17 practicable, temporary effects of noise on wildlife species are expected to be
18 insignificant.

19
20 There could be an indirect adverse impact on wildlife in other areas along the southwest
21 border if the IAs choose to cross the border at other locations. The magnitude of the
22 impact would depend upon several biotic and abiotic variables, including, but not limited
23 to, proximity to developed or disturbed areas, number and season of illegal entries, and
24 extant of vegetation community conditions and types where IAs choose to illegally
25 cross.

26
27 Beneficial effects on wildlife populations are also anticipated from the reduction of illegal
28 pedestrian traffic and consequent USBP enforcement actions to wildlife habitats located
29 north of the project corridor.

1 The Migratory Bird Treaty Act (MBTA) requires that Federal agencies coordinate with
2 USFWS if a construction activity would result in the take of a migratory bird. Since
3 construction is expected to begin some time in the beginning of 2008, avoidance of
4 migratory bird nesting season (March through September) is not likely possible.
5 Therefore, if construction begins on or around March 2008, preconstruction surveys to
6 identify nesting activity would be conducted, and USFWS would be notified of the
7 results. Any active nests occupied by migratory bird species would be avoided to the
8 extent practicable.

10 **3.8.2.3 Alternative 3: Secure Fence Act Alternative**

11 Direct effects would be greater, as 120 acres of wildlife and aquatic habitat would be
12 lost. Furthermore, the potential for mortality would be increased with the addition of a
13 second pedestrian fence, as small animals (e.g., desert cotton tail, antelope jack rabbit,
14 and Sonoran spotted whiptail) attempting to move through the project corridor may
15 become confused and become trapped between the two fences. The long-term effects
16 of such mortality potential are difficult to assess. However, due to the beneficial impacts
17 similar to those of the Proposed Action Alternative, this additional impact would likely
18 remain moderate within the ROI.

19
20 Temporary noise impact on wildlife would be greater in duration as a result of an
21 extended construction period and larger footprint. However, as described in Section
22 3.8.2.2, such an impact is expected to remain insignificant over the ROI.

24 **3.9 PROTECTED SPECIES AND CRITICAL HABITAT**

26 **3.9.1 Affected Environment**

27 **3.9.1.1 Federal**

28 A total of 16 Federally protected species and three candidate species (Table 3-2) have
29 the potential to occur within Santa Cruz County (USFWS 2007). CBP/USBP are
30 currently conducting Section 7 consultation on three species USFWS has determined
31 can be potentially found within the ROI and project corridor. These are: jaguar

1 (*Panthera onca*), lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*), and
 2 Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*). A brief description of
 3 these three species and their habitat requirements are presented in the following
 4 paragraphs.

6 **Table 3-2. Federally Listed and Proposed Species Potentially Occurring within**
 7 **Santa Cruz County, Arizona**

Common/Scientific Name	Federal Status	Habitat	Potential to occur within or near the Project Corridor
PLANTS			
Canelo Hills ladies'-tresses (<i>Spiranthes delitescens</i>)	E	Finely grained, highly organic, saturated soils of cienegas.	No – No saturated soils located in the project corridor.
Huachuca water umbel (<i>Lilaeopsis schaffneriana</i> spp. <i>recurva</i>)	E	Cienegas, perennial low gradient streams, wetlands	Yes –Potentially suitable habitat exists in the Santa Cruz River portion of the project corridor.
Pima pineapple cactus (<i>Coryphantha scheeri</i> var. <i>robustispina</i>)	E	Sonoran desertscrub or semi-desert grassland communities.	Yes – Nogales represents the southernmost portion of its range.
INVERTEBRATES			
Stephan's riffle beetle (<i>Hetrelmis stephani</i>)	C	Free-flowing springs and seeps.	No –The project corridor is not located in known habitat.
Huachuca springsnail (<i>Pyrgulopsis thomsoni</i>)	C	Aquatic areas, small springs with vegetation and slow moderate flow.	No – No suitable habitat present.
BIRDS			
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	C	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	No – No suitable habitat is present.
California brown pelican (<i>Pelecanus occidentalis californicus</i>)	E	Feed in shallow estuarine waters; nest on small coastal islands.	No – No suitable habitat present.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T	Nests in canyons and dense forests with multi-layered foliage structure.	Yes – Critical habitat designated east of project corridor. Suitable foraging habitat may occur within the Santa Cruz River floodplain.
Northern aplomado falcon (<i>Falco femoralis septentrionalis</i>)	E	Grasslands and savannahs.	Yes – Potential foraging and nesting habitat present.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	Yes – Potential foraging and nesting habitat may be present within the Santa Cruz River system.

Table 3-2, continued

Common/Scientific Name	Federal Status	Habitat	Potential to occur within or near the Project Corridor
AMPHIBIANS			
Chiricahua leopard frog (<i>Rana chiricahuensis</i>)	T	Streams, rivers, backwaters, ponds, and stock tanks.	Yes –Potentially suitable habitat may exist in perennial pools of the areas of the Santa Cruz River floodplain and its tributaries.
Sonora tiger salamander (<i>Ambystoma tigrinum stebbinsi</i>)	E	Stock tanks and impounded cienegas in San Rafael Valley, Huachuca Mountains.	No –The project corridor is not located in known habitat.
MAMMALS			
Jaguar (<i>Panthera onca</i>)	E	Found in tropical rainforests, arid scrub, and wet grasslands and prefer dense forests or swamps with a ready supply of water	Yes – Sightings have been documented west of the project corridor within the CNF.
Lesser long-nosed bat (<i>Leptonycteris curasoae yerbabuena</i>)	E	Desert scrub habitat with agave and columnar cacti present as food plants.	Yes – Potential foraging habitat but no suitable roosting habitat present.
Ocelot (<i>Leopardus pardalis</i>)	E	Humid tropical and sub-tropical forests, savannahs, and semi-arid thornscrub.	Yes –Potentially suitable habitat exists in densely vegetated areas of the Santa Cruz River floodplain and its tributaries.
FISHES			
Desert pupfish (<i>Cyprinodon macularius</i>)	E	Shallow springs, small streams, and marshes.	No – Native Arizona populations located on Organ Pipe Cactus National Monument and additional refugia populations north of project corridor.
Gila chub (<i>Gila intermedia</i>)	E	Pools, springs, cienegas, and streams.	Yes – Potentially suitable habitat exists in the Santa Cruz River system.
Gila topminnow (<i>Poeciliopsis occidentalis occidentalis</i>)	E	Small streams, springs, cienegas and vegetated shallows.	Yes – Potentially suitable habitat exists in the Santa Cruz River system.
Sonora chub (<i>Gila ditaenia</i>)	T	Perennial and intermittent shallow to moderate streams with boulders and cliffs.	No –The project corridor is not located in known habitat.

1 Legend: E – Endangered T – Threatened C – Candidate
2 Source: USFWS 2007

3
4
5
6

1 The jaguar is the largest and most robust of the North American cats. The
2 southwestern U.S. and Sonora, Mexico, are the extreme northern limits of the jaguar's
3 range, which primarily extends from central Mexico, south through Central and South
4 America to northern Argentina (Hatten *et al.* 2002). The jaguar is found near water in
5 the warm tropical climate of savannahs and forests. Information on jaguar ecology and
6 behavior, especially at the northern edge of the species' range, is very limited. Habitat
7 studies in the core part of their range indicate a close association with water, dense
8 cover, and sufficient prey, and an avoidance of highly disturbed areas (Hatten *et al.*
9 2002). Jaguar distribution patterns over the last 50 years and recent observations of
10 individuals suggest that southeast Arizona is the most likely area for future jaguar
11 occurrence in the U.S. (Hatten *et al.* 2002).

12

13 The lesser long-nosed bat was listed as endangered on September 30, 1988 (53 FR
14 38456). Lesser long-nosed bats are a nectar, pollen, and fruit-eating species that
15 migrate into southern New Mexico and Arizona seasonally from Mexico. Scattered
16 small agave plants have the potential to occur within the project corridor and could
17 provide potential foraging habitat.

18

19 The Pima pineapple cactus was designated as endangered on September 23, 1993 (58
20 CFR 49875). The Pima pineapple cactus is found at elevations between 2,300 and
21 4,500 feet in Pima and Santa Cruz Counties. Pima pineapple cacti are 4- to 18-inches
22 tall, dome-shaped, with silky yellow flowers that bloom in early July with summer rains
23 (58 CFR 49875). They are found in alluvial basins or on hillsides in semi-desert
24 grassland and Sonoran desert scrub. The project corridor lies in the southernmost
25 portion of the Pima pineapple cacti known range. The species occupies habitats that
26 are flat and sparsely vegetated. Suitable habitat for the Pima pineapple cactus exists
27 throughout the project corridor.

28

29 Because ROEs were not obtainable within the required schedule for this EA, pedestrian
30 surveys of the project corridor were not conducted. Consequently, definitive statements
31 about potential habitat or evidence of species occurrences could not be made.

1 Therefore, based solely on literature review and map reconnaissance, an additional
2 eight species identified in Table 3-2 may be supported by habitat within the project
3 corridor. These include: Huachuca water umbel (*Lilaeopsis schaffneriana* spp. *recurva*),
4 Mexican spotted owl (*Strix occidentalis lucida*), northern aplomado falcon, (*Falco*
5 *femorialis septentrionalis*), southwestern willow flycatcher (*Empidonax traillii extimus*),
6 ocelot (*Leopardus pardalis*), Chiricahua leopard frog (*Rana chiricahuensis*), Gila chub
7 (*Gila intermedia*), and Gila topminnow (*Poeciliopsis occidentalis occidentalis*). Brief
8 descriptions of the habitat requirements for these species were presented in Table 3-2.
9 Detailed descriptions were contained in the 2007 Fence EA (CBP 2007c) and are
10 incorporated herein by reference.

11

12 **3.9.1.2 State**

13 The Arizona Natural Heritage Program (ANHP) maintains a list of species with special
14 status in Arizona. The ANHP list includes flora and fauna whose occurrence in Arizona
15 is or may be in jeopardy, or has known or perceived threats or population declines
16 (AGFD 2006). The ANHP list is provided in Appendix C. These species are not
17 necessarily the same as those protected under the ESA of 1973, as amended.

18

19 The project corridor could be considered suitable habitat for various state-sensitive bird,
20 mammal, and plant species; however, definitive statements about potential habitat or
21 evidence of species occurrences cannot be made until pedestrian surveys are
22 conducted.

23

24 **3.9.2 Environmental Consequences**

25 **3.9.2.1 Alternative 1: No Action Alternative**

26 There would be no direct impact on protected species if the No Action Alternative were
27 selected, as no construction would occur. However, indirect adverse effects on
28 protected species, such as habitat degradation as a result of continued illegal traffic
29 would occur and could potentially increase.

30

1 **3.9.2.2 Alternative 2: Proposed Action Alternative**

2 Without data from pedestrian surveys, it is difficult to make a definitive assessment of
3 the presence of suitable habitat conditions or potential presence of the jaguar, lesser
4 long-nosed bat, and Pima pineapple cactus within the project corridor, or to make an
5 accurate determination of the potential presence of any other protected species to exist.
6 Through early and ongoing coordination with USFWS, a more definitive list of protected
7 species with the potential to be found within the project corridor would be developed. If
8 appropriate, CBP would enter into formal Section 7 consultation with USFWS. During
9 consultation with USFWS, CBP/USBP would determine which, if any, species require
10 surveys so that a definitive and accurate effect determination can be made.
11 Preconstruction surveys would be completed in order to confirm or refute the presence
12 or absence of these species, or suitable habitat that could support these species.

13
14 While avoidance would be the primary conservation measure, CBP/USBP have
15 prepared a list of appropriate BMPs (see Appendix D) for the jaguar, lesser long-nosed
16 bat, and Pima pineapple cactus. This list of BMPs was developed in close coordination
17 with CBP and USFWS; and is specific to USBP's proposed TI construction and
18 operation activities. During the Section 7 consultation, if it is determined that there is a
19 potential to adversely affect a protected species, the attached BMPs and appropriate
20 conservation measures would be implemented. In addition, supplemental NEPA
21 documentation might be required, to publicly disclose these potential effects and the
22 appropriate conservation measures or BMPs.

23
24 Habitats with the potential to support many of the state-protected species, especially
25 plant species, are found within the project corridor (see Appendix C). Prior to
26 construction activities, and upon verification of the presence of any such species,
27 coordination with AGFD staff would be conducted regarding avoidance and/or
28 conservation measures, as appropriate, to minimize adverse impact.

1 **3.9.2.3 Alternative 3: Secure Fence Act Alternative**

2 The potential impact, required Section 7 consultation, and AGFD coordination would be
3 the same for Alternative 3 as those discussed for the Proposed Action Alternative.
4

5 **3.10 CULTURAL RESOURCES**

6
7 The procedures to evaluate and manage cultural resources, as well as the cultural history
8 of the region, were described in the 2007 Road EA, and those discussions are
9 incorporated herein by reference (CBP 2007b). In summary, Section 106 of the NHPA
10 requires Federal agencies to identify and assess the effects of their actions on cultural
11 resources. The historic preservation review process mandated by Section 106 is outlined
12 in regulations issued by the ACHP. Revised regulations, "Protection of Historic
13 Properties" (36 CFR Part 800), became effective January 11, 2001.
14

15 **3.10.1 Affected Environment**

16 **3.10.1.1 Cultural Resources Overview**

17 A cultural resources overview of the project region is incorporated by reference from the
18 2003 EA (CBP 2003). In summary, the cultural setting of the project area is generally
19 divided into six different periods: Pre-Clovis, Paleoindian, Archaic, Formative, Late
20 Prehistory and Protohistory, and Spanish Exploration and Settlement. These periods are
21 commonly subdivided into smaller temporal phases based on particular characteristics of
22 the artifact assemblages encountered in each of three archeological regions within
23 southern Arizona.
24

25 **3.10.1.2 Previous Investigations**

26 Past cultural investigations for the project corridor are described in the 2003 EA and are
27 herein incorporated by reference (CBP 2003). In summary, a literature review was
28 conducted at the Arizona State Museum, Arizona SHPO office, and CNF. A total of 38
29 recorded cultural resources surveys were previously conducted within 1 mile of the
30 proposed project corridor.
31

1 **3.10.1.3 Current Investigations**

2 Because ROEs were not obtainable within the required schedule for this EA, pedestrian
3 surveys of the project corridor were not conducted. Consequently, definitive statements
4 about prehistoric and historic sites cannot be made at this time. There is a high
5 probability of prehistoric sites on terraces along the Santa Cruz River, as well as other
6 major washes that transect the project corridor. In addition, Border Monuments 118 and
7 119 are known to be located within the project corridor and are considered to be
8 significant historic properties. However, archival research indicated no other sites within
9 the project corridor.

10
11 **3.10.2 Environmental Consequences**

12 **3.10.2.1 Alternative 1: No Action Alternative**

13 Under the No Action Alternative, there would be no additional construction or ground-
14 disturbing activities and thus no impact on cultural resources.

15
16 **3.10.2.2 Alternative 2: Proposed Action Alternative**

17 Based on the current literature review, two Border Monuments (118 and 119) are the
18 only known historic properties within the project corridor and are eligible for listing on
19 the National Register of Historic Places (NRHP). The monuments would not be directly
20 affected by construction activities. A temporary barrier would be placed around the
21 monuments during construction activities as a mitigation measure, and all construction
22 and earthwork in the proximity would be monitored by a qualified archeologist.
23 Pedestrian surveys and Section 106 coordination with Arizona SHPO, as well as
24 coordination with USIBWC, would be completed prior to construction in order to
25 document the presence or absence of other historic properties, assess any potential for
26 adverse impact, and identify appropriate mitigation measures. Based on past CBP
27 actions, it is anticipated that USIBWC would be allowed maintenance access to the
28 monuments, and the line of sight from monument to monument would not be
29 obstructed.

1 Indirect effects to known and unknown cultural resources sites would be both beneficial
2 and adverse. In the areas immediately north of the project corridor, the primary
3 pedestrian fence would protect known and unknown cultural resources by reducing the
4 amount of IA traffic and the consequent USBP enforcement activities. Conversely,
5 there would be an adverse indirect impact on cultural resources sites in other areas
6 where IAs attempt to circumvent the primary pedestrian fence. The magnitude of these
7 effects is unknown, since the frequency and location of the illegal entry attempts are at
8 the discretion of the IAs. However, the primary pedestrian fence would serve as a force
9 multiplier by deterring IAs in the area and allowing USBP to deploy agents to other
10 unprotected reaches of the border.

11

12 **3.10.2.3 Alternative 3: Secure Fence Act Alternative**

13 Without data that can only be obtained from pedestrian surveys, it is difficult to assess
14 the potential for Alternative 3 to adversely affect historic properties. It is likely that any
15 sites that are encountered under the Proposed Action Alternative would also be affected
16 under this alternative, since cultural resources sites typically encompass areas that
17 extend well beyond 60 feet. There is a potential for Alternative 3 to affect additional
18 sites that the Proposed Action Alternative would avoid, if the southern boundary of a site
19 is located more than 60 feet north of the U.S.-Mexico border. Again, pedestrian surveys
20 and Section 106 would need to be completed prior to the initiation of construction
21 activities to ensure no adverse effects on potentially significant sites would occur. In
22 addition, supplemental NEPA documentation to disclose these potential effects might be
23 required.

24

25 **3.11 AIR QUALITY**

26

27 **3.11.1 Affected Environment**

28 Air quality issues and conditions for the ROI were discussed in the 2004 TVB EA and
29 most recently in the 2007 Road EA (CBP 2004, 2007b). Those discussions are
30 incorporated herein by reference.

31

1 In summary, the USEPA Office of Air Quality Planning and Standards has set National
2 Ambient Air Quality Standards (NAAQS) for six criteria pollutants. The major pollutants
3 of concern, or “criteria pollutants,” are carbon monoxide, sulfur dioxide, nitrogen dioxide,
4 ozone, suspended particulate matter less than 10 microns (PM-10), and lead. Areas
5 that do not meet the NAAQS are called “non-attainment” areas; conversely, areas that
6 meet both primary and secondary standards are known as “attainment” areas.

7
8 According to air quality information received from USEPA Region 9 during the
9 development of the 2007 Road EA, unincorporated areas of Santa Cruz County are in
10 attainment of established NAAQS for all criteria pollutants (CBP 2007b). However, the
11 Nogales metropolitan area is currently in violation of the NAAQS for PM-10. The
12 emission sources have been identified as unpaved roads, cleared areas, and paved
13 roads (USEPA 2007).

15 **3.11.2 Environmental Consequences**

16 **3.11.2.1 Alternative 1: No Action Alternative**

17 The No Action Alternative would not result in any direct impact on the region’s air quality
18 because no additional construction is proposed. However, indirect adverse effects on
19 air quality from illegal traffic and subsequent USBP enforcement activities would occur
20 and could potentially increase.

22 **3.11.2.2 Alternative 2: Proposed Action Alternative**

23 Calculations of the emissions created by construction activities required by the
24 Proposed Action Alternative were conducted to determine the potential impact on the
25 region’s airshed (Appendix E). Table 3-3 presents a summary of these emissions.
26 Based on these estimates, the fence and maintenance road construction would result in
27 a minimal and temporary impact on local air quality. During construction, fugitive dust
28 (PM-10) levels would increase in the ROI. However, fugitive dust generated during
29 construction would be minimized by applying water or other wetting solutions as
30 outlined in Section 5 of this EA. As indicated in Table 3-3, the PM-10 emissions would
31 be well below the *de minimis* threshold and thus do not require an air conformity

1 analysis. Furthermore, transportation and construction vehicles would be maintained to
 2 conform to state and local air quality requirements. No significant long-term impact on
 3 air quality is expected under the Proposed Action Alternative. Conversely, ambient air
 4 quality conditions would most likely incur slight improvements due to a reduction in off-
 5 road IA traffic and consequent USBP enforcement actions.

6
 7 **Table 3-3. Total Air Emissions (tons/year) from Construction Activities of the**
 8 **Proposed Action Alternative vs. the *de minimis* Levels**

Pollutant	Total (tons/year)	<i>de minimis</i> Thresholds (tons/year)
Carbon monoxide	28.62	NA
Volatile Organic Compounds	6.41	NA
Nitrogen oxides	54.55	NA
Particulate matter (< 10 microns)	14.22	100
Particulate matter (< 2.5 microns)	6.41	NA
Sulfur dioxide	6.53	NA

9 Source: 40 CFR 51.853 and GSRC model projections.

11 **3.11.2.3 Alternative 3: Secure Fence Act Alternative**

12 Calculations of the emissions created by construction activities required by Alternative 3
 13 to account for the additional construction footprint requirements for a secondary
 14 pedestrian fence were conducted to determine the potential impact on the region's
 15 airshed (Appendix E). Air emission calculations suggest that local PM-10 emissions
 16 would be greater than those of the proposed action. This is a direct result of an
 17 increase in project construction time and corridor surface area (130 feet as opposed to
 18 60 feet) that would be susceptible to an increased release of fugitive dust. As indicated
 19 in Table 3-4, PM-10 emissions would not exceed the *de minimis* threshold.

Table 3-4. Total Air Emissions (tons/year) from Construction Activities of Alternative 3 vs. the *de minimis* Levels

Pollutant	Total (tons/year)	<i>de minimis</i> Thresholds (tons/year)
Carbon monoxide	45.79	NA
Volatile Organic Compounds	10.26	NA
Nitrogen oxides	87.28	NA
Particulate matter (< 10 microns)	17.79	100
Particulate matter (< 2.5 microns)	9.27	NA
Sulfur dioxide	10.45	NA

Source: 40 CFR 51.853 and GSRC model projections.

3.12 NOISE

3.12.1 Affected Environment

Ambient noise conditions within the project corridor were described in the 2004 TVB EA and are incorporated herein by reference. Briefly, noise levels are generally computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise metric recommended by USEPA and has been adopted by most Federal agencies (Federal Interagency Committee on Noise 1992). A DNL of 65 decibels A-weighted scale (dBA) is most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities such as construction. Areas exposed to a DNL above 65 dBA are generally not considered suitable for residential use. The ambient noise levels within the project corridor are expected to be less than 55 dBA due to its remote location. Furthermore, there are no noise-sensitive receptors near the project corridor.

3.12.2 Environmental Consequences

3.12.2.1 *Alternative 1: No Action Alternative*

There would be no additional impact, beneficial or adverse, on noise levels with the implementation of the No Action Alternative. Noise levels from daily USBP operations would remain the same.

3.12.2.2 Alternative 2: Proposed Action Alternative

Construction noise levels created by transport vehicles, portable light generators, and other construction equipment would vary greatly depending on climatic conditions, season, equipment type and model, and construction activity. Although increased noise levels would occur during construction activities, the project corridor is undeveloped and does not contain noise-sensitive receptors (e.g., hospitals, schools, residences). However, during transport operations via public roads and private access roads to and from the project corridor, temporary increases in vehicle-related noise levels would likely occur within residential areas. The potential for extended periods of noise levels above the DNL average would be minimized as transport operations would not occur on a daily basis. Rather, heavy equipment transport would occur intermittently, so that equipment and materials could be stockpiled. In order to further minimize noise increases, transport operations would also be restricted to daylight hours and weekdays when the normal DNL averages are likely at the highest levels. Deviations from such a restricted schedule would be coordinated through Santa Cruz County Public Works Department-Transportation Division. As previously described in Section 3.8.2.2, any potential impact on wildlife species due to increased noise levels would be temporary and minor. There would be no direct, long-term significant impact on ambient noise levels in the project corridor.

Construction equipment and maintenance activities for the primary pedestrian fence road would periodically increase noise levels in the project corridor. However, upon completion of these activities, ambient noise levels would return to previous levels. Therefore, the impact would be temporary, localized, and insignificant.

3.12.2.3 Alternative 3: Secure Fence Act Alternative

The impacts on ambient noise would be similar for Alternative 3 as those discussed for the Proposed Action Alternative. Noise intensity and duration would be increased due to the larger footprint; still, these increases would be temporary and localized. Therefore no significant impacts would occur.

1 **3.13 AESTHETIC AND VISUAL RESOURCES**

2
3 **3.13.1 Affected Environment**

4 Aesthetic resources were discussed in the 2004 TVB EA, and are incorporated herein
5 by reference. Aesthetic resources consist of the natural and man-made landscape
6 features that give a particular environment its visual characteristics (see Exhibit 3-1).
7 The current visual characteristics of the project corridor are mostly open areas with
8 steep rolling hills and deep dissecting valleys covered by native grasses and other
9 vegetation. Background vistas outside of the city consist of distant views of the
10 surrounding mountains. The ROI and the entire southern Arizona region is known for its
11 tranquil dark skies and scenic mountain ranges. Trails, trash, and wildfires caused by
12 illegal traffic, have degraded many areas. In addition, overgrazing has also resulted in a
13 diminished aesthetic quality in several locations along the border.

14
15 **Exhibit 3-1. A Typical View along the Eastern Portion of the Project Corridor**



1 **3.13.2 Environmental Consequences**

2 **3.13.2.1 Alternative 1: No Action Alternative**

3 The No Action Alternative would result in an indirect adverse impact on the aesthetic
4 qualities of the area, as illegal traffic would continue to occur within the project corridor
5 and surrounding areas. The rate of illegal traffic could also increase as other areas
6 along the border come under more intensive control.

7
8 **3.13.2.2 Alternative 2: Proposed Action Alternative**

9 The primary pedestrian fence would result in a minor adverse impact on the aesthetic
10 qualities of the specific location where it is installed. Exhibit 3-2 provides a simple visual
11 representation of what the project corridor may look like with primary fence constructed.

12
13 **Exhibit 3-2. Digitally Enhanced Photo Representation of the Project Corridor at**
14 **the Same Location as Exhibit 3-1**



15
16

17 While the addition of TI would result in an adverse impact, reducing or eliminating illegal
18 foot traffic, which causes long-term changes to the environment, would be considered a
19 benefit to the region's appearance. Of further benefit would be a reduction of trash (as

1 identified in Photograph 3-1) and wildfires set by IAs would also be considered a benefit
2 to the region's aesthetics.

3



4

Photograph 3-1. Trash left behind by IAs, typical of the ROI

5
6

7 **3.13.2.3 Alternative 3: Secure Fence Act Alternative**

8 The impact on aesthetic resources under Alternative 3 would be similar to that of
9 Alternative 2. However, additional vegetation would be removed under this alternative,
10 detracting from the area's aesthetic quality. The construction of a two-tiered system of
11 infrastructure could further detract from the appearance of the project corridor.

12

13 **3.14 HAZARDOUS MATERIALS**

14

15 **3.14.1 Affected Environment**

16 Hazardous materials were discussed in the 2004 TVB EA and are incorporated herein
17 by reference (CBP 2004a). Unregulated solid waste due to the increase of IA vehicle
18 and foot traffic along the U.S.-Mexico border has become a severe problem in recent
19 years. BLM estimates that approximately 4 million pounds of trash was deposited by
20 IAs in southern Arizona in 2004 and 2005 (Davis 2006). Clothing, water bottles, food,
21 and other debris have been the most common waste materials observed during past
22 surveys of the project corridor.

1 Without data that can only be obtained from pedestrian surveys, it is difficult to make an
2 accurate determination as to the presence or absence of hazardous material within the
3 project corridor. In the future, a Phase I environmental site assessment or visual
4 inspection would be completed within the project corridor to make a determination of the
5 location of any *Recognized Environmental Conditions*. However, preliminary searches
6 of data and maps on the of USEPA's *Envirofacts Data Warehouse* web site revealed no
7 known hazardous waste sites located within the project corridor.

9 **3.14.2 Environmental Consequences**

10 **3.14.2.1 Alternative 1: No Action Alternative**

11 There would be no direct impact as a result of the No Action Alternative because no
12 construction activities would take place. The potential for indirect impact from
13 unregulated solid waste generated by illegal traffic would remain at current levels. As IA
14 traffic remains at current levels or increases within the project corridor, the associated
15 unregulated solid waste (*i.e.*, clothes, water bottles, backpacks, and other debris) would
16 also increase.

18 **3.14.2.2 Alternative 2: Proposed Action Alternative**

19 Although no hazardous waste is anticipated to be stored within the project corridor, POL
20 would be stored at the temporary staging areas in order to maintain and refuel
21 construction equipment. However, these activities would include primary and
22 secondary containment measures. Clean-up materials (*e.g.*, oil mops) would also be
23 maintained at the site to allow an immediate response in case an accidental spill occurs.
24 Drip pans would be provided for the power generators and other stationary equipment
25 to capture any POL that is accidentally spilled during maintenance activities or from
26 equipment leaks.

28 Sanitation facilities would be provided during construction activities, and waste would be
29 collected and disposed of by licensed contractors. No gray water would be discharged
30 to the ground. Disposal contractors would use only established roads to transport

1 equipment and supplies, and all waste would be disposed of in strict compliance with
2 Federal, state, and local regulations, in accordance with the contractor's permits.

3
4 A Phase 1 site survey would be required prior to the start of construction. If the
5 presence of hazardous material is confirmed, then it would be avoided or removed and
6 the site cleaned, as appropriate.

7
8 **3.14.2.3 Alternative 3: Secure Fence Act Alternative**

9 Under Alternative 3, the potential impact and required surveys would be similar to those
10 of Alternative 2.

11
12 **3.15 ROADWAYS AND TRAFFIC**

13
14 **3.15.1 Affected Environment**

15 The project is located within a remote and undeveloped area east of Nogales, Arizona,
16 where no public roadways exist near the project corridor. The nearest roadways are
17 rural all-weather aggregate roads connecting to Arizona State Highway (State Hwy) 80
18 (Patagonia Hwy). As identified in Figure 2-1, these roadways include David Drive, Royal
19 Road, Kino Springs Drive, and El Camino Real. Access to the project corridor is
20 provided via connections between these public roadways and the three privately-owned
21 access roads. There are two sparsely developed residential areas located between the
22 project corridor and State Hwy 80. David Road and North Royal Road provide access
23 to State Hwy 80 through a rural residential area approximately 1 mile north of the
24 project corridor on the western portion of the corridor, while the El Camino Real and
25 Kino Drive provide access through a small developed golf course community located
26 almost 3 miles north of the project corridor.

1 **3.15.2 Environmental Consequences**

2 **3.15.2.1 Alternative 1: No Action Alternative**

3 There would be no direct impact as a result of the No Action Alternative because no
4 construction activities and subsequent transport of equipment and materials would take
5 place.

6

7 **3.15.2.2 Alternative 2: Proposed Action Alternative**

8 The Proposed Action Alternative would have only a minor and temporary impacts to
9 public roadways and traffic, as construction activities are expected to last only 8
10 months. During construction, traffic from construction equipment would likely impose
11 some minimal delays in traffic from over-sized vehicles and material transport through
12 residential areas. The contractor would be required to coordinate and comply with
13 transportation requirements and safety measures identified by the Santa Cruz County
14 Public Works Department-Transportation Division to ensure safe and efficient
15 movement of equipment and materials to the project corridor. The potential for delays
16 and disruption of traffic would not occur on a daily basis, as the heavy equipment
17 transport would occur intermittently, and the equipment would be stockpiled at one of
18 the temporary staging areas. Therefore, local and regional impacts on public roadways
19 and traffic would be insignificant and would return to near-normal conditions following
20 the construction period.

21

22 **3.15.2.3 Alternative 3: Secure Fence Act Alternative**

23 Under Alternative 3, the potential impact and required coordination would be similar to
24 those of the Proposed Action Alternative.

25

26 **3.16 SOCIOECONIMICS**

27

28 **3.16.1 Affected Environment**

29 The socioeconomic environment for the project region is described in detail in the 2003
30 CBP Nogales Infrastructure Improvements EA, the 2004 TVB EA, the 2007 Road EA,
31 and the 2007 Fence EA and is incorporated herein by reference (CBP 2003, CBP

1 2004a, CBP 2007a-c). In summary, the previous EAs examined population structure,
2 housing, environmental justice, and protection of children.

3
4 The ROI for the proposed project is Santa Cruz County. The estimated 2005 population
5 of Santa Cruz County was 44,055. The City of Nogales accounts for almost half
6 (21,830) of the total residents of Santa Cruz County (Arizona Department of Commerce
7 2007). The racial mix of Santa Cruz County consists predominantly of Caucasians (76
8 percent) and people claiming to be of some race other than Caucasian, African-
9 American, Native American, Asian, Native Hawaiian, and other Pacific Islander (21
10 percent). About 81 percent of the total Caucasian population of Santa Cruz County
11 claim to be of Hispanic origin (Arizona Department of Commerce 2007).

12 13 **3.16.1.1 Employment, Poverty Levels, and Income**

14 The total number of jobs in the study area in 2005 was 15,956, an increase of 18
15 percent over the number of jobs in 1990 (13,491) (U.S. Bureau of Economic Analysis
16 2003). The service industry provided the most jobs, followed by the retail trade industry
17 and the government sector. The 2000 annual average unemployment rate for Santa
18 Cruz County was 13.9 percent.

19 20 **3.16.2 Environmental Consequences**

21 **3.16.2.1 Alternative 1: No Action Alternative**

22 Under the No Action Alternative, no construction of pedestrian fence would occur, and
23 IAs and smugglers would continue to increase costs to U.S. citizens due to criminal
24 activities. Increased costs would be associated with apprehension, detention, and
25 incarceration of criminals and, indirectly, with loss of property, illegal participation in
26 government programs, and increased insurance costs.

27 28 **3.16.2.2 Alternative 2: Proposed Action Alternative**

29 While some residential areas and businesses (e.g., a golf course community) are
30 located north of the project corridor along construction access routes, no housing units
31 or businesses are located within the project corridor or adjacent to it, so no

1 displacement of people, houses, or businesses would occur. Land acquired through fee
2 title would result in a loss of property taxes, as 55 acres of land would be transferred to
3 the government, resulting in a minor, yet long-term adverse economic impact on the
4 Santa Cruz County tax base.

5
6 During construction of the primary pedestrian fence, there would be temporary,
7 insignificant increases in population from the addition of construction crews in the area.
8 Construction crews would likely stay at nearby hotels in Nogales. As a result, no
9 additional demand for housing would be anticipated during construction. The
10 construction of the primary pedestrian fence would not require any additional demands
11 on public services during or after construction.

12
13 The Proposed Action Alternative would have a direct beneficial impact on the income of
14 the local area resulting from the rental of construction equipment and purchase of
15 materials, such as fuel and cement, during the construction period. While the exact
16 amount of raw material expenditures is not known, it is expected to result in a moderate,
17 short-term beneficial impact on income.

18
19 An indirect result of the Proposed Action Alternative is the potential for IA traffic to shift
20 to areas with less TI. However, it is unknown where IAs would choose to cross the
21 U.S.-Mexico border. Social costs, such as property damage, car theft, violent crime,
22 drug treatment and rehabilitation, and entitlement programs on a regional and National
23 level would potentially be reduced as the effectiveness of the USBP to gain and
24 maintain control of the border reduces illegal cross-border traffic. Overall, social and
25 economic resources would experience beneficial, long term and temporary impacts with
26 a reduction in illegal activities.

27
28 **3.16.2.3 Alternative 3: Secure Fence Act Alternative**

29 Impacts on the socioeconomic resources in the ROI would be similar in type to those of
30 the Proposed Action Alternative, yet the magnitude of impacts, adverse and beneficial,
31 would be much greater. Depending on the land acquisition process, Alternative 3 could

1 result in over twice (130 acres) the loss of property taxes available to the economy, an
2 additional long-term adverse impact. However, a greater demand for hotel rooms and
3 temporary housing during the construction period and raw material expenditures
4 required for the addition of a secondary pedestrian fence and wider project corridor
5 would have a temporary beneficial impact on the economy.

6

7 Social and economic resources within the ROI would experience a net beneficial, long-
8 term impact from a reduction in illegal activities, offsetting any adverse impact.

SECTION 4.0
CUMULATIVE IMPACTS

1 **4.0 CUMULATIVE IMPACTS**

2
3 This section of the EA addresses the potential cumulative impacts associated with the
4 implementation of the alternatives and other projects/programs that are planned for the
5 region. The CEQ defines cumulative impacts as “the impact on the environment which
6 results from the incremental impact of the action when added to other past, present, and
7 reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or
8 person undertakes such other actions” (40 CFR 1508.7). This section continues,
9 “Cumulative impacts can result from individually minor but collectively significant actions
10 taking place over a period of time.”

11
12 USBP has been conducting law enforcement actions along the border since its
13 inception in 1924, and has continually transformed its methods as new missions, IA
14 modes of operations, agent needs, and national enforcement strategies have evolved.
15 Development and maintenance of training ranges, station and sector facilities, detention
16 facilities, and roads and fences have affected thousands of acres with synergistic and
17 cumulative impacts on soil, wildlife habitats, water quality, and noise. Beneficial effects
18 have resulted from the construction and use of these roads and fences, including but
19 not limited to: increased employment and income for border regions and surrounding
20 communities, protection and enhancement of sensitive resources north of the border,
21 reduction in crime within urban areas near the border, increased land value in areas
22 where border security has increased, and increased knowledge of the biological
23 communities and pre-history of the region through numerous biological and cultural
24 resources surveys and studies.

25
26 With continued funding and implementation of CBP’s environmental conservation
27 measures, including environmental education and training of its agents, use of biological
28 and archeological monitors, wildlife water systems, and restoration activities, adverse
29 effects of future and on-going projects would be avoided or minimized. However,
30 recent, on-going and reasonably foreseeable proposed projects will result in cumulative

1 impacts. In particular, within the next 2 years, 225 miles are scheduled to be
 2 completed. The first phase of construction would occur in areas that have already been
 3 developed (e.g., currently contain permanent vehicle barrier or TVB), thus little or no
 4 additional environmental impact would be expected. The second phase of construction
 5 would generally occur in more remote areas and would inevitably result in cumulative
 6 impacts. It should be noted that the final locations for the primary pedestrian fence
 7 have not been determined yet, so these should be considered only as planning
 8 estimates. A list of the past, on-going, and other proposed USBP projects within the
 9 ROI surrounding the Nogales Station AO is presented in Table 4-1.

10

11 **Table 4-1. Recently Completed or Reasonably Foreseeable USBP projects within**
 12 **and near the Project Corridor and ROI**

Project	Approximate Distance from Project Corridor (miles)	Approximate Acres Permanently Impacted
Leased an 80-acre parcel of land near the Mariposa POE for USBP operations (portable lights and maintenance of roads), Nogales Station	1	80
Proposed construction and maintenance of approximately 11.7 miles of all-weather roads, which includes 8.5 miles of drag roads, low water crossings, and drainage structures on either side of Nogales.	1-5	40
Restoration of Ephraim Ridge near Nogales	2	1
Expansion of USBP checkpoint facilities near Three-Points	35	5
Proposed placement of TVBs at up to 21 different locations (approximately 37 miles) along the U.S.-Mexico border within the Tucson, Nogales, and Sonoita stations AO	0 to 60	0
Relocation of Nogales Interstate 19 (I-19) checkpoint	50	1
Installation of 15 remote video surveillance systems in the Nogales Station's AO	2-5	2
Installation of a relay tower at Crawford Hill in the Nogales Station's AO	2	0.1
Construction and improvements to 3 miles of USBP patrol roads and drag roads west of the Mariposa POE	0	37
Construction 2.4 miles of primary fence and maintenance road west of the Mariposa POE in Nogales, Arizona	2	18
Realignments to 0.34 mile of all-weather patrol road and relocation of 55 permanent lights east DeConcini POE	0	24
Total	198 acres	

13

14

1 The NEPA analysis for the 2007 Fence EA was recently completed (CBP 2007c).
2 Construction is expected to begin in early 2008.

3
4 In addition to these phased projects, USBP might be required to implement other
5 activities and operations that are currently not foreseen or mentioned in this document.
6 These actions could be in response to national emergencies or security events like the
7 terrorist attacks on September 11, 2001, or to changes in the mode of operations of
8 potential IAs. One such USBP initiative that has only recently come to fruition is a
9 proposal to identify locations (as much as 300 miles) along the southwestern border
10 where vehicle fence would be the preferred fence design. While still in the planning
11 stages, areas within the Tucson Sector that have been identified as potential projects
12 include the Baboquivari Mountains to the west of the ROI and areas in eastern Arizona
13 near the Arizona-New Mexico state line to the east.

14
15 Plans by other agencies that would also affect the region's natural and human
16 environment include various road improvements by Arizona Department of
17 Transportation (ADOT) and/or Santa Cruz County. The majority of these projects would
18 be expected to occur along existing corridors and/or within previously disturbed sites.
19 The magnitude of the effects would depend upon the length and width of the road right-
20 of-way (ROW) and the extant conditions within and adjacent to the ROW.

21
22 The 2007 Road EA documented several ADOT projects planned in the next 5 years
23 (CBP 2007b). The details of these projects are incorporated herein by reference.
24 Following is a summary of the types of ADOT projects currently in the planning stage:

- 25 • Country Club Road-Ruby Road - design of frontage roads
- 26 • U.S.-Mexico border - Business I-19 roadway improvements
- 27 • Junction of State Route-189 and I-19 - roadway improvements
- 28 • Doe Street to Baffert Drive - retrofit, sidewalks, landscaping
- 29 • Patagonia Lake/Sonoita Creek - design planning
- 30 • State Route-82 between Mileposts 38 and 39.5 - slope flattening
- 31 • State Route-189 at Milepost 0.095 - drainage improvements
- 32 • Mariposa POE - parking lot and road improvements
- 33
- 34

1 In addition, projects are currently being planned by other Federal entities which could
2 affect areas in use by USBP. CBP/USBP should maintain close coordination with these
3 agencies to ensure that CBP/USBP activities do not conflict with other agencies'
4 policies or management plans. CBP would consult with applicable state and Federal
5 agencies prior to performing any construction activities and would coordinate operations
6 so that they do not inappropriately impact the mission of other agencies. The 2007
7 Road EA provided an extensive list of past or foreseeable Federal projects within the
8 region. These projects are also incorporated herein by reference (CBP 2007b). Other
9 agencies, such as BLM, U.S. Air Force, U.S. Marine Corps, NPS, and USFS, routinely
10 prepare or update Resource Management Plans for the resources they manage. USFS
11 has the responsibility of managing approximately half of all lands within Santa Cruz
12 County. In addition to general rangeland management, the types of projects conducted
13 by USFS include:

- 14
- 15 • lake maintenance projects;
- 16 • pasture divisions and grazing allotment management plans;
- 17 • fuelwood/hazardous fuel reduction plans;
- 18 • specific habitat improvement projects;
- 19 • facility planning;
- 20 • invasive exotic plant management programs;
- 21 • land exchanges;
- 22 • pipeline/transmission ROWs; and
- 23 • mechanical brush control plans
- 24

25 The City of Nogales is the designated gateway from and to Mexico on the CANAMEX
26 Trade Corridor. The name "CANAMEX" is derived from the country names of Canada,
27 America, and Mexico, where a western trade corridor of 1,700 miles of existing highway
28 and interstate systems connects the three countries. The CANAMEX corridor would
29 likely become one of the most important north/south trade corridors in North America.
30 The state governments of Arizona and Nevada are committed to obtaining funds to
31 construct a four-lane divided highway in anticipation of the CANAMEX Trade Corridor.
32 The completion of these projects would create an uninterrupted north/south highway
33 system down the spine of the CANAMEX Trade Corridor. This project is in the planning
34 stage, and potential impacts are unknown at this time.

1 Many positive cumulative impacts have been realized through CBP activities. For
2 example, construction and maintenance activities have had cumulative positive impacts
3 on socioeconomic resources within the border area through reductions in illegal drug
4 smuggling activities. INS (now CBP) activities completed from 1994 to 1999 have
5 provided information on over 100 new cultural resources sites potentially eligible for
6 NRHP listing.

7
8 A summary of the anticipated cumulative impacts relative to the Proposed Action
9 Alternative (*i.e.*, construction of 7.6 miles of TI east of the DeConcini POE) is presented
10 below. Discussions are presented for each of the resources described previously.

11 12 **4.1 LAND USE**

13
14 A significant impact would result occur if any action is inconsistent with adopted land
15 use plans, or the action would substantially alter those resources required for
16 supporting, or benefiting, the current use. The Proposed Action Alternative would only
17 affect 55 acres permanently. While an additional 26 acres of equipment staging areas
18 would be temporarily affected, these areas would return to the current use upon
19 completion of construction. Land that is primarily used for cattle grazing and USBP
20 patrol activities would be acquired through lease, easement, or fee title to the
21 government and would become part of the TI system that provides improved border
22 enforcement. Therefore, this action would not be expected to result in a significant
23 cumulative adverse effect.

24 25 **4.2 SOILS**

26
27 A significant impact would result if the action exacerbates or promotes long-term
28 erosion, if the soils are inappropriate for the proposed construction, if the action would
29 create a risk to life or property, or if there would be a substantial reduction in agricultural
30 production or loss of prime farmland soils. The Proposed Action Alternative and other
31 USBP actions have not reduced prime farmland soils or agricultural production. Pre-

1 and post-construction SWPPP measures would be implemented to control erosion. No
2 inappropriate soil types are located at the project site that would present a safety risk.
3 The impact to 55 acres of permanently altered and 26 acres of temporarily disturbed
4 soils, when combined with past and proposed projects in the region, would not be
5 considered to have a significant cumulative adverse impact.

6 7 **4.3 HYDROLOGY AND GROUNDWATER**

8
9 The significance threshold for water resources includes any action that substantially
10 depletes groundwater supplies or interferes with groundwater recharge. There would
11 be no significant impact on groundwater resources as a result of the withdrawal of 7.6
12 acre-feet of water for the construction and maintenance of the proposed fence and road.
13 When combined with past and proposed projects in the region, the Proposed Action
14 Alternative would not be considered to have a significant cumulative adverse impact.

15 16 **4.4 SURFACE WATERS AND WATERS OF THE U.S**

17
18 Coordination with USACE Los Angeles District would occur prior to construction within
19 potential jurisdictional WUS to ensure no net loss of the functions of these sensitive
20 resources. The required SWPPP measures would reduce erosion and sedimentation
21 during construction to negligible levels and would eliminate post-construction erosion
22 and sedimentation from the site. The same measures would be implemented for other
23 construction projects; therefore, the cumulative impact would not be significant.

24 25 **4.5 FLOODPLAINS**

26
27 The significance threshold for adverse effects on floodplains would be any action or
28 combination of actions that result in direct or indirect flood losses, affecting human
29 safety, health, and welfare. No significant impact on floodplains would occur as a result
30 of the Proposed Action Alternative. Fences and roads would be designed to ensure that
31 floodwater conveyance is not impeded and that flood elevations, frequencies, and

1 durations would not be increased. Compliance with EO 11988 and the local floodplain
2 regulations would also ensure that any potential adverse impact on the floodplain is
3 offset. The Santa Cruz Floodplain and Erosion Hazard Management Ordinance, No.
4 2001-03, bases its statutory authorization, in part, on analysis of the cumulative effects
5 of obstructions within floodplains. Therefore, when combined with other existing and
6 proposed projects in the region, any adverse impacts on floodplains would be
7 insignificant.

8
9 **4.6 VEGETATIVE HABITAT**

10
11 The significance threshold for vegetative habitat includes a substantial reduction in
12 ecological processes, communities, or populations that would threaten the long-term
13 viability of a species or result in the substantial loss of a sensitive community that could
14 not be offset or otherwise compensated for. Removal of Scrub-Grassland and Riparian
15 Deciduous Forest and Woodland communities (as identified in the Proposed Action
16 Alternative), would not result in a significant cumulative impact on vegetation, due to
17 the vast amount of similar habitat contained within and surrounding the project corridor
18 and the juxtaposition of the project corridor with other disturbed and developed areas.
19 Without compensatory mitigation to offset potential impacts, the loss of 3 acres of
20 Cottonwood-Willow community would result in a moderate cumulative impact, due to its
21 importance to many riparian wildlife and aquatic species. However, prior to construction
22 of any proposed project, mitigation measures as deemed appropriate would offset
23 potential effects.

24
25 Other USBP projects, including vegetation clearing and additional lighting, would result
26 in cumulative adverse impacts. The extent of these impacts is not known, since the
27 actions are not planned or defined to date. However, the long-term viability of
28 vegetation communities in the ROI would not be threatened. This loss of vegetative
29 habitat, when combined with other ground-disturbing or development projects in the
30 ROI, would not result in a significant cumulative impact on the region's vegetation
31 communities.

1 **4.7 WILDLIFE AND AQUATIC RESOURCES**

2
3 The significance threshold for wildlife and aquatic resources include a substantial
4 reduction in ecological processes or populations that threaten the long-term viability of a
5 species or result in the substantial loss of a sensitive habitat that could not be offset or
6 otherwise compensated for. Removal of wildlife habitat would result in insignificant
7 cumulative impacts due to the vast amount of similar habitat contained within and
8 surrounding the project corridor. As described in Section 4.6, the cumulative loss of 0.3
9 acre of aquatic habitat and 3 acres of riparian habitat in a desert environment would
10 likely be moderate.

11
12 As a result of past and planned projects within the Tucson Sector, cumulative impacts
13 due to fragmentation of habitat would be considered moderate to substantial. Most all
14 of the border within the Tucson Sector would have physical barriers installed once all
15 proposed and planned projects are completed. Many segments of these barriers would
16 be vehicle fence rather than primary pedestrian fence. In addition, even future primary
17 pedestrian fence that is constructed within arroyos or washes would be designed and
18 constructed to allow conveyance of flood flows, which would require some small gaps in
19 the fence panels. Thus, there would still be opportunities for transboundary migration.

20
21 Due to the vast amount of similar habitat contained within and surrounding the project
22 corridor, the juxtaposition of the project corridor with other disturbed and developed
23 areas, and the fact that there will be gaps in the barriers, the long-term viability of
24 species and communities in the project region would not be threatened. In addition,
25 prior to construction, site surveys for migratory species and appropriate mitigation
26 measures, as deemed necessary, would be implemented. This loss, when combined
27 with other ground-disturbing or development projects in the project region, would not
28 result in a significant cumulative negative impact on the region's biological resources.

1 **4.8 THREATENED AND ENDANGERED SPECIES**

2
3 Impact on threatened and endangered species would be significant if any action results
4 in jeopardizing the continued existence of any endangered, threatened, or rare species.
5 USBP would complete ESA Section 7 consultation with USFWS for Federally-protected
6 species, specifically for the jaguar, lesser long-nosed bat, and Pima pineapple cactus,
7 prior to initiation of the Proposed Action Alternative. As part of the consultation process,
8 conservation measures would be developed, as appropriate, to minimize cumulative
9 impacts on protected species. Therefore, this action, when combined with other
10 existing and proposed projects in the ROI, would not result in a significant cumulative
11 impact on endangered, threatened, or rare species, or jeopardize the continued
12 existence of any species.

13
14 **4.9 CULTURAL, HISTORICAL, AND ARCHEOLOGICAL RESOURCES**

15
16 With no site-specific data, it is difficult to accurately assess the potential for the
17 Proposed Action Alternative to adversely affect historic properties. However, it is
18 anticipated that the Proposed Action Alternative would not result in significant
19 cumulative effects on any known cultural resources sites, provided that appropriate
20 mitigation is identified through the Section 106 process and is implemented by
21 CBP/USBP. Therefore, this action, when combined with other existing and proposed
22 projects in the region, would not be expected to result in a significant cumulative impact
23 on historical properties.

24
25 **4.10 AIR QUALITY**

26
27 Impact on air quality would be considered significant if the action results in a violation of
28 air quality standards, obstructs implementation of an air quality plan, or exposes
29 sensitive receptors to substantial pollutant concentrations. The emissions generated
30 during and after the construction of the fence would be short-term and minor. Although
31 maintenance of the fence and associated maintenance road would result in cumulative

1 impacts on the region's airshed, these impacts would not be considered significant. No
2 violation of air quality standards, obstruction of air quality plans, or exposure of sensitive
3 receptors would occur. Deterrence of and improved response time to IAs created by
4 the construction of the fence and road would reduce off-road enforcement actions that
5 are currently required by USBP agents, benefiting air quality.

7 **4.11 NOISE**

8
9 Actions would be considered to cause significant impacts if they permanently increase
10 ambient noise levels over 65 dBA. Most of the noise generated by the Proposed Action
11 Alternative would occur during construction and thus would not contribute to cumulative
12 impacts on ambient noise levels. Routine maintenance of the fence and road would
13 result in slight temporary and sporadic increases in noise levels that would continue to
14 occur over the long-term. Potential sources of noise from other projects in combination
15 with routine maintenance are not enough (temporal or spatial) to increase ambient noise
16 levels above the 65 dBA range in the ROI. Thus, the noise generated by the
17 construction and maintenance of the fence and road, when considered with the other
18 existing and proposed projects in the region, would not have a significant cumulative
19 adverse impact.

21 **4.12 AESTHETIC AND VISUAL RESOURCES**

22
23 Actions that cause a substantial permanent loss of the characteristics that make an area
24 visually unique or sensitive would be considered to cause a significant impact. There
25 would be no major impact on visual resources from implementing the Proposed Action
26 Alternative, due in part to the surrounding development and the existing border TI.
27 Construction and maintenance of the primary pedestrian fence, when considered with
28 existing and proposed developments in the surrounding area, including other USBP-
29 proposed TI components (e.g., relocation of 55 permanent lights adjacent to the project
30 corridor [CBP 2007a]) would not result in a significant cumulative adverse impact on the
31 visual quality of the region. Areas north of the border would experience beneficial,

1 indirect cumulative effects from the reduction of trash, soil erosion, and wildfires
2 produced by IAs.

3

4 **4.13 HAZARDOUS MATERIALS**

5

6 There would be significant impact if an action creates a public hazard, the site is
7 considered a hazardous waste site that poses health risks, or the action would impair
8 the implementation of an adopted emergency response or evacuation plan. Only minor
9 increases in the use of hazardous substances (e.g., POLs) would occur as a result of
10 the construction and maintenance of the fence and road. No health or safety risks
11 would be created by the Proposed Action Alternative. Once confirmation of any existing
12 hazards that may exist within the project corridor is complete, and if any discovered
13 hazards are removed, the Proposed Action Alternative, when combined with other on-
14 going and proposed projects in the region, would not be considered to have a significant
15 cumulative impact.

16

17 **4.14 ROADWAYS AND TRAFFIC**

18

19 The significance threshold for effects on roadways and traffic conditions includes major
20 traffic delays and/or detours that affect the current transportation patterns to a degree
21 that is above the current management capabilities of the Santa Cruz County Public
22 Works Department-Transportation. The potential for delays and disruption of traffic
23 would not occur on a daily basis, as heavy equipment transport would occur
24 intermittently and equipment would be stockpiled at one of the temporary staging areas.
25 Therefore, impacts would be insignificant on the local and regional level, and roadways
26 and traffic would return to normal conditions following the construction period. The
27 Proposed Action Alternative, when combined with other currently proposed or on-going
28 projects within the region, would not have a significant cumulative impact.

29

30

1 **4.15 SOCIOECONOMICS**

2

3 The significance threshold for socioeconomic conditions includes displacement or
4 relocation of residences or commercial buildings, increases in long-term demands for
5 public services in excess of existing and projected capacities, and disproportionate
6 impacts on minority and low-income families. Construction of the Proposed Action
7 Alternative would result in a temporary, minor and beneficial impact on the region's
8 economy. There would be no significant impact on residential areas, populations, or
9 minority or low-income families. The Proposed Action Alternative, when combined with
10 the other currently proposed or on-going projects within the region, would not have a
11 significant cumulative impact.

SECTION 5.0
MITIGATION MEASURES

1 **5.0 MITIGATION MEASURES**

2
3 This chapter describes those measures that will be implemented to reduce or eliminate
4 potential adverse impacts on the human and natural environment. Many of these
5 measures have been incorporated as standard operating procedures by CBP on past
6 projects. Environmental design measures are presented for each resource category
7 that will be potentially affected. It should be emphasized that these are general
8 mitigation measures and development of specific mitigation measures will be required
9 for certain activities implemented under the action alternatives. The proposed mitigation
10 measures will be coordinated through the appropriate agencies and land managers or
11 administrators, as required.

12
13 It is CBP's policy to reduce impacts through the sequence of avoidance, minimization,
14 mitigation, and finally, compensation. Mitigation varies, and includes activities such as
15 restoration of habitat in other areas, acquisition of lands, and implementation of BMPs
16 and will be coordinated with CNF, USFWS, and other appropriate Federal and state
17 resource agencies.

18
19 **5.1 GENERAL CONSTRUCTION ACTIVITIES**

20
21 BMPs will be implemented as standard operating procedures during all construction
22 activities. These BMPs will include proper handling, storage, and disposal of hazardous
23 and regulated materials. To minimize potential impacts from hazardous and regulated
24 materials, all fuels, POLs and solvents will be collected and stored in tanks or drums
25 within a secondary containment system that consists of an impervious floor and bermed
26 sidewalls capable of containing the volume of the largest container stored therein. The
27 refueling of machinery will be completed following accepted guidelines, and all vehicles
28 will have drip pans during storage to contain minor spills and drips. Although it is
29 unlikely a major spill will occur, any spill of reportable quantities will be contained
30 immediately within an earthen dike, and the application of an absorbent (e.g., granular,

1 pillow, sock, etc.) will be used to absorb and contain the spill. Furthermore, spillage of
2 any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 of a
3 reportable quantity must be cleaned up and reported to the appropriate Federal and
4 state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table
5 302.4 will be included as part of the SPCCP. A SPCCP will be in place prior to the start
6 of construction, and all personnel will be briefed on the implementation and
7 responsibilities of this plan.

8
9 All waste oil and solvents will be recycled, if possible. All non-recyclable hazardous and
10 regulated wastes will be collected, characterized, labeled, stored, transported, and
11 disposed of in accordance with all Federal, state, and local regulations, including proper
12 waste manifesting procedures.

13
14 Solid waste receptacles will be maintained at staging areas, and non-hazardous solid
15 waste (trash and waste construction materials) will be collected and deposited in on-site
16 receptacles. Solid waste will be collected and disposed of by a local waste disposal
17 contractor.

18 19 **5.2 SOILS**

20
21 Vehicular traffic associated with the construction activities will remain on established
22 roads to the maximum extent practicable. Upon completion of the construction
23 activities, rehabilitation of the staging areas will include loosening compacted soils, re-
24 vegetating, or distributing of geological materials (i.e., boulders and rocks) over the
25 disturbed area to reduce erosion while allowing the area to naturally vegetate. In
26 addition, erosion control measures and appropriate BMPs, as required and promulgated
27 through the SWPPP, will be implemented before, during, and after construction
28 activities.

29
30 Road construction and maintenance will avoid, to the extent practicable, making wind
31 rows with the soils once grading activities are completed. Any excess soils not used

1 during construction of the proposed infrastructure will be distributed throughout the
2 project corridor.

3

4 **5.3 GROUND/SURFACE WATER RESOURCES AND WATERS OF THE U.S.**

5

6 Verification of the location of potential jurisdictional WUS will be required. As
7 appropriate, applicable Department of the Army Section 404 permit procedures,
8 including Section 401 Water Quality Certifications, will be completed prior to initiation of
9 the construction activities within drainages. Mitigation and compensation measures will
10 be implemented, as appropriate, through the permit process to ensure no net loss of
11 WUS functions and that surface water conveyance is not impeded.

12

13 Early coordination between CBP/USBP and USACE Los Angeles District, Regulatory
14 Branch has been initiated. The proposed construction activities will require a SWPPP,
15 which will be prepared and submitted to ADWR as part of the NPDES permit process.
16 The SWPPP will identify BMPs that will be implemented before, during, and after
17 construction. These BMPs will ensure that erosion and sedimentation in the waterways
18 are minimized.

19

20 **5.4 FLOODPLAINS**

21

22 In order to ensure compliance with EO 11988 and local floodplain regulations,
23 coordination with the Santa Cruz Public Works Department and USIBWC will be
24 required so that construction activities do not adversely impact floodplains. The
25 bid/build contractor will be required to acquire the appropriate floodplain permits to
26 ensure fence and road design remain in compliance with the local floodplain regulation
27 (*Santa Cruz Floodplain and Erosion Hazard Management Ordinance, No. 2001-03*).
28 Information required for submittal of floodplain permit applications includes but is not
29 limited to: specific site plans; an engineering hydrology and hydrologic analysis that
30 incorporates fence and road designs; and a debris clearing maintenance plan. As
31 deemed necessary to ensure that the provisions of the local floodplain management

1 ordinance are met, the fence and road design may require subsequent alterations prior
2 to construction. In addition to local permit requirements, the NEPA process would be
3 used as a tool to ensure compliance with the floodplain management planning process.
4

5 **5.5 VEGETATION**

6
7 Native seeds or plants, which are compatible with the enhancement of protected
8 species, will be used to the extent feasible, as required under Section 7(a)(1) of the
9 ESA, to revegetate staging areas and turnarounds. In addition, organic material will be
10 collected and stockpiled during construction to be used for erosion control after
11 construction while the areas naturally revegetate.
12

13 Construction equipment will be cleaned at the temporary staging areas, in accordance
14 with BMPs, prior to entering and departing the project corridor, to minimize the spread
15 and establishment of non-native invasive plant species.
16

17 **5.6 WILDLIFE AND AQUATIC RESOURCES**

18
19 In compliance with the MBTA, migratory bird nesting surveys will be conducted prior to
20 construction if clearing and grubbing activities take place during the breeding/nesting
21 season (typically March 1 through September 1). This will ensure that construction
22 activities do not result in the take of nesting migratory birds. Nighttime construction
23 activities will be conducted only when absolutely necessary for adequate concrete pours
24 or, in the case of an accelerated construction schedule, to meet Federal mandates.
25 Conservation measures addressed in Sections 5.1 and 5.3 will further minimize impacts
26 on water resources, terrestrial habitats, and aquatic habitats.
27

28 **5.7 THREATENED AND ENDANGERED SPECIES**

29
30 CBP/USBP are currently conducting Section 7 consultation with the USFWS to
31 determine the effects to the jaguar, lesser long-nosed bat, and Pima pineapple cactus.

1 Through early and ongoing coordination with USFWS, a more definitive list of protected
2 species with the potential to occur within the project corridor will be developed. Surveys
3 will be completed in order to confirm or refute the presence or absence of these species
4 or suitable habitat that could support these species. If such surveys reveal evidence of
5 the presence of protected species, appropriate BMPs (as presented in Appendix D) will
6 be implemented. As appropriate, CBP/USBP will implement any conservation
7 recommendations identified as a result of the consultation process.

8
9 Coordination with AGFD staff regarding avoidance and/or conservation measures to
10 minimize adverse impact on state-protected species will occur as appropriate prior to
11 the start of construction.

12 13 **5.8 CULTURAL RESOURCES**

14
15 Pedestrian surveys and completion of the Section 106 process with Arizona SHPO, as
16 well as coordination with USIBWC, will be completed prior to construction in order to
17 document the presence or absence of historic properties. Upon completion of the
18 Section 106 process and implementation of any requirements identified in that
19 coordination, all construction and construction activities will be kept within previously
20 surveyed areas.

21
22 A temporary barrier will be placed around the monuments during construction activities.
23 If any cultural material is discovered during the construction efforts, the Arizona SHPO
24 will be notified immediately and all activities halted until a qualified archaeologist
25 assesses the cultural remains. USIBWC will be provided maintenance access to the
26 monuments, and the line of sight view from monument to monument will not be
27 obstructed.

1 **5.9 AIR QUALITY**

2

3 Standard construction BMPs, such as routine watering of the construction and access
4 roads, will be used to control fugitive dust during the construction phases of the
5 proposed project. Additionally, all construction equipment and vehicles will be required
6 to be kept in good operating condition to minimize exhaust emissions.

7

8 **5.10 NOISE**

9

10 Standard noise attenuation equipment, such as mufflers, shall be used on all
11 construction equipment and vehicles and will be maintained in good operating condition,
12 free from leaks. Because of the increased noise sensitivity along transport routes,
13 transport operations will be limited to daylight hours and weekdays for transportation of
14 heavy equipment and materials. Deviations will be coordinated with the Santa Cruz
15 County Public Works Department-Transportation Division on a case by case basis.

16

17 **5.11 HAZARDOUS MATERIALS**

18

19 Prior to acquisition (easement or fee title) of the project corridor, a site survey or Phase
20 1 environmental site assessment of the project corridor will be conducted to determine
21 the presence of existing hazardous material. As appropriate, any *Recognized*
22 *Environmental Conditions* will be avoided or removed and the site cleaned as
23 appropriate.

24

25 **5.12 ROADWAYS AND TRAFFIC**

26

27 Prior to the start of construction activities, the bid/build contractor will coordinate and
28 comply with transportation requirements and safety measures identified by the Santa
29 Cruz County Public Works Department-Transportation Division to ensure safe and
30 efficient movement of equipment and materials to the project corridor.

SECTION 6.0
REFERENCES



6.0 REFERENCES

- Arizona Department of Commerce. 2007. County Profiles. Internet website: http://www.commerce.state.az.us/communities/county_profiles.asp. Last Accessed May 15, 2007.
- Arizona Department of Economic Security. 2002. Internet website: <http://www.bls.gov/>.
- Arizona Department of Water Resources (ADWR). 2007. About ADWR. Internet website: http://www.azwater.gov/WaterManagement_2005/Content/AMAs/SantaCruzAMA/default.htm Last Accessed: May 21, 2007.
- Arizona Department of Game and Fish (AGFD). 2007. Species Lists. Internet website: http://www.gf.state.az.us/w_c/edits/hdms_species_lists.shtml. Last updated December, 21, 2006. Last Accessed: May 4, 2007.
- Associated Press. 2002. Photo gives biologists new evidence of jaguars in Arizona February 6, 2002. Downloaded 6 June 2002, <<http://azcentral.com/new/0206jag.html>.
- Brown, D.E. and C.A. Lopez Gonzalez. 2001. Borderland Jaguars. University of Utah Press, Salt Lake City, UT.
- Brown, D.E. 1994. Biotic Communities: southwestern United States and northwestern Mexico. David E. Brown, ed. University of Utah Press, Salt Lake City, Utah.
- Busnel, R. G., and J. Fletcher. 1978. Effect of noise on wildlife. New York: Academic Press.
- Coronado National Forest (CNF). 2005. Coronado National Forest Management Indicator Species Population Status and Trends. US Department of Agriculture, Forest Service - Southwest Region, Coronado National Forest. 77 pgs.
- U.S. Customs and Border Protection (CBP) 2003. Environmental Assessment for Various Infrastructure Improvements within the Nogales Station, Cochise County, Arizona. Department of Homeland Security, Washington D.C. October 2003.
- CBP. 2004a. Environmental Assessment for Temporary Vehicle Barriers, Tucson Sector Pima, Santa Cruz, and Cochise Counties, Arizona. Department of Homeland Security, Washington D.C. December 2004.
- CBP. 2004b. National Border Patrol Strategy: Office of Border Patrol., Washington D.C., September 2004.

- 1 CBP. 2004c. Welcome to U.S. Customs and Border Protection. Internet Resource:
2 <http://www.cbp.gov/xp/cgov/toolbox/about/mission/cbp.xml>.
3
- 4 CBP. 2007a Supplemental Environmental Assessment for Nogales Infrastructure
5 Improvements, U.S. Border Patrol, Tucson Sector, Nogales Station, Santa Cruz
6 County, Arizona. May 2007.
7
- 8 CBP. 2007b. Environmental Assessment for the Construction of New Patrol and Drag
9 Roads, Office of Border Patrol, Nogales Station, Santa Cruz County, Arizona
10 March 2007.
11
- 12 CBP. 2007c. Environmental Assessment for construction of 2.4 miles of primary fence,
13 USBP, Tucson Sector , Nogales station, Santa Cruz, County Arizona.
14 November 2007.
15
- 16 Congressional Research Service. 2006. *Border Security: Barriers Along the U.S.*
17 *International Border*. Report For Congress prepared by Blas Nunez-Neto and
18 Stephen Vina. Updated 12 December 2006.
19
- 20 Davis, Tony. 2006. Desert Invasion – U.S. July 30, 2006. Internet Website:
21 <http://w.w.w.desertinvasion.us/articles/art2006jul30a.hml>. Accessed December
22 19, 2006.
23
- 24 Defenders of Wildlife. 2005. Jaguar Sighting in Arizona. Internet
25 Website:<http://www.defenders.org/wildlife/new/bigcats/jaguar/az.html>. Accessed
26 March 3, 2005.
27
- 28 Federal Emergency Management Agency (FEMA). 1981. Public Floodplain Map - Santa
29 Cruz Count - Panel #0400910007b.
30
- 31 FEMA. 2006. FEMA's Environmental Planning and Historic Preservation (EHP)
32 Program. Executive Order 11988: Floodplain Management. Internet Website:[http://](http://www.fema.gov/plan/ehp/ehplaws/eo11988.shtm)
33 <http://www.fema.gov/plan/ehp/ehplaws/eo11988.shtm>. Last Modified: Thursday, 17-
34 Aug-2006. Las accessed Dec17, 2007.
35
- 36 Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of
37 Selected Airport Noise Analysis Issues. Federal Interagency Committee on
38 Noise. August 1992.
39
- 40 Fletcher, J.L. 1990. Review of noise and terrestrial species: 1983-1988. pp. 181-188 in:
41 B. Berglund and T. Lindvall, eds. Noise as a Public Health Problem Vol. 5: New
42 Advances in Noise Research Part II. Swedish Council for Building Research,
43 Stockholm.
44
45

- 1 Hatten, J.R., A. Averill-Murray, and W.E. Van Pelt. 2002. Characterizing and mapping
2 potential jaguar habitat in Arizona. Nongame and Endangered Wildlife Program
3 Technical Report 203. AGFD, Phoenix, Arizona.
4
- 5 Hoffmeister, D.F. 1986. Mammals of Arizona. The University of Arizona and the
6 Arizona Game and Fish Department. 602 p.
7
- 8 Immigration and Naturalization Service (INS). 2001. Supplemental Programmatic
9 Environmental Impact Statement for the Continuation of Immigration and
10 Naturalization Service and Joint Task Force Six Activities along the
11 Southwestern Border.
12
- 13 Lowe, C.H. (editor). 1964. The Vertebrates of Arizona. The University of Arizona
14 Press. Tucson, Arizona. 270 p.
15
- 16 Lowe, C.H. and P.A. Holm. 1992. A Checklist of Amphibians and Reptiles of
17 Chiricahua National Monument. Southwest Parks and Monument Association.
18 Tucson, Arizona. 5 p.
19
- 20 Minckley, W.L. 1973. Fishes of Arizona. Arizona Game and Fish Department,
21 Phoenix, Arizona. 293 p.
22
- 23 Northwest Transmission Assessment Committee. 2006. List of Annual Progress
24 Reports to WECC – 2006. Available online at
25 [http://www.nwpp.org/ntac/pdf/NTAC%202007-03-13%20Att%206%20-](http://www.nwpp.org/ntac/pdf/NTAC%202007-03-13%20Att%206%20-%20ProgRep_01-10-07.pdf)
26 [%20ProgRep_01-10-07.pdf](http://www.nwpp.org/ntac/pdf/NTAC%202007-03-13%20Att%206%20-%20ProgRep_01-10-07.pdf). Last Accessed 29 November 2007.
27
- 28 Rinne, J.N. and W.L. Minckley. 1991. Native Fishes of Arid Lands: A Dwindling
29 Resource of the Desert Southwest. General Technical Report RM-206. U.S.
30 Department of Agriculture, Forest Service, Rocky Mountain Forest and Range
31 Experiment Station, Fort Collins, Colorado. 45 p.
32
- 33 Robbins, C.R., R.M. Bailey, C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, and W.B.
34 Scott. 1991. Common and Scientific Names of Fishes from the United States
35 and Canada. American Fisheries Society Special Publication 20. 183 p.
36
- 37 Santa Cruz County. 2001. Santa Cruz Floodplain and Erosion Hazard Management
38 Ordinance, No. 2001-03. An ordinance of the Board of Supervisors of Santa
39 Cruz County, Arizona. May 1, 2001.
40
- 41 Unisource Energy Corporation. 2006. 2006 Annual Report. Available online at
42 http://www.uns.com/docs/2006_Annual_Report.pdf. Last Accessed 29
43 November 2007.
44

- 1 U.S. Army Corps of Engineers (USACE). 1990. Final Environmental Impact Statement
2 for the Fort Huachuca, Fort Devens, Fort Monmouth Base Realignment, U.S. Army
3 Corps of Engineers, Los Angeles District and New England Division.
4
- 5 U.S. Department of Agriculture (USDA). 1979. Soil Survey of Santa Cruz and Parts of
6 Cochise and Pima Counties Arizona. United States Department of Agriculture,
7 Soil Conservation Service and Forest Service.
8
- 9 U.S. Department of the Interior. 1989. Final San Pedro River Riparian Management Plan
10 and Environmental Impact Statement. U.S. Department of the Interior, Bureau of
11 Land Management, Stafford District, Stafford, Arizona.
12
- 13 U.S. Environmental Protection Agency (USEPA). 2004a. Listed Water Information
14 Cycle 2000: Nogales Wash and East Nogales Wash. Internet website:
15 http://oaspub.epa.gov/waters/enviro.control?p_list_id=AZ15050301-011.
16
- 17 USEPA. 2004b. 305(b) Lists/Assessment Unit Information Santa Cruz River. Internet
18 website: [http://oaspub.epa.gov/waters/enviro.wcontrol?p_id305b=AZ15050301-](http://oaspub.epa.gov/waters/enviro.wcontrol?p_id305b=AZ15050301-010_00)
19 [010_00](http://oaspub.epa.gov/waters/enviro.wcontrol?p_id305b=AZ15050301-010_00)
20
- 21 USEPA. 2007. Currently Designated Non-attainment Areas for All Criteria Pollutants.
22 Internet Website: www.epa.gov/air/oaqps/greenbk/ancl.html#ARIZONA. Last
23 Accessed: May 4, 2007.
24
- 25 U.S. Forest Service (USFS). 1999. Regional Forester's Sensitive Species List. USDA,
26 Forest Service, Region 3.
27
- 28 USFS. 2006. Coronado National Forest – Home Page. Internet website:
29 www.fs.fed.us/r3/coronado/ Last updated: February 07, 2006.
30
- 31 U.S. Fish and Wildlife Service (USFWS). 2007. Arizona Ecological Field Services Field
32 Office website – Threatened and Endangered Species List – Santa Cruz County.
33 Internet Address: www.fws.gov/arizonaes/ . Last Updated: November 8, 2007.
34 last accessed November 13, 2007.
35
- 36 Van Pelt, W. E. 2005. Personal Communication from William E. Van Pelt of Arizona
37 Game and Fish Department to James E. Henderson of Gulf South Research
38 Corporation on February 28, 2005 transmitted by email.

SECTION 7.0
LIST OF PREPARERS

7.0 LIST OF PREPARERS

Name	Agency/Organization	Discipline/Expertise	Experience	Role In Preparing EA
Charles McGregor	USACE, Ft. Worth District	Chemistry and Environmental Sciences	17 years geotechnical and environmental related studies	Environmental Manager, ECSO
Suna Adam Knaus	Gulf South Research Corporation	Forestry/Wildlife	18 years natural resources	EA Technical Review
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	31 years EA/EIS studies	Project Manager Technical Review
Eric Webb, Ph.D.	Gulf South Research Corporation	Ecology/Wetlands	18 years natural resources and NEPA studies	Technical Review
Stephen Oivanki, P.G.	Gulf South Research Corporation	Geology, Environmental Assessment	20 years environmental assessment and remediation experience	Technical Review
Josh McEnany	Gulf South Research Corporation	Biology	7 years natural resources and NEPA studies	Technical Review
John P. Mire	Gulf South Research Corporation	Natural Resources	15 years NEPA and natural resources studies	Co Project Manager EA Preparation
Shanna McCarty	Gulf South Research Corporation	Forestry	2 years natural resources	EA Preparation
Chris Cothron	Gulf South Research Corporation	GIS/graphics	1 year GIS/graphics experience	GIS/graphics
Ticia Bullion	Gulf South Research Corporation	Report Coordinator	1 year word processing	Editing/graphics

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APPENDIX A
AGENCY COORDINATION AND PUBLIC REVIEW

U.S. Department of Homeland Security
Washington, DC 20229



U.S. Customs and
Border Protection

Deputy Commissioner

Ms. Terri Raml
District Manager
Bureau of Land Management
Phoenix District
21605 N. 7th Avenue
Phoenix, AZ 85027-2929

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. Raml:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. Maps presenting the proposed project sites are enclosed.

Based on Congressional and Executive mandates, CBP and USBP are assessing operational requirements and land issues along the entire Southwest border. Preparing the EA does not necessarily mean the 7.63 miles of tactical infrastructure will be installed within USBP Tucson Sector. Rather, this effort is a prudent part of the planning process needed to assess any environmental concerns in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act (NHPA), the Clean Water Act (CWA), and other applicable environmental laws and regulations.


Page 2

Ms. Teri Raml

Your agency has been identified as a Federal authority with responsibilities for resources that may be affected by the Proposed Action. In accordance with the Council on Environmental Quality (CEQ) regulations addressing cooperating agencies (40 CFR 1501.6 and 1508.5) and CEQ's January 30, 2002, guidance, CBP is inviting you to participate in the development of the EA as a cooperating agency. Please contact Mr. Charles McGregor of the USACE, Fort Worth District, Engineering Construction Support Office by mail at P.O Box 17300, Fort Worth, Texas 76102-0300 if your agency would like to be a cooperating agency.

Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585 or Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,



Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure

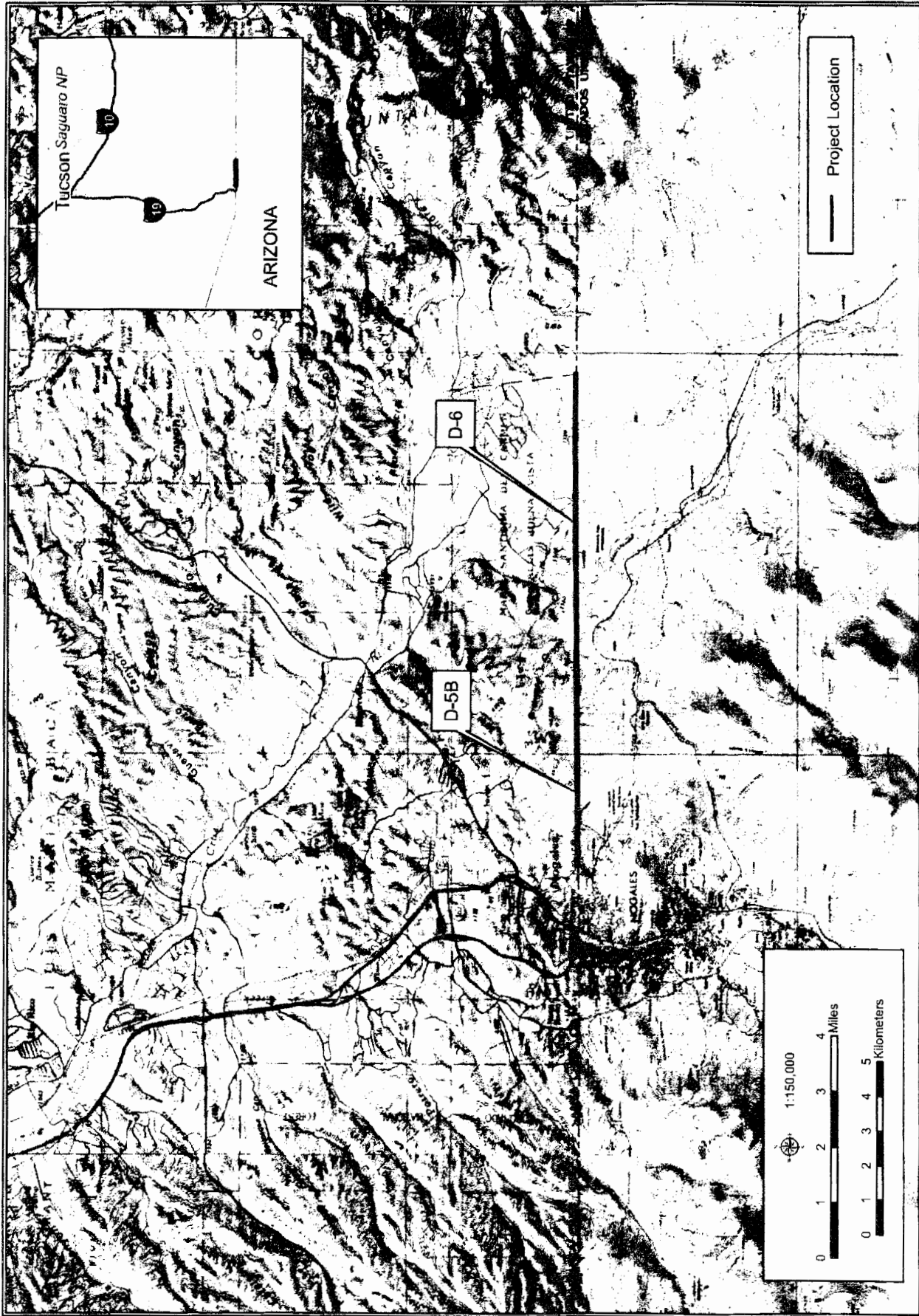


Figure 1-1: Project Location

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U.S. Department of Homeland Security
Washington, DC 20229



U.S. Customs and
Border Protection

Deputy Commissioner

Mr. Keith Graves, Supervisor
U.S. Department of Agriculture
Coronado National Forest
303 Old Tucson Road
Nogales, AZ 85621

OCT 18 2009

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Graves:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. Maps presenting the proposed project sites are enclosed.

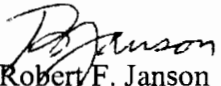
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Page 2
Mr. Keith Graves

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Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585 or Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,


Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

Mr. Wayne Nastri
Regional Administrator, Region 9
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

OCT 18 2007

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Nastri:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. Maps presenting the proposed project sites are enclosed.

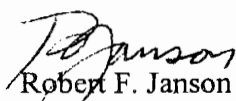
Based on Congressional and Executive mandates, CBP and USBP are assessing operational requirements and land issues along the entire Southwest border. Preparing the EA does not necessarily mean the 7.63 miles of tactical infrastructure will be installed within USBP Tucson Sector. Rather, this effort is a prudent part of the planning process needed to assess any environmental concerns in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act (NHPA), the Clean Water Act (CWA), and other applicable environmental laws and regulations.

Page 2
Mr. Wayne Nastri

Your agency has been identified as a Federal authority with responsibilities for resources that may be affected by the Proposed Action. In accordance with the Council on Environmental Quality (CEQ) regulations addressing cooperating agencies (40 CFR 1501.6 and 1508.5) and CEQ's January 30, 2002, guidance, CBP is inviting you to participate in the development of the EA as a cooperating agency. Please contact Mr. Charles McGregor of the USACE, Fort Worth District, Engineering Construction Support Office by mail at P.O Box 17300, Fort Worth, Texas 76102-0300 if your agency would like to be a cooperating agency.

Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585 or Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,


Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

COL Thomas H. Magness, IV
US Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd., Suite 980
Los Angeles, CA 90017

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear COL Magness:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. Maps presenting the proposed project sites are enclosed.

Based on Congressional and Executive mandates, CBP and USBP are assessing operational requirements and land issues along the entire Southwest border. Preparing the EA does not necessarily mean the 7.63 miles of tactical infrastructure will be installed within USBP Tucson Sector. Rather, this effort is a prudent part of the planning process needed to assess any environmental concerns in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act (NHPA), the Clean Water Act (CWA), and other applicable environmental laws and regulations.

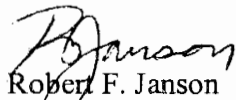
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COL Thomas H. Magness, IV

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Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585 or Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,



Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

Dr. Benjamin Tuggle
Regional Director
U.S. Fish and Wildlife Service
Southwest Regional
P.O. Box 1306
Albuquerque, NM 87103-1306

OCT 18 2007

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Dr. Tuggle:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. Maps presenting the proposed project sites are enclosed.

Based on Congressional and Executive mandates, CBP and USBP are assessing operational requirements and land issues along the entire Southwest border. Preparing the EA does not necessarily mean the 7.63 miles of tactical infrastructure will be installed within USBP Tucson Sector. Rather, this effort is a prudent part of the planning process needed to assess any environmental concerns in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act (NHPA), the Clean Water Act (CWA), and other applicable environmental laws and regulations.

Page 2

Dr. Benjamin Tuggle

Your agency has been identified as a Federal authority with responsibilities for resources that may be affected by the Proposed Action. In accordance with the Council on Environmental Quality (CEQ) regulations addressing cooperating agencies (40 CFR 1501.6 and 1508.5) and CEQ's January 30, 2002, guidance, CBP is inviting you to participate in the development of the EA as a cooperating agency. Please contact Mr. Charles McGregor of the USACE, Fort Worth District, Engineering Construction Support Office by mail at P.O Box 17300, Fort Worth, Texas 76102-0300 if your agency would like to be a cooperating agency.

Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1585 or Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,



Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure

Cc: Mike Horton



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Benjamin H. Nuvamsa, Chairman
Attn: Mr. Leigh J. Kuwanwisiwma
Hopi Tribal Council
P.O. Box 123
Kykotsmovi, Arizona 86039

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Nuvamsa:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

To assist USBP in gaining and maintaining operational control of the border, CBP proposes to construct, maintain, and operate tactical infrastructure to include primary pedestrian fence and access and patrol roads in 2 segments along the U.S./Mexico international border. Individual segments would range from approximately 2.23 miles to 5.40 miles in length. A map presenting the proposed project sites is enclosed.


Based on Congressional and Executive mandates, CBP and USBP are assessing operational requirements and land issues along the entire Southwest border. Preparing the EA does not necessarily mean the 7.63 miles of tactical infrastructure will be installed within USBP Tucson Sector. Rather, this effort is a prudent part of the planning process needed to assess any environmental concerns in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act (NHPA), the Clean Water Act (CWA), and other applicable environmental laws and regulations.

Honorable Benjamin H. Nuvamsa

Page 2

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Sincerely,

A handwritten signature in black ink, appearing to read "RFJ For R. Janson". The signature is stylized and written in a cursive-like font.

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Ronnie Lupe, Chairman
Attn: Mr. Mark Atalha
White Mountain Apache Tribal Council
202 East Walnut Street
Whiteriver, Arizona 85941

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Lupe:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Honorable Ronnie Lupe

Page 2

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Sincerely,



For Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Delia Carlisle, Chairperson
Attn: Ms. Nancy Nelson
Ak Chin Indian Community
47685 N. Eco Museum Rd.
Maricopa, Arizona 85239

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. Carlisle:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Honorable Delia Carlisle

Page 2

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Sincerely,



For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable William Rhodes, Governor
Attn: Mr. Barnaby Lewis
Gila River Indian Community
315 W. Casa Blanco Road
Sacaton, Arizona 85247

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Rhodes:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Honorable William Rhodes

Page 2

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Sincerely,



For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Ms. Jill McCormick
Cocopah Tribe Museum
County 15th & Avenue G
Somerton, Arizona 85350

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. McCormick:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Ms. Jill McCormick
Page 2

We welcome your comments on this undertaking and look forward to hearing any concerns you may have regarding known sacred sites or other traditional cultural properties within the proposed project area. A cultural resources survey is currently being conducted on the project corridor, and we will provide you a copy of the cultural resources report for your review and comment once it has been prepared. We will also provide a copy of the EA for your review and comment. If you have any questions, please contact Mr. Charles McGregor by mail at USACE, Fort Worth District, Engineering Construction Support Office, P.O Box 17300, Fort Worth, Texas 76102-0300 or by telephone at (817) 886-1585 or by contacting Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,



For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Joni M. Ramos, President
Attn: Ms. Dezbah Hatahli
Salt River Pima-Maricopa Indian Community
10005 E. Osburn
Scottsdale, Arizona 85256

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. Ramos:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Honorable Joni M. Ramos

Page 2

We welcome your comments on this undertaking and look forward to hearing any concerns you may have regarding known sacred sites or other traditional cultural properties within the proposed project area. A cultural resources survey is currently being conducted on the project corridor, and we will provide you a copy of the cultural resources report for your review and comment once it has been prepared. We will also provide a copy of the EA for your review and comment. If you have any questions, please contact Mr. Charles McGregor by mail at USACE, Fort Worth District, Engineering Construction Support Office, P.O Box 17300, Fort Worth, Texas 76102-0300 or by telephone at (817) 886-1585 or by contacting Assistant Chief Patrol Agent Craig Weinbrenner, USBP Tucson Sector at (520) 670-6871.

Sincerely,


For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Ned Norris, Jr., Chairman
Attn: Mr. Peter Steere, Cultural Resources Manager
Tohono O'odham Nation
Cultural Affairs Department
P.O. Box 837
Sells, Arizona 85634

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Norris:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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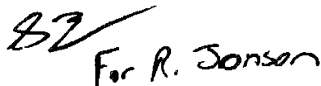
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Honorable Ned Norris, Jr.

Page 2

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Sincerely,

A handwritten signature in black ink, appearing to read "RFJ" followed by "For R. Janson".

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

State Historic Preservation Office
Attn: JoAnne Medley
1300 West Washington
Phoenix, Arizona 85007

OCT 25 2007

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. Medley:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate consultation with your office.

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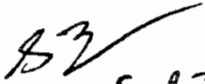
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State Historic Preservation Office

Page 2

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Sincerely,



For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

OCT 25 2007

Honorable Wendsler Nosie, Chairman
Attn: Ms. Vernelda Grant, THPO
San Carlos Apache Tribe
Historic Preservation & Archaeology Department
P.O. Box 0
San Carlos, Arizona 85550

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Mr. Nosie:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.

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Honorable Wendsler Nosie

Page 2

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Sincerely,



For R. Janson

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



**U.S. Customs and
Border Protection**

Honorable Herminia Frias
Attn: Ms. Amalia Reyes
Pascua Yaqui Tribe
7474 S Camino de Oeste
Tucson, Arizona 85746

OCT 25 2007

Subject: Environmental Assessment (EA) for Proposed Construction, Maintenance, and Operation of Tactical Infrastructure, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Border Patrol Tucson Sector

Dear Ms. Frias:

While no final decisions on the fence locations have been made, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP), a component of the Department of Homeland Security, is preparing a Supplemental Environmental Assessment (EA) to address the potential environmental impacts and feasibility of constructing, maintaining, and operating tactical infrastructure in segments totaling approximately 7.63 miles in length within USBP Tucson Sector, Arizona. In preparing the EA, CBP will be working directly with the United States Army Corps of Engineers, Fort Worth District (USACE), who will provide technical expertise and other support to CBP. At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, CBP wishes to initiate its consultation process with appropriate federally-recognized tribes who historically used this region and/or continue to use the area.


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Honorable Herminia Frias
Page 2

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Sincerely,



For R. Janson.

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection

Enclosure



United States
Department of
Agriculture

Forest
Service

Coronado National Forest
Nogales Ranger District

303 Old Tucson Road
Nogales, Arizona 85621
Phone (520) 281-2296
FAX (520) 281-2396

File Code: 1950-4/1500

Date: October 30, 2007

Charles McGregor
USACE, Fort Worth District, Engineering Construction
Support Office
P.O. Box 17300
Fort Worth, TX 76102-0300

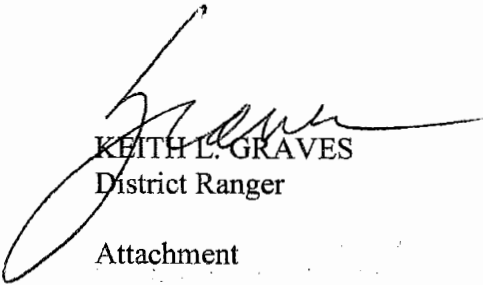
Dear Mr. McGregor:

This is in response to a letter received from Robert F. Janson, Acting Executive Director, Asset Management, U.S. Customs and Border Protection. Mr. Janson discussed the Tactical Infrastructure NEPA process and needs for preparing an Environmental Assessment to address 7.63 miles of tactical infrastructure east of Nogales, Arizona. The base map provided does not indicate activities occurring on National Forest System lands managed by the Coronado National Forest. The map shows that proposed activities would stop at the eastern boundary of the "Maria Santisma Del Carmen" private lands, also known as the "Buena Vista" private lands.

The Coronado National Forest is prepared to offer assistance in accomplishing your agency's objectives for this proposal by providing a Right of Entry to access National Forest System lands as necessary to meet the intent of the proposed action; and providing natural resource specialist information and Engineering guidance upon request. I am attaching a copy of the Right of Entry sent to the Executive Director, Asset Management, C&BP, September 20, 2007, which you may also utilize for this proposal.

Please contact me directly with any further needs or clarifications. I may be reached at 520.761.6000 and klgraves@fs.fed.us.

Sincerely,



KEITH L. GRAVES
District Ranger

Attachment

cc: Jeanine Derby, Forest Supervisor



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United States
Department of
Agriculture

Forest
Service

Coronado National Forest
Supervisor's Office

300 W. Congress
Tucson, Arizona 85701
Phone (520) 388-8300
FAX (520) 388-8305
TTY (520) 388-8304

File Code: 1500/1950-4/2710

Date: September 20, 2007

Renee Smoot
Executive Director
Asset Management, Office of Finance, Customs
and Border Protection
1700 Pennsylvania Avenue, NW
Suite 7.3-A
Washington, DC 20229

Dear Renee:

I reviewed the request for a Right of Entry (RoE) for the purpose of conducting various site evaluations and investigations on National Forest System lands administered by the Coronado National Forest. This letter serves as your Right of Entry to perform the requested surveys within these boundaries, designated as the Nogales and Sierra Vista Ranger Districts. By this letter, I am authorizing your Right of Entry for site surveys necessary to address the National Environmental Policy Act processes to design security infrastructure along the international boundary with the Republic of Mexico. This authorization is in effect for three (3) years from the date of this letter to meet your project needs.

The environmental surveys will comply with the following items:

- All vehicular travel will be confined to existing Forest Service Road systems;
- No new roads will be constructed;
- No improvements to existing roadways will be performed;
- No lasting impacts on the lands being surveyed will be performed;
- No animal life will be removed or displaced by the survey activity;
- No plant materials will be removed;
- Locations of hazardous materials, illegal dumping/trash accumulation sites located during the surveys will be provided to the Nogales Ranger District;
- The targeted information gathered during the survey will be provided to District Ranger Keith Graves at: Nogales Ranger District, 303 Old Tucson Road, Nogales, Arizona 85621.



To reduce redundancy, the Nogales District will act as lead for the Coronado National Forest. All correspondence should be addressed to Keith L. Graves, District Ranger.

Thank you for keeping us informed. I look forward to assisting in meeting our mutual management goals and objectives.

Sincerely,

JEANINE A. DERBY
Forest Supervisor

**White Mountain Apache Tribe Heritage Program
PO Box 507 Fort Apache, AZ 85926**

To: Craig Weinbrenner, USBP Assistance Chief Patrol Agent
Date: December 06, 2007
Proposed Project: Proposed construction, maintenance, and operation of Tactical Infrastructure, U.S. Dept of Homeland Security, U.S. CBP, U.S. Border Patrol, Tucson Sector.

The White Mountain Apache Historic Preservation Office (THPO) appreciates receiving information on the proposed project, dated October 25, 07. In regards to this, please attend to the checked items below;

► There is no need to send additional information unless project planning or implementation results in the discovery of sites and/or items having known or suspected Apache Cultural affiliation.

The proposed project is located within an area of probable cultural or historical importance to the White Mountain Apache Tribe (WMAT). As part of the effort to identify historical properties that maybe affected by the project we recommend an ethnohistorical study and interviews with Apache Elders. The Cultural Resource Director, *Mr. Ramon Riley* would be the contact person at (928) 338-4625 should this become necessary.

The proposed project is located within or adjacent to a known historic property of cultural concern and/or historical importance to the White Mountain Apache Tribe and will most likely result in adverse affect to said property. Considering this, please refrain from further steps in project planning and/or implementation.

Please refer to the attached additional notes in regards to the proposed project:

We have received and reviewed the information regarding the proposed construction, maintenance, and operation of Tactical Infrastructure in segments totaling approximately 7.63 miles within the USBP Tucson Sector, AZ, and we have determined the proposed project *will not have an effect* on the tribe's Traditional Cultural Properties (TCPs) and/or historic properties. The project may proceed with the understanding that all ground disturbance be monitored and in the event subsurface materials or human remains are encountered all construction activities are to be stopped and the proper authorities and/or affiliated tribe(s) be notified to evaluate the situation.

We look forward to continued collaborations in the protection and preservation of places of cultural and historical significance.

Sincerely,

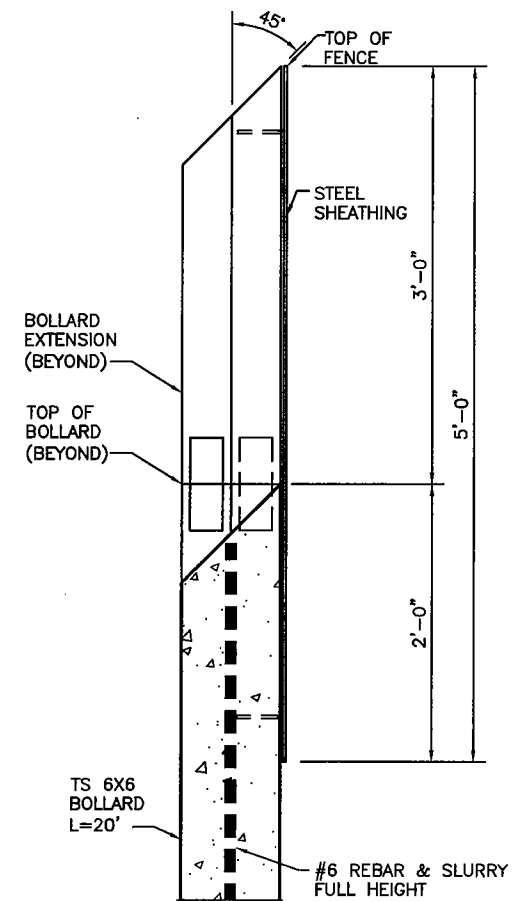
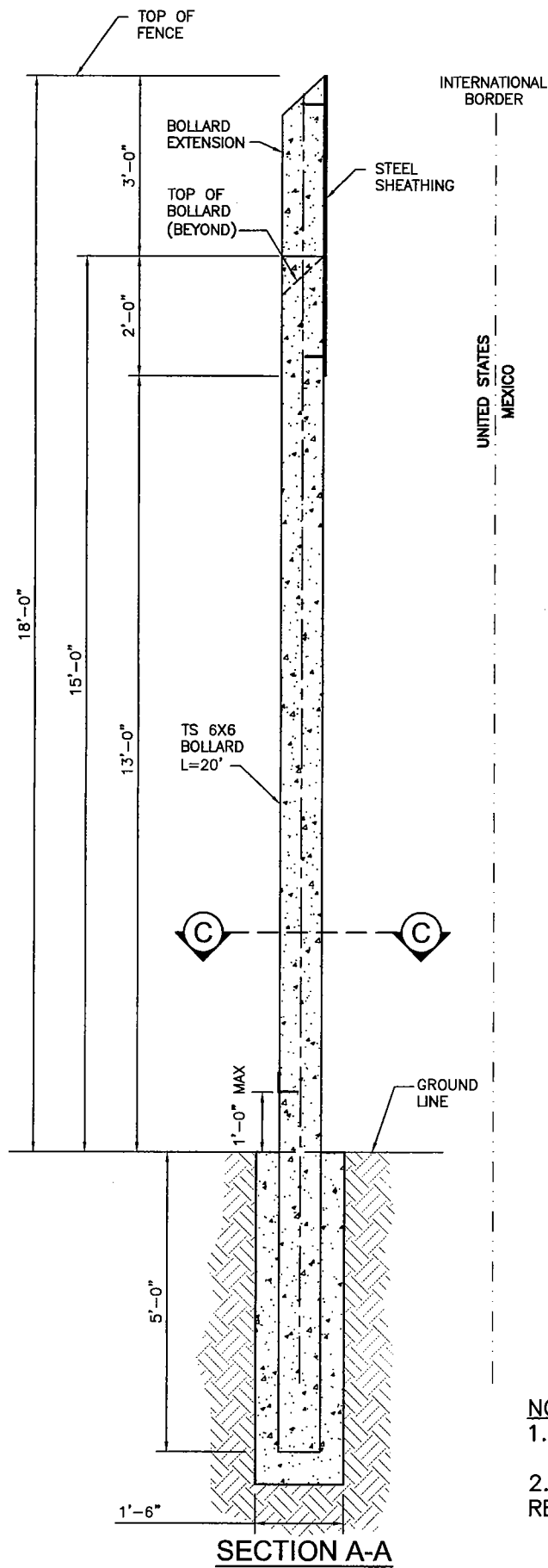
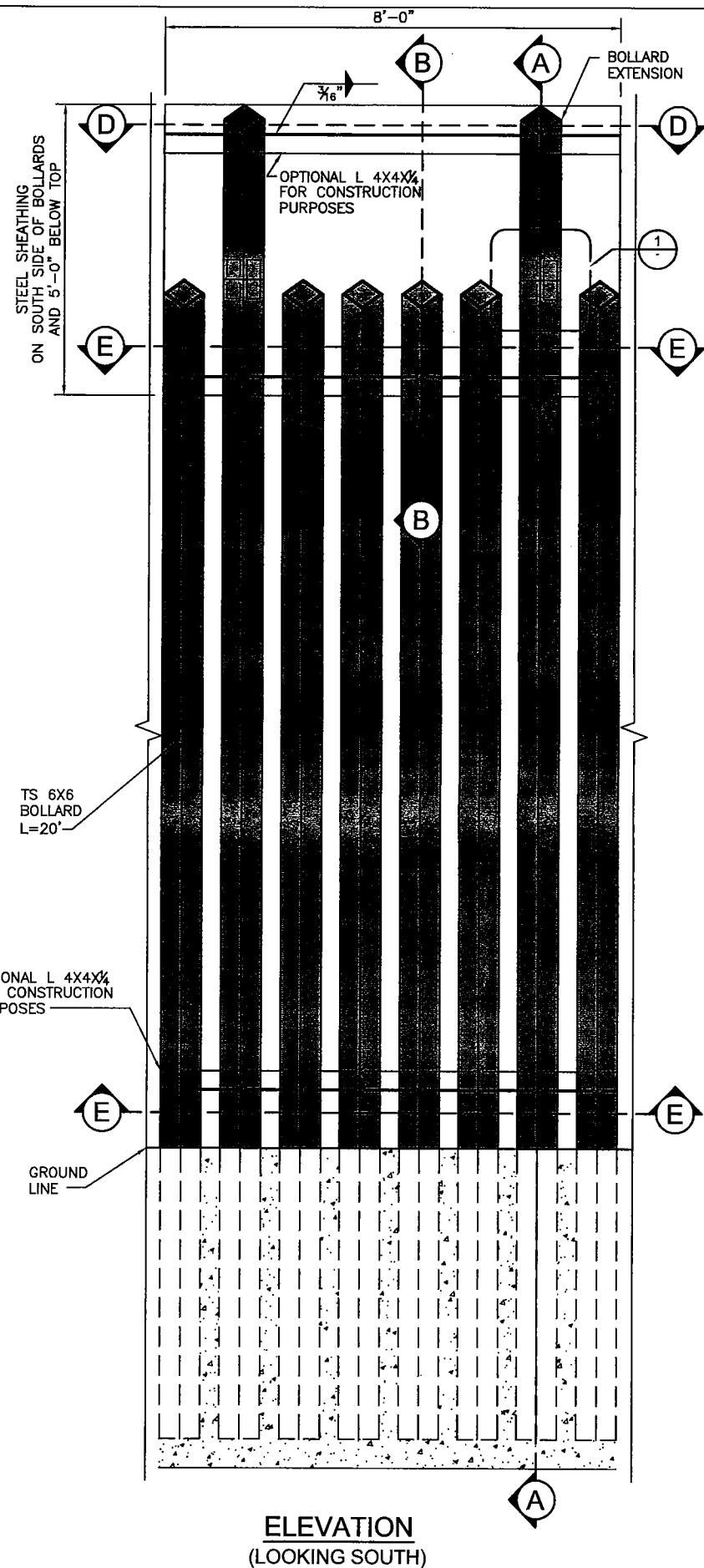
Mark T. Altaha
White Mountain Apache Tribe
Historic Preservation Officer
1 (928) 338-3033 Fax: 338-6055

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**RESERVED FOR
PUBLIC REVIEW PERIOD**

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APPENDIX B
PROPOSED PRIMARY PEDESTRIAN FENCE DESIGN SCHEMATICS



NOTE:

1. VALID FOR 90 MPH WIND
2. FOUNDATION DETAILS SHOWN REPRESENT MINIMUM DIMENSIONAL REQUIREMENTS AND MAY NEED TO BE INCREASED BASED ON FINAL DESIGN.



Rev.	Date	By	Check	Appr.

SCHEMATIC NOT FOR CONSTRUCTION

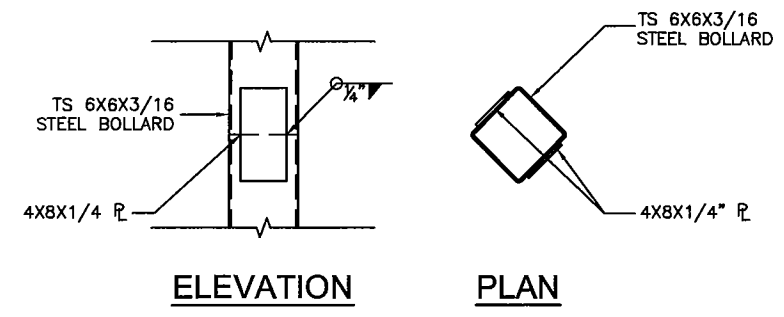
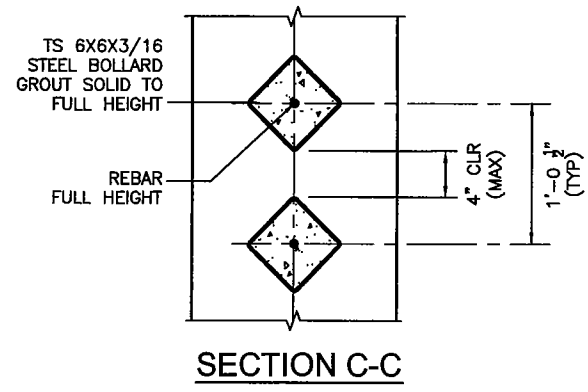


Designed by: KAS	Checked by: JWB	Date: 11/18/07	Rev.:
Drawn by: MCM/KMB	Reviewed by: TQ	Submitted by: Michael Baker Jr., Inc.	Project No: Baker Project No: 112319

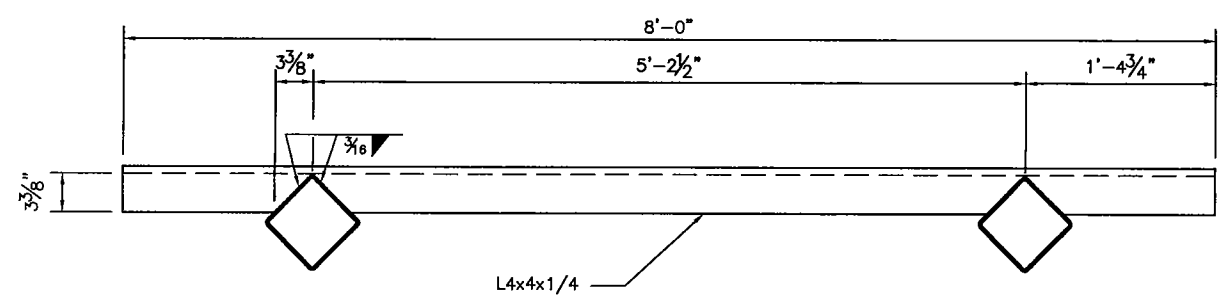
PF225 CONCEPTUAL FENCE DESIGNS

PERSONNEL - VEHICLE TYPE 1

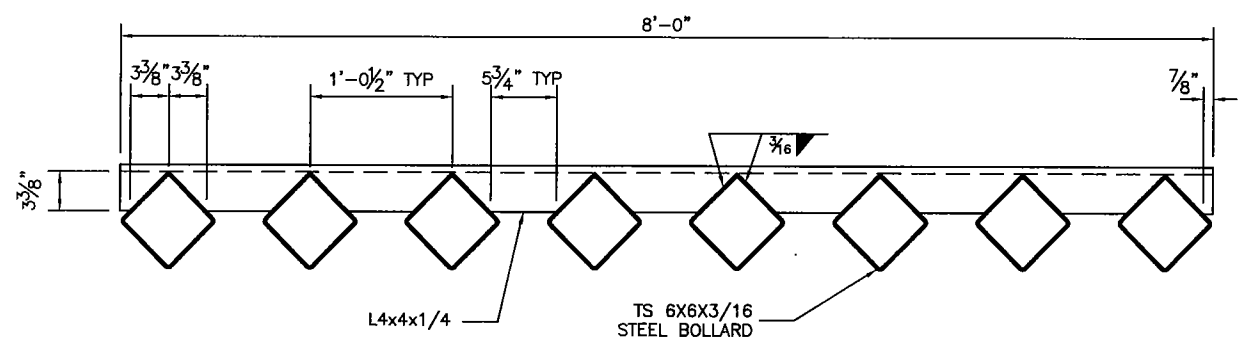
PV-1



DETAIL 1
OPTIONAL SPLICE



SECTION D-D



SECTION E-E



Rev.	Date	Description

SCHEMATIC
NOT FOR
CONSTRUCTION



Designed by: KAS	Date:	Rev.
Drawn by: MC	Submitted by: Michael Baker Jr., Inc.	
Checked by: JWB	Plot date:	Baker Project No: 11/18/07 112319
Reviewed by: TQ		

PF225
CONCEPTUAL
FENCE
DESIGNS

PERSONNEL-
VEHICLE
TYPE 1

SHEET
NUMBER
PV-1

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APPENDIX C
STATE PROTECTED SPECIES LISTS



Special Status Species Santa Cruz County, Arizona

Arizona Game and Fish Department, Heritage Data Management System

Updated: June 28, 2007

Accessed November 21,2007

http://www.azgfd.gov/w_c/edits/documents/sss-species_bycounty.pdf

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	STATE	GRANK	S RANK
Santa Cruz	AMPHIBIAN	Ambystoma tigrinum stebbinsi	Sonora Tiger Salamander	WSC	G5T1T2	S1
Santa Cruz	AMPHIBIAN	Eleutherodactylus augusti cactorum	Western Barking Frog	WSC	G5T5	S2
Santa Cruz	AMPHIBIAN	Gastrophryne olivacea	Great Plains Narrow-mouthed Toad	WSC	G5	S3
Santa Cruz	AMPHIBIAN	Rana chiricahuensis	Chiricahua Leopard Frog	WSC	G3	S2
Santa Cruz	AMPHIBIAN	Rana tarahumarae	Tarahumara Frog	WSC	G3	SXS1
Santa Cruz	AMPHIBIAN	Rana yavapaiensis	Lowland Leopard Frog	WSC	G4	S3
Santa Cruz	BIRD	Accipiter gentilis	Northern Goshawk	WSC	G5	S3
Santa Cruz	BIRD	Amazilia violiceps	Violet-crowned Hummingbird	WSC	G5	S3
Santa Cruz	BIRD	Ammodramus bairdii	Baird's Sparrow	WSC	G4	S2N
Santa Cruz	BIRD	Anthus spragueii	Sprague's Pipit	WSC	G4	S2N
Santa Cruz	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl		G4T4	S3
Santa Cruz	BIRD	Buteo nitidus maxima	Northern Gray Hawk	WSC	G5T4Q	S3
Santa Cruz	BIRD	Buteogallus anthracinus	Common Black-Hawk	WSC	G4G5	S3
Santa Cruz	BIRD	Coccyzus americanus occidentalis	Western Yellow-billed Cuckoo	WSC	G5T3Q	S3
Santa Cruz	BIRD	Dendrocygna autumnalis	Black-bellied Whistling-Duck	WSC	G5	S3
Santa Cruz	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	WSC	G5T1T2	S1
Santa Cruz	BIRD	Falco peregrinus anatum	American Peregrine Falcon	WSC	G4T4	S4
Santa Cruz	BIRD	Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	WSC	G5T3	S1
Santa Cruz	BIRD	Haliaeetus leucocephalus (wintering p	Bald Eagle	WSC	G5	S4N
Santa Cruz	BIRD	Pachyramphus aglaiae	Rose-throated Becard	WSC	G4G5	S1
Santa Cruz	BIRD	Pandion haliaetus	Osprey	WSC	G5	S2B,S4N
Santa Cruz	BIRD	Polioptila nigriceps	Black-capped Gnatcatcher	WSC	G5	S1
Santa Cruz	BIRD	Strix occidentalis lucida	Mexican Spotted Owl	WSC	G3T3	S3S4
Santa Cruz	BIRD	Trogon elegans	Elegant Trogon	WSC	G5	S3
Santa Cruz	BIRD	Tyrannus crassirostris	Thick-billed Kingbird	WSC	G5	S2
Santa Cruz	BIRD	Tyrannus melancholicus	Tropical Kingbird	WSC	G5	S3
Santa Cruz	FISH	Agosia chrysogaster chrysogaster	Gila Longfin Dace		G4T3T4	S3S4
Santa Cruz	FISH	Catostomus clarki	Desert Sucker		G3G4	S3S4
Santa Cruz	FISH	Catostomus insignis	Sonora Sucker		G3	S3
Santa Cruz	FISH	Cyprinodon macularius	Desert Pupfish	WSC	G1	S1
Santa Cruz	FISH	Gila ditaenia	Sonora Chub	WSC	G2	S1

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	STATE	GRANK	S RANK
Santa Cruz	FISH	<i>Gila intermedia</i>	Gila Chub	WSC	G2	S2
Santa Cruz	FISH	<i>Poeciliopsis occidentalis occidentalis</i>	Gila Topminnow	WSC	G3T3	S1S2
Santa Cruz	FISH	<i>Rhinichthys osculus</i>	Speckled Dace		G5	S3S4
Santa Cruz	INVERTEBRATE	<i>Agathymus aryxna</i>	Arizona Giant Skipper		G4G5	S?
Santa Cruz	INVERTEBRATE	<i>Argia sabino</i>	Sabino Canyon Damselfly		G1G2	S?
Santa Cruz	INVERTEBRATE	<i>Calephelis rawsoni arizonensis</i>	Arizona Metalmark		G3G4	S2
Santa Cruz	INVERTEBRATE	<i>Heterelmis stephani</i>	Stephan's Heterelmis Riffle Beetle		G1	S1
Santa Cruz	INVERTEBRATE	<i>Limenitis archippus obsoleta</i>	Obsolete Viceroy Butterfly		G5T3T4	S?
Santa Cruz	INVERTEBRATE	<i>Neophasia terlooii</i>	Chiricahua Pine White		G3G4	S2?
Santa Cruz	INVERTEBRATE	<i>Pyrgulopsis thompsoni</i>	Huachuca Springsnail		G2	S2
Santa Cruz	INVERTEBRATE	<i>Stygobromus arizonensis</i>	Arizona Cave Amphipod		G2G3	S1?
Santa Cruz	INVERTEBRATE	<i>Sympetrum signiferum</i>	Mexican Meadowfly		G2G3	S?
Santa Cruz	MAMMAL	<i>Choeronycteris mexicana</i>	Mexican Long-tongued Bat	WSC	G4	S3
Santa Cruz	MAMMAL	<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat		G4T4	S3S4
Santa Cruz	MAMMAL	<i>Lasiurus blossevillii</i>	Western Red Bat	WSC	G5	S3
Santa Cruz	MAMMAL	<i>Leptonycteris curasoae yerbabuenae</i>	Lesser Long-nosed Bat	WSC	G4	S2S3
Santa Cruz	MAMMAL	<i>Macrotus californicus</i>	California Leaf-nosed Bat	WSC	G4	S3
Santa Cruz	MAMMAL	<i>Myotis velifer</i>	Cave Myotis		G5	S3S4
Santa Cruz	MAMMAL	<i>Panthera onca</i>	Jaguar	WSC	G3	S1
Santa Cruz	MAMMAL	<i>Sigmodon ochrognathus</i>	Yellow-nosed Cotton Rat		G4G5	S4
Santa Cruz	MAMMAL	<i>Sorex arizonae</i>	Arizona Shrew	WSC	G3	S2
Santa Cruz	MAMMAL	<i>Thomomys umbrinus intermedius</i>	Southern Pocket Gopher		G5T3	S3
Santa Cruz	PLANT	<i>Abutilon parishii</i>	Pima Indian Mallow	SR	G2	S2
Santa Cruz	PLANT	<i>Acacia farnesiana</i>	Sweet Acacia		G5	S1S2
Santa Cruz	PLANT	<i>Agave parviflora ssp. parviflora</i>	Santa Cruz Striped Agave	HS	G3T3	S3
Santa Cruz	PLANT	<i>Allium rhizomatum</i>	Redflower Onion	SR	G3?Q	S1
Santa Cruz	PLANT	<i>Amoreuxia gonzalezii</i>	Saiya	HS	G1	S1
Santa Cruz	PLANT	<i>Amsonia grandiflora</i>	Large-flowered Blue Star		G2	S2
Santa Cruz	PLANT	<i>Arabis tricornuta</i>	Chiricahua Rock Cress		G1?	S1?
Santa Cruz	PLANT	<i>Asclepias lemmonii</i>	Lemmon Milkweed		G4?	S2
Santa Cruz	PLANT	<i>Asclepias uncialis</i>	Greene Milkweed		G3G4	S1?
Santa Cruz	PLANT	<i>Astragalus hypoxylus</i>	Huachuca Milk-vetch	SR	G1	S1
Santa Cruz	PLANT	<i>Browallia eludens</i>	Elusive New Browallia Species		G2?	S1
Santa Cruz	PLANT	<i>Capsicum annuum var. glabriusculum</i>	Chiltepin		G5T5	S2
Santa Cruz	PLANT	<i>Carex chihuahuensis</i>	A Sedge		G3G4	S2S3
Santa Cruz	PLANT	<i>Carex ultra</i>	Arizona Giant Sedge		G3?	S2

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	STATE	GRANK	S RANK
Santa Cruz	PLANT	Choisya mollis	Santa Cruz Star Leaf		G5?T2?	S2
Santa Cruz	PLANT	Conioselinum mexicanum	Mexican Hemlock Parsley		G2?	S1
Santa Cruz	PLANT	Coryphantha recurvata	Santa Cruz Beehive Cactus	HS	G3	S3
Santa Cruz	PLANT	Coryphantha scheeri var. robustispina	Pima Pineapple Cactus	HS	G4T2	S2
Santa Cruz	PLANT	Coursetia glabella			G3?	S1
Santa Cruz	PLANT	Dalea tentaculoides	Gentry Indigo Bush	HS	G1	S1
Santa Cruz	PLANT	Erigeron arisolius			G2	S2
Santa Cruz	PLANT	Euphorbia macropus	Woodland Spurge	SR	G4	S2
Santa Cruz	PLANT	Graptopetalum bartramii	Bartram Stonecrop	SR	G3	S3
Santa Cruz	PLANT	Hedeoma dentatum	Mock-pennyroyal		G3	S3
Santa Cruz	PLANT	Heterotheca rutteri	Huachuca Golden Aster		G2	S2
Santa Cruz	PLANT	Hexalectris revoluta	Chisos Coral-root	SR	G1G2	S1
Santa Cruz	PLANT	Hexalectris spicata	Crested Coral Root	SR	G5	S3S4
Santa Cruz	PLANT	Hieracium pringlei	Pringle Hawkweed		G2Q	S1
Santa Cruz	PLANT	Ipomoea plummerae var. cuneifolia	Huachuca Morning Glory		G4T3	S3
Santa Cruz	PLANT	Ipomoea thurberi	Thurber's Morning-glory		G3	S1
Santa Cruz	PLANT	Laennecia eriophylla	Woolly Fleabane		G3	S2
Santa Cruz	PLANT	Lilaeopsis schaffneriana var. recurva	Huachuca Water Umbel	HS	G4T2	S2
Santa Cruz	PLANT	Lilium parryi	Lemmon Lily	SR	G3	S2
Santa Cruz	PLANT	Lobelia fenestralis	Leafy Lobelia	SR	G4	S1
Santa Cruz	PLANT	Lobelia laxiflora	Mexican Lobelia	SR	G4	S1
Santa Cruz	PLANT	Lotus alamosanus	Alamos Deer Vetch		G3G4	S1
Santa Cruz	PLANT	Lupinus huachucanus	Huachuca Mountain Lupine		G2	S2
Santa Cruz	PLANT	Macroptilium supinum	Supine Bean	SR	G2	S1
Santa Cruz	PLANT	Malaxis corymbosa	Madrean Adders Mouth	SR	G4	S3S4
Santa Cruz	PLANT	Malaxis porphyrea	Purple Adder's Mouth	SR	G4	S2
Santa Cruz	PLANT	Mammillaria wrightii var. wilcoxii	Wilcox Fishhook Cactus	SR	G4T4	S4
Santa Cruz	PLANT	Manihot davisiae	Arizona Manihot		G4	S2
Santa Cruz	PLANT	Marina diffusa	Escoba		G5?	S1
Santa Cruz	PLANT	Metastelma mexicanum	Wiggins Milkweed Vine		G3G4	S1S2
Santa Cruz	PLANT	Muhlenbergia dubioides	Box Canyon Muhly		G1Q	S1
Santa Cruz	PLANT	Muhlenbergia xerophila	Weeping Muhly		G3	S1
Santa Cruz	PLANT	Notholaena lemmonii	Lemmon Cloak Fern		G3?	S1S2
Santa Cruz	PLANT	Opuntia versicolor	Stag-horn Cholla	SR	G4	S2S3
Santa Cruz	PLANT	Paspalum virletii	Virlet Paspalum		G3?	S1
Santa Cruz	PLANT	Passiflora arizonica	Arizona Passionflower		G5T3T5	S2

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	STATE	GRANK	S RANK
Santa Cruz	PLANT	Pectis imberbis	Beardless Chinch Weed		G3	S1
Santa Cruz	PLANT	Penstemon discolor	Catalina Beardtongue	HS	G2	S2
Santa Cruz	PLANT	Penstemon superbus	Superb Beardtongue		G3?	S2?
Santa Cruz	PLANT	Physalis latiphysa	Broad-leaf Ground-cherry		G1	S1
Santa Cruz	PLANT	Psilotum nudum	Whisk Fern	HS	G5	S1
Santa Cruz	PLANT	Samolus vagans	Chiricahua Mountain Brookweed		G2?	S2
Santa Cruz	PLANT	Schiedeella arizonica	Fallen Ladies'-tresses	SR	GNR	S4
Santa Cruz	PLANT	Senecio carlomasonii	Seemann Groundsel		G4?Q	S2S3
Santa Cruz	PLANT	Senecio multidentatus var. huachucan	Huachuca Groundsel	HS	G2G4T2	S2
Santa Cruz	PLANT	Sisyrinchium cernuum	Nodding Blue-eyed Grass		G5	S2
Santa Cruz	PLANT	Solanum lumholtzianum	Lumholtz Nightshade		G3G4	S3
Santa Cruz	PLANT	Spiranthes delitescens	Madrean Ladies'-tresses	HS	G1	S1
Santa Cruz	PLANT	Stenorrhynchos michuacanum	Michoacan Ladies'-tresses	SR	G4	S3
Santa Cruz	PLANT	Stevia lemmonii	Lemmon's Stevia		G3G4	S2
Santa Cruz	PLANT	Talinum humile	Pinos Altos Flame Flower	SR	G2	S1
Santa Cruz	PLANT	Talinum marginatum	Tepic Flame Flower	SR	G2	S1
Santa Cruz	PLANT	Tephrosia thurberi	Thurber Hoary Pea		G4G5	S3
Santa Cruz	PLANT	Tragia laciniata	Sonoran Noseburn		G3G4	S3?
Santa Cruz	PLANT	Viola umbraticola	Shade Violet		G3G4	S2?
Santa Cruz	REPTILE	Aspidoscelis burti stictogrammus	Giant Spotted Whiptail		G4T4	S2
Santa Cruz	REPTILE	Crotalus willardi willardi	Arizona Ridge-nosed Rattlesnake	WSC	G5T4	S1S2
Santa Cruz	REPTILE	Gopherus agassizii (Sonoran Populatio	Sonoran Desert Tortoise	WSC	G4T4	S4
Santa Cruz	REPTILE	Lampropeltis getula nigrita	Western Black Kingsnake		G5T3T4Q	S1S2
Santa Cruz	REPTILE	Oxybelis aeneus	Brown Vinesnake	WSC	G5	S1
Santa Cruz	REPTILE	Thamnophis eques megalops	Northern Mexican Gartersnake	WSC	G5T5	S1

APPENDIX D
LIST OF BEST MANAGEMENT PRACTICES FOR PROTECTED SPECIES

LIST OF BEST MANAGEMENT PRACTICES FOR PROTECTED SPECIES

COORDINATION: U.S. Fish and Wildlife Service/ U.S. Border Patrol Tucson Sector

COMMITMENT: To be implemented as deemed appropriate through Section 7 Consultation

Protected Species	Best Management Practice (BMP) Recommended by U.S. Fish and Wildlife Service	BMP Type
Jaguar	CBP should actively participate in Jaguar Conservation Team meetings and activities. This should also include provision of funds to support the monitoring program, such as funding for additional trip cameras at potential jaguar locations and radio telemetry. Camera monitoring currently costs \$48,000.00 per year. Radio telemetry would also assist in refining the location of travel corridors used by jaguars, which could assist in landscape-level planning.	Species Specific - Mitigation
Lesser long-nosed bat	When planning activities, avoid areas containing columnar cacti (saguaro, organ pipe) or agaves that provide the forage base for the bat. If they cannot be avoided, columnar cacti and agaves should be salvaged and transplanted. When salvage is not possible, columnar cacti and agaves should be purchased and planted. Salvage, transplantation, and container planting should be done in accordance with a restoration plan that includes success criteria and monitoring.	Species Specific - Modifications
Lesser long-nosed bat	Funding for surveys to locate bat roosts within the project area, particularly in coordination with /managers would facilitate avoidance.	Species Specific - Mitigation
Lesser long-nosed bat	Funding for continued monitoring of maternity and summer roost sites would assist in documenting the status of the species. Infra-red cameras could also be purchased to document bats at roosts.	Species Specific - Mitigation
Lesser long-nosed bat	Plant Palmer's agave in suitable areas as part of revegetation and erosion control actions. This will enhance foraging opportunities.	Species Specific - Mitigation
Lesser long-nosed bat	Placement of fences, barriers, or other means to deter IAs from using bat roosts for shelter would significantly reduce the risk of roost abandonment.	Species Specific - Mitigation

Continued.

Protected Species	Best Management Practice (BMP) Recommended by U.S. Fish and Wildlife Service	BMP Type
Pima pineapple cactus	Maintenance activities in cactus habitat should not increase the existing disturbed areas.	Species Specific - Modifications
Pima pineapple cactus	Use of existing roads and trails should be maximized in areas of suitable habitat for the cactus. Maps of suitable habitat areas should be available and protection of the cactus stressed in environmental education for CBP personnel and contractors involved in construction or maintenance of facilities.	Species Specific - Modifications
Pima pineapple cactus	A method to define the amount of ongoing disturbance from CBP activities is especially important to the cactus because of the large area of habitat that is affected, particularly by patrol operations. This method should be developed and implemented.	Species Specific - Mitigation
Pima pineapple cactus	Compensation for habitat degradation or loss should be provided on a 1 acre: 1 acre basis in either an established conservation bank or a new one set up for CBP purposes.	Species Specific - Mitigation
Pima pineapple cactus	Salvage of Pima pineapple cactus has shown very limited success with transplanted individuals experiencing high first-year mortality. Salvage of individual cacti will be considered only when on-site or off-site habitat conservation is not possible and death of the cacti is unavoidable.	Species Specific - Mitigation

APPENDIX E
AIR EMISSION CALCULATIONS

CALCULATION SHEET-COMBUSTABLE EMISSIONS-PROPOSED ACTION

Assumptions for Cumbustable Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	12	150	540000
Diesel Road Compactors	0	100	12	150	0
Diesel Dump Truck	0	300	12	150	0
Diesel Excavator	0	300	12	150	0
Diesel Hole Cleaners/Trenchers	2	175	12	150	630000
Diesel Bore/Drill Rigs	2	300	12	150	1080000
Diesel Cement & Mortar Mixers	3	300	12	150	1620000
Diesel Cranes	2	175	12	150	630000
Diesel Graders	0	300	12	150	0
Diesel Tractors/Loaders/Backhoes	2	100	12	150	360000
Diesel Bull Dozers	2	300	12	150	1080000
Diesel Front End Loaders	2	300	12	150	1080000
Diesel Fork Lifts	3	100	12	150	540000
Diesel Generator Set	3	40	12	150	216000

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTABLE EMISSIONS-PROPOSED ACTION

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr
Water Truck	0.262	1.232	3.267	0.244	0.238	0.440	318.963
Diesel Road Paver	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Dump Truck	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Excavator	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Hole Cleaners\Trenchers	0.354	1.694	4.034	0.319	0.305	0.514	371.985
Diesel Bore/Drill Rigs	0.714	2.725	8.510	0.595	0.583	0.869	630.428
Diesel Cement & Mortar Mixers	1.089	4.142	12.997	0.857	0.839	1.303	945.642
Diesel Cranes	0.305	0.903	3.971	0.236	0.229	0.507	368.097
Diesel Graders	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Tractors/Loaders/Backhoes	0.734	3.257	2.864	0.544	0.528	0.377	274.173
Diesel Bull Dozers	0.428	1.642	5.665	0.393	0.381	0.881	638.283
Diesel Front End Loaders	0.452	1.845	5.951	0.417	0.405	0.881	638.164
Diesel Aerial Lifts	1.178	4.618	5.094	0.827	0.803	0.565	411.081
Diesel Generator Set	0.288	0.895	1.421	0.174	0.169	0.193	139.796
Total Emissions	5.805	22.953	53.773	4.605	4.480	6.529	4736.611

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-SUMMARY OF EMISSIONS-PROPOSED ACTION

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)						
Emission source	VOC	CO	NOx	PM-10	PM-2.5	SO ₂
Combustable Emissions	5.81	22.95	53.77	4.61	4.48	6.53
Construction Site-fugitive PM-10	NA	NA	NA	9.60	1.92	NA
Construction Workers Commuter & Trucking	0.61	5.66	0.78	0.01	0.01	NA
Total emissions	6.41	28.62	54.55	14.22	6.41	6.53
De minimis threshold	NA	NA	NA	100.00	NA	NA

CALCULATION SHEET-TRANSPORTATION COMBUSTABLE EMISSIONS-PROPOSED ACTION

Construction Worker Personal Vehicle Commuting to Construction Sight-Passenger and Light Duty Trucks									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	120	150	10	10	0.27	0.32	0.59
CO	12.4	15.7	120	150	10	10	2.46	3.11	5.57
NOx	0.95	1.22	120	150	10	10	0.19	0.24	0.43
PM-10	0.0052	0.0065	120	150	10	10	0.00	0.00	0.00
PM 2.5	0.0049	0.006	120	150	10	10	0.00	0.00	0.00

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Heavy Duty Trucks Delivery Supply Trucks to Construction Sight									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	150	2	2	0.01	0.01	0.02
CO	1.32	3.21	60	150	2	2	0.03	0.06	0.09
NOx	4.97	12.6	60	150	2	2	0.10	0.25	0.35
PM-10	0.12	0.33	60	150	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	150	2	2	0.00	0.01	0.01

OBP Commute to New Site									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	0	0	0	-	0.00	-
CO	12.4	15.7	60	0	0	0	-	0.00	-
NOx	0.95	1.22	60	0	0	0	-	0.00	-
PM-10	0.0052	0.0065	60	0	0	0	-	0.00	-
PM 2.5	0.0049	0.006	60	0	0	0	-	0.00	-

POV Source: USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway vehicle emission factor model.

Fleet Characterization: 20 POVs commuting to work were 50% are pick up trucks and 50% passenger cars

CALCULATION SHEET-FUGITIVE DUST-PROPOSED ACTION

Fugitive Dust Emissions at New Construction Site.					
Construction Site	Emission Factor tons/acre/month (1)	Total Area- Construction Site/month	Months/yr	Total PM-10 Emissions tns/yr	Total PM-2.5 (2)
Fugitive Dust Emissions	0.11	7.27	12	9.60	1.92

1. Mid-Atlantic Regional Air Management Association (MARAMA). Fugitive Dust-Construction Calculation Sheet can be found online at: http://www.marama.org/visibility/Calculation_Sheets/. MRI= Midwest Research Institute, Inventory of Agricultural Tiling, Unpaved Roads, Airstrips and construction Sites., prepared for the U.S. EPA, PB 238-929, Contract 68-02-1437 (November 1977)

2. 20% of the total PM-10 emissions are PM-2.5 (EPA 2006).

Costruction Site Area	Demension (ft)			
Proposed Prioject	Length	Width	Units	Total Acres
New Construction Area	5,280	60	1	7.27
New Construction Area	20	20	0	0.00
Total				7.27

Conversion Factors	Miles to feet	Acres to sq ft	Sq ft to acres	Sq ft in 0.5 acres
	5280	0.000022957	43560	21780

Assumptions	Sections/day	Length of Section (ft)	Length/day (ft)	Days/Month	Length/Month (ft)	Miles/Month
Fencing installed per day (ft)	22	10	220	24	5280	1.00
Length of fence/month (miles) (1)	1.00					

1. OBP reported that construction crew completes approximately 22 sections of fence per day and about 1 mile per month.

CALCULATION SHEET-COMBUSTABLE EMISSIONS-ALTERNATIVE 3

Assumptions for Cumbustable Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	12	240	864000
Diesel Road Compactors	0	100	12	240	0
Diesel Dump Truck	0	300	12	240	0
Diesel Excavator	0	300	12	240	0
Diesel Hole Cleaners/Trenchers	2	175	12	240	1008000
Diesel Bore/Drill Rigs	2	300	12	240	1728000
Diesel Cement & Mortar Mixers	3	300	12	240	2592000
Diesel Cranes	2	175	12	240	1008000
Diesel Graders	0	300	12	240	0
Diesel Tractors/Loaders/Backhoes	2	100	12	240	576000
Diesel Bull Dozers	2	300	12	240	1728000
Diesel Front End Loaders	2	300	12	240	1728000
Diesel Fork Lifts	3	100	12	240	864000
Diesel Generator Set	3	40	12	240	345600

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTABLE EMISSIONS-ALTERNATIVE 3

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr
Water Truck	0.419	1.971	5.227	0.390	0.381	0.705	510.341
Diesel Road Paver	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Dump Truck	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Excavator	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Hole Cleaners\Trenchers	0.567	2.710	6.454	0.511	0.489	0.822	595.175
Diesel Bore/Drill Rigs	1.143	4.361	13.615	0.952	0.933	1.390	1008.684
Diesel Cement & Mortar Mixers	1.742	6.627	20.794	1.371	1.343	2.085	1513.027
Diesel Cranes	0.489	1.444	6.354	0.378	0.367	0.811	588.955
Diesel Graders	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Tractors/Loaders/Backhoes	1.174	5.211	4.583	0.870	0.844	0.603	438.677
Diesel Bull Dozers	0.686	2.628	9.064	0.628	0.609	1.409	1021.252
Diesel Front End Loaders	0.724	2.952	9.521	0.666	0.647	1.409	1021.062
Diesel Aerial Lifts	1.885	7.389	8.150	1.323	1.285	0.905	657.730
Diesel Generator Set	0.461	1.432	2.274	0.278	0.270	0.308	223.674
Total Emissions	9.289	36.724	86.037	7.368	7.169	10.447	7578.577

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-SUMMARY OF EMISSIONS-ALTERNATIVE 3

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)						
Emission source	VOC	CO	NOx	PM-10	PM-2.5	SO ₂
Combustable Emissions	9.29	36.72	86.04	7.37	7.17	10.45
Construction Site-fugitive PM-10	NA	NA	NA	10.40	2.08	NA
Construction Workers Commuter & Trucking	0.97	9.06	1.25	0.02	0.02	NA
Total emissions	10.26	45.79	87.28	17.79	9.27	10.45
De minimis threshold	NA	NA	NA	100.00	NA	NA

CALCULATION SHEET-TRANSPORTATION COMBUSTABLE EMISSIONS-ALTERNATIVE 3

Construction Worker Personal Vehicle Commuting to Construction Sight-Passenger and Light Duty Trucks									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	120	240	10	10	0.43	0.51	0.94
CO	12.4	15.7	120	240	10	10	3.94	4.98	8.92
NOx	0.95	1.22	120	240	10	10	0.30	0.39	0.69
PM-10	0.0052	0.0065	120	240	10	10	0.00	0.00	0.00
PM 2.5	0.0049	0.006	120	240	10	10	0.00	0.00	0.00

Heavy Duty Trucks Delivery Supply Trucks to Construction Sight									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	240	2	2	0.01	0.02	0.03
CO	1.32	3.21	60	240	2	2	0.04	0.10	0.14
NOx	4.97	12.6	60	240	2	2	0.16	0.40	0.56
PM-10	0.12	0.33	60	240	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	240	2	2	0.00	0.01	0.02

OBP Commute to New Site									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	0	0	0	-	0.00	-
CO	12.4	15.7	60	0	0	0	-	0.00	-
NOx	0.95	1.22	60	0	0	0	-	0.00	-
PM-10	0.0052	0.0065	60	0	0	0	-	0.00	-
PM 2.5	0.0049	0.006	60	0	0	0	-	0.00	-

POV Source: USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway vehicle emission factor model.

Fleet Characterization: 20 POVs commuting to work were 50% are pick up trucks and 50% passenger cars

CALCULATION SHEET-FUGITIVE DUST-ALTERNATIVE 3

Fugitive Dust Emissions at New Construction Site.					
Construction Site	Emission Factor tons/acre/month (1)	Total Area- Construction Site/month	Months/yr	Total PM-10 Emissions tns/yr	Total PM-2.5 (2)
Fugitive Dust Emissions	0.11	7.88	12	10.40	2.08

1. Mid-Atlantic Regional Air Management Association (MARAMA). Fugitive Dust-Construction Calculation Sheet can be found online at: http://www.marama.org/visibility/Calculation_Sheets/. MRI= Midwest Research Institute, Inventory of Agricultural Tiling, Unpaved Roads, Airstrips and construction Sites., prepared for the U.S. EPA, PB 238-929, Contract 68-02-1437 (November 1977)

2. 20% of the total PM-10 emissions are PM-2.5 (EPA 2006).

Costruction Site Area	Demension (ft)			
Proposed Prioject	Length	Width	Units	Total Acres
New Construction Area	2,640	130	1	7.88
New Construction Area		20	0	0.00
Total				7.88

Conversion Factors	Miles to feet	Acres to sq ft	Sq ft to acres	Sq ft in 0.5 acres
	5280	0.000022957	43560	21780

Assumptions	Sections/day	Length of Section (ft)	Length/day (ft)	Days/Month	Length/Month (ft)	Miles/Month
Fencing installed per day (1)	11	10	110	24	2640	0.50
Length of fence/month (miles)	0.50					

1. OBP reported that construction crew complete 22 sections of fence per day. Alternative 3 requires 2 fences to be built per section and therefore will take twice as long to complete per section. Therefore, instead of assuming that 22 sections of fence will be completed per day, we are assuming that 11 sections of fence will be completed per day.

ABBREVIATIONS AND ACRONYMS

← *continued from front cover*

POE	Port-Of-Entry
POL	Petroleum, oil and lubricants
ROI	Region of Influence
ROW	Right-of-way
SFA	Secure Fence Act
SHPO	State Historic Preservation Officer
SPCCP	Spill Prevention, Containment and Countermeasures Plan
SWPPP	Storm Water Pollution Prevention Plan
TI	Tactical infrastructure
TVB	Temporary Vehicle Barrier
UES	Unisource Energy Services
U.S.	United States
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USIBWC	U.S. Section, International Boundary and Water Commission
WUS	Waters of the U.S





FINAL

**ENVIRONMENTAL ASSESSMENT
FOR THE IMPROVEMENT AND CONSTRUCTION, OPERATION, AND
MAINTENANCE OF PROPOSED ALL-WEATHER ROAD
IN THE EL CENTRO STATION AREA OF RESPONSIBILITY
U.S. CUSTOMS AND BORDER PROTECTION, EL CENTRO SECTOR**

**U.S. Customs and Border Protection
Department of Homeland Security
Washington, DC**



FINAL
FINDING OF NO SIGNIFICANT IMPACT
FOR THE IMPROVEMENT AND CONSTRUCTION, OPERATION, AND
MAINTENANCE OF PROPOSED ALL-WEATHER ROAD
IN THE EL CENTRO STATION AREA OF RESPONSIBILITY
U.S. CUSTOMS AND BORDER PROTECTION, EL CENTRO SECTOR

PROJECT HISTORY: U.S. Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP) within Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and their weapons of terrorism and to enforce the laws that protect the U.S. homeland. This is accomplished by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the United States.

CBP prepared an Environmental Assessment (EA), which is incorporated herein by reference, to address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road near the U.S./Mexico border within USBP El Centro Station's Area of Responsibility (AOR). The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) and analyzes the project alternatives and potential impacts on the human and natural environment from two action alternatives and a No Action Alternative.

PURPOSE AND NEED: The purpose of the Proposed Action is to increase border security within the USBP El Centro Sector with an ultimate objective of reducing illegal cross-border activity by providing safer and more efficient access for USBP agents along the U.S./Mexico border in the west desert area of the USBP El Centro Station's AOR and to BP Hill. The primary need for the Proposed Action is because of the remoteness of the west desert area and the impassability of the existing road, which creates long drive times for agents to reach patrol areas and limits their ability to assist with interdictions and apprehensions. An additional need for the Proposed Action is to provide agents with the infrastructure necessary to carry out USBP's mission

PROPOSED ACTION: The Proposed Action would include improvement and construction, operation, and maintenance of approximately 1.6 miles of all-weather roads. The Proposed Action would involve improvement of an existing border road and construction of a new access road to the top of BP Hill, where CBP operates a RVSS tower. The border road improvements would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile

within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures an include all-weather surfacing.

ALTERNATIVES CONSIDERED: In addition to the No Action Alternative, two action alternatives were identified and considered during the planning stages of the proposed project and all are carried forward for analysis in this EA: the Proposed Action Alternative (Preferred Alternative) and the BP Hill Improvement Alternative. Under the BP Hill Improvement Alternative, the improvements to the existing border road, staging areas, and maintenance activities as presented in the Proposed Action Alternative would occur. However, rather than construct a new access road to the BP Hill RVSS tower site, CBP would improve the existing access road, which is approximately 0.3 mile long, by widening it to 16 feet, installing ancillary structures, all-weather surfacing, and reducing the grade through cut and fill activities. The No Action Alternative has also been evaluated, as required by NEPA. The No Action Alternative would require the USBP agents to continue to have long drive times to reach patrol areas, agent safety issues while trying to maintain and access the BP Hill RVSS tower, and would be restricted in their abilities to assist with interdictions and apprehensions. This alternative will serve as the baseline to which the two action alternatives are compared.

ENVIRONMENTAL CONSEQUENCES: The Proposed Action would potentially result in minimal to moderate impacts, including temporary increased air pollution from soil disturbance and minor increases in water use and ambient noise. No adverse impacts on historic or cultural resources would occur. No residences or children are found near the project corridor; thus, the road improvements and construction would have no effect relative to environmental justice or protection of children issues. Up to 7.5 acres of vegetation and wildlife habitat would be permanently impacted by the Proposed Action. However, due to the vegetation and wildlife habitat being locally and regionally common, these impacts are not considered major.

Up to 7.5 acres of BLM lands, specifically within the Yuha Area of Critical Environmental Concern and flat-tailed horned lizard (*Phrynosoma mcallii*) (FTHL) Yuha Desert Management Area (YDMA), would be permanently impacted. This permanent residual disturbance would not cause the BLM to exceed its cumulative residual disturbance cap of not more than one percent of the management area (i.e., 572 acres) as mandated by the FTHL Rangeland Management Strategy, to which BLM is a signatory. Impacts on land use are not considered major.

It is highly unlikely that Federally-listed or state-listed threatened or endangered species or their habitats would be impacted, as no known habitat exists within the project corridor. However, the Proposed Action could potentially impact four BLM sensitive species: the western burrowing owl (*Athene cunicularia*), kit fox (*Vulpes macrotis*), badger (*Taxidea taxus*), and FTHL. Although potential habitat for the western burrowing owl, kit fox, and badger would be impacted, these species or their burrows were not observed in the project corridor during recent biological surveys, and the habitat for these species is both locally and regionally common. Therefore, no direct impacts on occupied burrows are expected. Impacts from the improvements to the existing roadway would not constitute major impacts or cause additional fragmentation of habitat. FTHL habitat would be impacted by the construction activities, and there is the potential

for taking individuals. Best Management Practices (BMP) such as preconstruction surveys and monitoring for the presence of FTHL during construction, as well as compensation for loss of habitat would reduce impacts on FTHL. Impacts from the Proposed Action can be mitigated in accordance with the FTHL Rangewide Management Strategy; therefore, no major impacts would occur.

The potential impacts resulting from the Proposed Action (Preferred Alternative), in combination with impacts resulting from other development in the project region, would have minimal permanent cumulative effects on air quality, noise, aesthetics, and biological resources. No major impacts on any resources would occur regardless of the alternative chosen.

BEST MANAGEMENT PRACTICES: The following BMPs will be implemented to minimize impacts on the human and natural environment:

Project Planning/Design – General Construction

The all-weather road will be sited, designed, and improved/constructed to avoid or minimize habitat loss within or adjacent to the footprint. The amount of aboveground obstacles associated with the site will be minimized.

CBP will ensure that all construction will follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

CBP will incorporate BMPs relating to project area delineation, water sources, waste management, and site restoration into project planning and implementation for construction and maintenance.

General Construction Activities

CBP will clearly demarcate project construction area perimeters with a representative from the land management agency. No disturbance outside that perimeter will be authorized.

Within the designated disturbance area, CBP will minimize the area to be disturbed by limiting deliveries of materials and equipment to only those needed for effective project implementation.

CBP will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. This wash water is toxic to wildlife. Storage tanks must have proper air space (to avoid rainfall-induced overtopping), be on-ground containers, and be located in upland areas instead of washes.

In the event that CBP contaminates soil or water resources as a result of the proposed project, the contaminated soil or water will be remediated as per BLM requirements.

CBP will avoid transmitting disease vectors, introducing invasive non-native species, and depleting natural aquatic systems by using wells, irrigation water sources, or treated municipal sources for construction or irrigation purposes instead of natural sources.

CBP will place drip pans under parked equipment and establish containment zones when refueling vehicles or equipment.

Vegetation

CBP will minimize habitat disturbance by restricting vegetation removal to the smallest possible project footprint. Native seeds or plants, which are compatible with the enhancement of protected species will be used to the greatest extent practicable to rehabilitate staging areas and other temporarily disturbed areas.

Construction equipment will be cleaned at temporary at a central wash station, in accordance with BMPs, prior to entering and departing project areas to minimize the spread and establishment of non-native invasive plant species.

Wildlife Resources

The Migratory Bird Treaty Act (16 USC 703-712, [1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989]) requires that Federal agencies coordinate with the USFWS if a construction activity would result in the take of a migratory bird. If construction or clearing activities are scheduled during nesting season (February 15 through September 1) surveys will be performed to identify active nests. If impacts on migratory birds are unavoidable and construction activities will result in the disturbance or take of a migratory bird, then coordination with the USFWS and California Department of Fish and Game will be required and applicable permits would be obtained prior to construction or clearing activities. Another mitigation measure that would be considered is to schedule all construction activities outside nesting season, negating the requirement for nesting bird surveys.

CBP will not, for any length of time, permit any pets inside the project area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

Protected Species

Construction equipment will be cleaned prior to entering and departing the project corridor area to minimize the spread and establishment of non-native invasive plant species. Soil disturbances in temporary impact areas will be rehabilitated. To minimize critical habitat impacts, designated travel corridors will be marked with easily observed removable or biodegradable markers, and travel will be restricted to the established tower site construction areas.

A qualified monitor will be present during the improvement, construction and maintenance of the proposed roads in FTHL habitat. Duties of the monitor(s) will include surveying the roadways prior to and during improvement/construction and removing and relocating lizards outside the project area. The FTHL Rangewide Management Strategy contains a comprehensive list of avoidance and minimization measures to limit adverse effects on the lizard. In addition, CBP will compensate for loss of habitat using the compensation formulas outlined in the FTHL Rangewide Management Strategy. Based upon field visits, aerial photography, and discussions with BLM, CBP has determined that of the potential 7.5 acres of habitat permanently impacted only 3.5 of those acres are considered undisturbed native habitat. The remaining 4 acres consists of previously disturbed habitat in the form of the existing roadway and the extant Imperial Irrigation District gravel/sand quarry area (the eastern 2,300 feet of the project corridor). CBP

proposes to mitigate up to 3.6 acres at a 5:1 ratio (18 acres) and will mitigate the remaining 3.9 acres at a 4:1 ratio (15.6 acres). The total mitigation acreage is up to 33.6 acres.

Water Resources

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease during heavy rains and would not resume until conditions are suitable for the movement of equipment and material. No refueling or storage will take place within 100 feet of drainages.

CBP will avoid contaminating natural aquatic systems with runoff by limiting all equipment maintenance, staging, laydown, and dispensing of fuel, oil, etc., to designated upland areas.

A Storm Water Pollution Prevention Plan will be prepared. A Spill Prevention Control and Countermeasures Plan will be maintained to ensure that all are aware of its implementation requirements in the event of a spill.

Air Quality

In order to minimize the amount of project-related dust emissions, all construction activities will comply with Imperial County Air Pollution Control District's requirements (Rule 800) for control of particulate matter (PM-10). Rule 800 provides guidance for contractors that: (1) minimize land disturbance; and (2) ensure saturation of exposed areas and control of fugitive dust caused by hauling activities and vehicular travel on unpaved road surfaces. In addition, all construction equipment shall be maintained and operated in a manner that produces the least amount of emissions. All construction equipment and vehicles must be maintained in good operating condition, free from leaks.

Cultural Resources

Should any archaeological artifacts be found during staging or installation activities, the appropriate BLM archaeologist or cultural resources specialist will be notified immediately. All work will cease until an evaluation of the discovery is made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

Noise

During the construction and improvement and maintenance of the proposed roadways, short-term noise impacts are anticipated. All applicable Occupational Safety and Health Administration regulations and requirements will be followed. On-site activities will be restricted to daylight hours, to the greatest extent practicable. All equipment will possess properly working mufflers and would be kept properly tuned to reduce backfires.

Hazardous Materials

BMPs will be implemented as standard operating procedures during all construction activities, and will include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will 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 will be completed in accordance with accepted industry and regulatory guidelines, and all vehicles will

have drip pans during storage to contain minor spills and drips. Although it is unlikely that a major spill would occur, any spill of reportable quantities will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock) will be used to absorb and contain the spill.

CBP will contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the construction and maintenance sites. This will assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

CBP will minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste onsite will be properly stored and tightly covered with a wildlife-proof material until disposal.

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

Solid waste receptacles will be maintained at the construction staging area. Non-hazardous solid waste (trash and waste construction materials) will be collected and deposited in on-site receptacles. Solid waste will be collected and disposed of by a local waste disposal contractor.

FINDINGS AND CONCLUSIONS: No significant adverse impacts are anticipated for any resource analyzed within this document. Therefore, no further analysis or documentation (i.e., Environmental Impact Statement) is warranted. CBP, in implementing this decision, would employ all practical means to minimize and mitigate the potential adverse impacts on the human and biological environment.

Project Proponent:

 2/15/13

Arturo G. Guajardo Date
Deputy Division Chief
Strategic Planning, Policy and Analysis Division
Office of Border Patrol

Approved:

 2/28/13

Karl Calvo Date
Executive Director
Facilities Management and Engineering
U.S. Customs and Border Protection

FINAL

**ENVIRONMENTAL ASSESSMENT
FOR THE IMPROVEMENT AND CONSTRUCTION, OPERATION, AND
MAINTENANCE OF PROPOSED ALL-WEATHER ROAD
IN THE EL CENTRO STATION AREA OF RESPONSIBILITY
U.S. CUSTOMS AND BORDER PROTECTION, EL CENTRO SECTOR**

February 2013

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EXECUTIVE SUMMARY

INTRODUCTION: The U.S. Border Patrol (USBP) is a law enforcement entity of U.S. Customs and Border Protection (CBP) within the Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and their weapons of terrorism and to enforce the laws that protect the U.S. homeland. This is accomplished by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the United States between the land Ports of Entry. The addition of new agents, personnel, and resources will enhance the operational capabilities of USBP.

The existing U.S./Mexico border road in the USBP El Centro's Station's Area of Responsibility (AOR) is impassable. This creates long drive times for agents to reach patrol areas and limits their abilities to assist with interdictions and apprehensions. This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) and analyzes the project alternatives and potential impacts on the human and natural environment from road corridor improvements and construction.

PURPOSE AND NEED: The purpose of the Proposed Action is to increase border security within the USBP El Centro Sector with an ultimate objective of reducing illegal cross-border activity by providing safer and more efficient access for USBP agents along the U.S./Mexico border in the west desert area of the USBP El Centro Station's AOR and to BP Hill. The primary need for the Proposed Action is because of the remoteness of the west desert area and the impassability of the existing road, which creates long drive times for agents to reach patrol areas and limits their abilities to assist with interdictions and apprehensions. An additional need for the Proposed Action is to provide agents with the infrastructure necessary to carry out USBP's mission.

DESCRIPTION OF PROPOSED ACTION: The Proposed Action would improve and construct, operate, and maintain approximately 1.6 miles of all-weather road near the U.S./Mexico border within USBP El Centro Station's AOR. The existing 1.4-mile road that would be improved is west of the All-American Canal and adjacent to and within U.S. Bureau of Land Management's (BLM) Yuha Desert Area of Critical Environmental Concern. The Proposed Action includes improvements to the existing border road, construction of a new access road to the top of BP Hill, and required maintenance

activities upon completion of the proposed project. The Proposed Action also includes the construction of a new access road to the top of BP Hill (0.2 mile in length).

**PROPOSED ACTION
AND ALTERNATIVES
CONSIDERED:**

One other viable action alternative was identified and considered during the planning stages of the proposed project. This alternative would consist of the Proposed Action but with no new road construction to BP Hill. Instead, only road improvements to the existing BP Hill access road would be implemented. The No Action Alternative, which would preclude the construction, operation, and maintenance of border road, was also evaluated.

Two alternatives were considered but eliminated from further consideration. The first alternative was to construct a new road parallel to the U.S./Mexico border within the 60-foot Roosevelt Reservation. Extensive earth moving and engineering would be required for this alternative due to the impassability of the entire road. The other alternative considered but eliminated was to improve limited areas within the existing border road and BP Hill. Only improving segments of the road, as proposed in the second eliminated alternative, would not meet the purpose and need of the proposed project.

**AFFECTED
ENVIRONMENT AND
CONSEQUENCES:**

The improvement, construction, operation, and maintenance of 1.6 miles of all-weather road would potentially result in minimal to moderate impacts, including temporary increased air pollution from soil disturbance, permanent loss of up to 7.5 acres of vegetation and wildlife habitat, and minor increases in water use and ambient noise. No adverse impacts on historic properties or threatened or endangered species would occur. No residences or children are found near the project corridor; thus, the road improvements and construction would have no effect relative to environmental justice or protection of children issues.

**FINDINGS AND
CONCLUSIONS:**

No major adverse impacts are anticipated for any resource analyzed within this document. Therefore, no further analysis or documentation (i.e., Environmental Impact Statement or Environmental Impact Report) is warranted. CBP, in implementing this decision, would employ all practical means to minimize and mitigate the potential adverse impacts on the human and biological environment.

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SECTION 1.0
INTRODUCTION



1.0 INTRODUCTION

U.S. Customs and Border Protection (CBP) has prepared this Environmental Assessment (EA) to address the potential effects, beneficial and adverse, resulting from the proposed improvement and construction, operation, and maintenance of approximately 1.6 miles of all-weather road near the U.S./Mexico border within U.S. Border Patrol (USBP) El Centro Station's Area of Responsibility (AOR). The existing border road is impassable and creates long drive times for agents to reach patrol areas, limiting their ability to assist with interdictions and apprehensions. The border road improvements would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) would be constructed leading to the BP Hill Remote Video Surveillance System (RVSS) tower from the improved border road. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing.

On April 1, 2008, the Secretary of the U.S. Department of Homeland Security (DHS), pursuant to his authority under Section 102(c) of Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA), exercised his authority to waive certain environmental and other laws in order to ensure the expeditious construction of tactical infrastructure (TI) along the U.S./Mexico border. The proposed improvement and construction, operation, and maintenance of approximately 1.6 miles of all-weather road addressed in this EA is part of a larger TI project, portions of which are waived from National Environmental Policy Act (NEPA) and other Federal regulatory compliance by the Secretary of DHS. The other elements of the larger TI project include the improvement, operation, and maintenance of two staging areas, two access roads, and border road to the east and west of the proposed project area. As part of the Secretary of the DHS's commitment to environmental stewardship under the waiver, CBP published the May 2008 Environmental Stewardship Plan (ESP) for the Construction, Operation, and Maintenance of Tactical Infrastructure, U.S. Border Patrol, El Centro Sector, California, which describes the proposed TI and any potential environmental impacts.

USBP El Centro Station is one of four stations composing the El Centro Sector, along with the Calexico, Indio, and Riverside stations in California. USBP El Centro Station's AOR includes 37.1 linear miles of the U.S./Mexico border. The remoteness of, and travel time to, the west desert area of USBP El Centro Station's AOR limits the capability of law enforcement agents to rapidly respond to illegal activity. By providing an all-weather road near the border, agent response time to illegal cross-border activities would be greatly enhanced, and agents could be more efficiently and safely deployed to patrol the more remote sections of USBP El Centro Station's AOR.

1.1 STUDY LOCATION

The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border within USBP El Centro Station's AOR. Specifically, the project is located adjacent to and within the BLM's Yuha Desert Area of Critical Environmental Concern (ACEC). The City of Calexico, California, is located approximately 10 miles east of the project area, while the City of El Centro, California, is located approximately 11.5 miles northeast of the project area (Figure 1-1). Access to the project area is limited to primitive roads with ingress and egress locations along State Route (SR) 98.

1.2 CBP HISTORY

In 1924, Congress created the USBP to serve as the law enforcement entity of the Immigration and Naturalization Service (INS), and it did so until November 25, 2002, when Congress transferred all INS responsibilities to the newly created DHS with the passage of the Homeland Security Act of 2002 (Public Law [PL] 107-296). USBP was officially transferred to DHS/CBP on March 1, 2003.

1.3 CBP INTENT AND STRATEGIES

In the aftermath of the September 11, 2001 terrorist attacks on the United States and the subsequent formation of DHS, CBP was created by unifying all frontline personnel and functions with law enforcement responsibilities at our Nation's borders. The mission of CBP is to secure the borders of the United States and to prevent terrorists and terrorist weapons from entering the United States (CBP 2012). As an important component of CBP, USBP's mission is to detect and prevent terrorists and terrorist weapons from entering the country between official Ports of Entry (POE). USBP will continue to advance its mission to detect, interdict, and apprehend those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the United States. While previous years' strategies have applied an appropriate mix of infrastructure, technology, and personnel to effectively manage land borders in a resource-based approach to border security, the new USBP National Strategy (2012-2016) extends a risk-based approach to countering the threat environment through information, integration, and rapid response. Assets are used to execute the mission functions of predicting illicit activity, detecting and tracking border crossings, identifying and classifying the detections, and responding to and resolving suspect border crossings as threats are identified through intelligence efforts and prioritized for response and targeted enforcement.

1.4 REGULATORY AUTHORITY

The primary sources of authority granted to USBP agents are the Immigration and Nationality Act (INA) of 1952 (PL 82-414) contained in Title 8 of the United States Code (USC) "Aliens and Nationality" and other statutes relating to the immigration and naturalization of aliens. The secondary sources of authority are administrative regulations implementing those statutes, judicial decisions, and administrative decisions of the Board of Immigration Appeals. In addition, the IIRIRA of 1996 (PL 104-208) and, subsequently, the Homeland Security Act

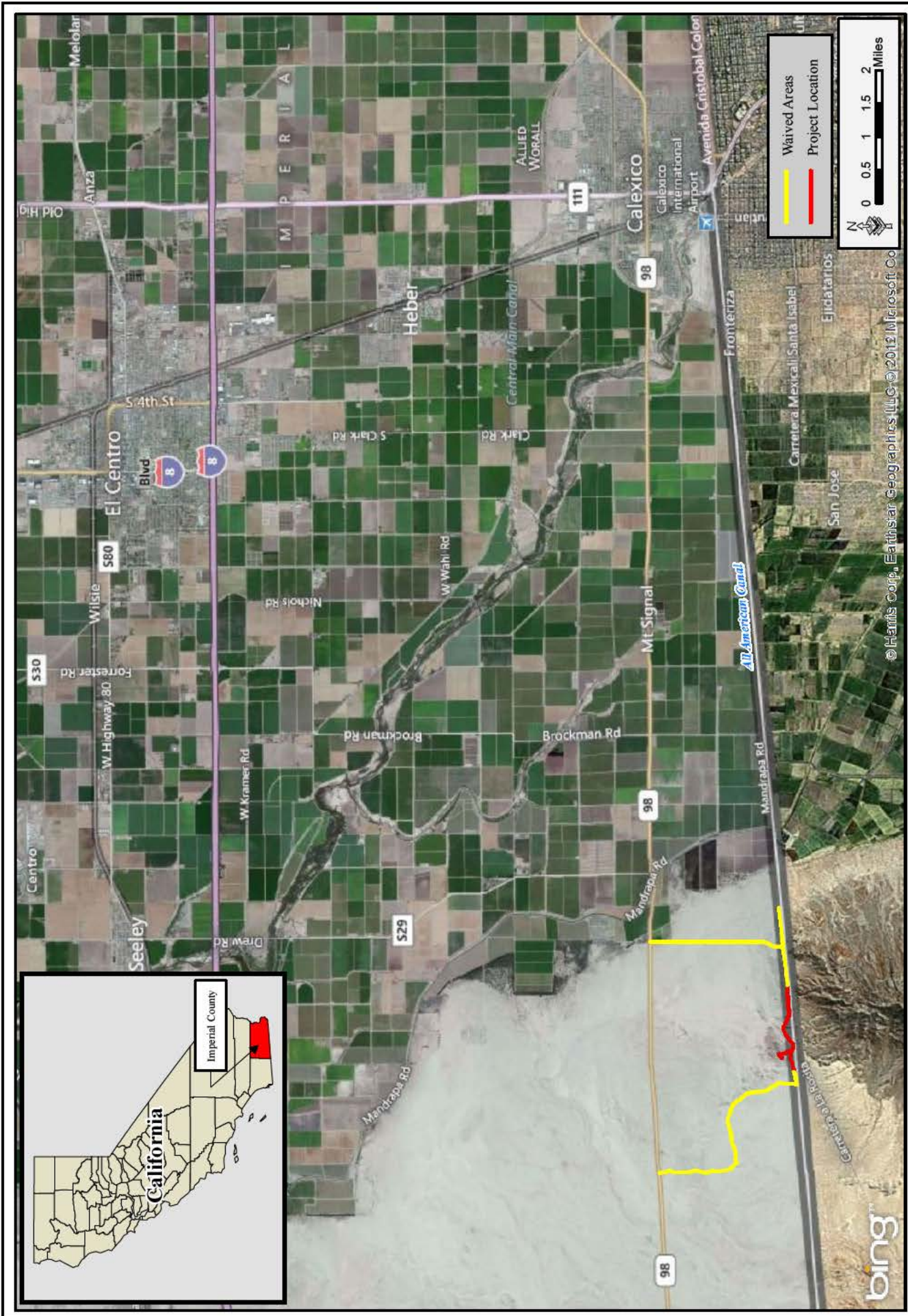


Figure 1-1: Vicinity Map

mandate that DHS acquire and improve equipment and technology along the border, hire and train new agents for the border region, and develop effective border enforcement strategies.

1.5 PURPOSE AND NEED

The purpose of the Proposed Action is to increase border security within the USBP El Centro Sector with an ultimate objective of reducing illegal cross-border activity by providing safer and more efficient access for USBP agents along the U.S./Mexico border in the west desert area of the USBP El Centro Station's AOR and to BP Hill. The primary need for the Proposed Action is because of the remoteness of the west desert area and the impassability of the existing road, which creates long drive times for agents to reach patrol areas and limits their ability to assist with interdictions and apprehensions. An additional need for the Proposed Action is to provide agents with the infrastructure necessary to carry out USBP's mission.

1.6 SCOPE OF THE ANALYSIS

The EA will include the analysis of effects resulting from the improvement, operation, and maintenance of an all-weather road and construction, operation, and maintenance of a new access road to BP Hill. The proposed road improvements and construction would include development of lands within El Centro Station's AOR in the Yuha Desert ACEC/Yuha Desert flat-tailed horned lizard (FTHL) Management Area, both of which are managed by the BLM. The potentially affected biological and human environment would include resources associated with the undeveloped land located in south-central Imperial County; however, most potential effects would be limited to the construction site and immediately adjacent resources.

1.7 APPLICABLE ENVIRONMENTAL GUIDANCE, STATUTES, AND REGULATIONS

The EA will be prepared by CBP in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4347) and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), BLM planning guide (BLM NEPA Handbook H-1790-1), as well as the DHS "Environmental Planning Directive" (Directive 023-01). Other pertinent environmental statutes, regulations, and compliance requirements that will guide the preparation of the EA are summarized in Table 1-1. This list, however, is not intended to be an all-inclusive list of applicable Federal laws and regulations.

1.8 PUBLIC INVOLVEMENT

Consultation and coordination with Federal and state agencies would occur during preparation of the document. The list below includes contacts that were made during the development of the action alternatives and writing of the EA. Copies of correspondence are provided in Appendix A. Formal and informal coordination will be conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers, Los Angeles District (USACE)
- U.S. Section, International Boundary and Water Commission (USIBWC)

Table 1-1. Relevant Policy Documents, Invoking Actions, Regulatory Requirements, and Status of Compliance*

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
<p>Archaeological Resources Protection Act of 1979</p> <p>16 United States Code (USC) § 470 et seq.</p>	<p>Department of Interior</p>	<p>Excavation, removal, damage, or other alteration or defacing; or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands</p> <p>43 Code Federal Regulations (CFR) 7.4</p>	<p>Because activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources, no permit shall be required</p>	<p>No adverse impact on historic properties.</p> <p>Section 106 consultation is ongoing</p>
<p>Bureau of Indian Affairs (BIA) Policy, Requirements, and Responsibilities for NEPA Compliance</p> <p>59 AIM 3</p>	<p>BIA</p>	<p>Any undertaking by Federal agencies on lands administered by a sovereign Native American tribe</p> <p>40 CFR Parts 1500-1508</p>	<p>Adherence to guidelines set forth by the Council on Environmental Quality (CEQ) for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508) on lands administered by a sovereign Native American on tribal property</p>	<p>Project is not located on tribal lands</p>
<p>Clean Air Act of 1963</p> <p>16 USC § 470 et seq.</p>	<p>Environmental Protection Agency (USEPA)</p>	<p>Any Federal action where the total of direct and indirect emissions in a non-attainment area would equal or exceed the provided rates</p> <p>40 CFR 51</p>	<p>Project emission levels were determined to be less than <i>de minimis</i> thresholds; therefore, a determination of conformity with applicable implementation plan is not required</p>	<p>Only minor emissions would occur during construction</p>
<p>Comprehensive Environmental Response, Compensation and Liability Act of 1980</p> <p>42 USC § 9601 et seq.</p>	<p>USEPA</p>	<p>Release or threatened release of a hazardous substance</p> <p>40 CFR 302</p>	<p>Development of emergency response plans, notification, and cleanup</p>	<p>To be completed by U.S. Customs and Border Protection (CBP) during design and operation</p>
<p>Endangered Species Act (ESA) of 1973</p> <p>16 USC § 1531 et seq.</p>	<p>U.S. Fish and Wildlife Service (USFWS)</p>	<p>All actions in which there is discretionary Federal involvement or control and potential to affect protected species.</p> <p>50 CFR 402.03</p>	<p>Determination of no jeopardy to listed species and no destruction or adverse modification of critical habitat through consultation with the USFWS</p>	<p>No effect on any Federally protected species</p>
<p>Farmland Protection Policy Act of 1981</p> <p>7 USC § 9601 et seq.</p>	<p>Natural Resources Conservation Service</p>	<p>Any Federal action</p> <p>7 CFR 658</p>	<p>Identify and take into account the adverse effects on the protection of farmland</p>	<p>No prime farmland soils would be impacted</p>

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
Federal Water Pollution Control Act of 1977 (also known as Clean Water Act or CWA) 33 USC § 1251 et seq. CWA	USEPA	Storage, use, or consumption of oil and oil products, which could discharge oil in quantities that could affect water quality standards, into or upon the navigable Waters of the U.S. 40 CFR 112 Discharge of pollutants 40 CFR 122	Preparation of a Spill Prevention, Control, and Countermeasures Plan Obtain a general National Pollutant Discharge Elimination System Permit	To be completed by CBP or contractor To be completed by CBP or contractor. Minor impacts on Waters of the United States, a USACE Nationwide Permit 14 would be used
IIM Land Use Agreement Direct Payment Arrangement 25 CFR Part 162	BIA	Any Federal action resulting in a trust land use agreement for use of tribal property between a Federal agency and a sovereign Native American tribe 25 CFR Part 169	Agreement between CBP and the respective Native American tribe for payment of trust land use	Project is not located on tribal lands
Migratory Bird Treaty Act of 1918 16 USC § 703	USFWS	Any Federal action resulting in the potential take of any migratory bird, or the parts, nests, or eggs of such bird 50 CFR 21.11	Avoidance of take or application for permit	Proposed surveys prior to any construction beginning during nesting season
National Historic Preservation Act of 1966 16 USC § 470 et seq.	Advisory Council on Historic Preservation	Any undertaking by Federal 36 CFR 800.3	Assessment of effects through consultation with the Advisory Council on Historic Preservation	No adverse impact on historic properties Section 106 consultation is ongoing

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
Occupational Health and Safety Act of 1970 29 USC § 651 et seq.	Occupational Safety and Health Administration, Department of Labor	Employees performing in a workplace 29 CFR 1910.5(a)	Adherence to occupational health and safety standards	To be completed by CBP during design and operation
Resource Conservation and Recovery Act (RCRA) of 1976 42 USC § 6901 et seq.	USEPA	Collection of residential, commercial, and institutional solid wastes and street wastes 40 CFR 243 Procurement of more than \$10,000 annually of products containing recovered materials 40 CFR 247 Recovery of resources from solid waste through source separation 40 CFR 246	Adherence to guidelines for waste storage and safety and collection equipment, frequency, and management Procure designated items composed of the highest percentage of recovered materials practicable Recovery of high-grade paper, residential materials, and corrugated containers	To be completed by CBP during design and operation To be completed by CBP during design and operation To be completed by CBP during design and operation
Executive Order (EO) 11988: Floodplain Management 42 Federal Register (FR) 26,951 (May 24, 1997)	Water Resources Council, Federal Emergency Management Agency, Council on Environmental Quality (CEQ)	Treatment, storage, or disposal of hazardous waste on-site 40 CFR 262.10(c)	Determination of hazardous or non-hazardous nature of solid waste, obtain an EPA identification number if necessary, properly accumulate hazardous waste, and maintain a record	To be completed by CBP during design and operation To be completed by CBP during design and operation
EO 11990: Protection of Wetlands 42 FR 26,691 (May 24, 1977)	U.S. Army Corps of Engineers, USEPA	Acquisition and management of Federal lands; Federally undertaken, financed, or assisted construction; conducting Federal activities affecting land use within a floodplain Federally undertaken, financed, or assisted construction, and improvements; conducting Federal activities affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities	Determine whether the proposed action would occur in a floodplain, then evaluate potential effects of any action in a floodplain Take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands	No floodplains would be impacted by the Proposed Action No impacts on wetlands

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations 59 FR 7629 (February 11, 1994)	USEPA	All programs or activities receiving Federal financial assistance that affect human health or the environment	Analyze the environmental effects, including human health, economic, and social effects of CBP actions, including effects on minority communities and low-income communities	No effects on minority communities or low-income communities. Item eliminated from EA
EO 13045: Protection of Children from Environmental Health Risks and Safety Risks 62 FR 19883 (April 23, 1997)	USEPA	Any Federal action that has the potential to place children at higher health and safety risks	Identify and assess environmental health risks and safety risks that may disproportionately affect children	No effects on minority communities or low-income communities. Item eliminated from EA
EO 13423: Strengthening Federal Environmental, Energy, and Transportation Management 72 FR No. 17,3919 (January 24, 2007)	CEQ	Reduction of energy, waste production, and water consumption, and improved efficiency of transportation within Federal agencies	Incorporate waste prevention, energy efficiency, and recycling in the agency's daily operations	To be completed by CBP during design and operation as appropriate
EO 13123: Greening the Government Through Efficient Energy Management 64 FR 30851 (June 3, 1999)	USEPA, Department of Energy (DOE)	Operation and maintenance of a Federal facility	Reduce emissions of greenhouse gases, reduce energy consumption, strive to expand use of renewable energy, reduce use of petroleum, and reduce water consumption	To be completed by CBP during design and operation as appropriate

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
EO 13514: Federal Leadership in Environmental, Energy, and Economic Performance 74 FR 52117 (October 8, 2009)	CEQ	Construction, operation, and maintenance of a Federal facility; aircraft operations and worker commutes	Increase energy efficiency; measure, report, and reduce greenhouse gas emissions from direct and indirect activities; conserve and protect water resources through efficiency, reuse, and stormwater management; eliminate waste, recycle, and prevent pollution; design, construct, maintain, and operate high-performance sustainable buildings in sustainable locations	To be completed by CBP during design and operation as appropriate

*Not All-Inclusive

- California Department of Fish and Game (CDFG)
- California Environmental Protection Agency (CalEPA)
- California Regional Water Quality Control Board (RWQCB)
- California State Historical Preservation Officer (SHPO)
- BLM
- Imperial Irrigation District (IID)
- Native American Tribes

This draft EA was made available for public review for 30 days, and the Notice of Availability (NOA) was published in the *Imperial Valley Press* on November 15, 2012. The draft EA was also available electronically at <http://ecso.swf.usace.army.mil/Pages/Publicreview.cfm>. In addition, the draft EA was available for review at El Centro Public Library, 539 West State Street, El Centro, California 92243 and the Calexico City Library, 850 Encinas Avenue, Calexico, California 92231, from November 15, 2012 to December 15, 2012. During this review period, only five comment letters were received. These letters and the responses to the comments are included in Appendix A, along with other correspondence sent or received during the preparation of the EA.

1.8.1 Cooperating Agency

A request to be a cooperating agency was submitted to and accepted by BLM, since all of the proposed project would be located within lands managed by BLM. A copy of the cooperation letter is in Appendix A. BLM is required to manage the natural resources on their lands to ensure sustainability of grazing leases, recreational opportunities, cultural resources, and natural resources.

1.8.2 California Environmental Quality Act (CEQA) Lead Agency

Identification of the appropriate CEQA lead agency is the necessary first step toward compliance with CEQA. Because the RWQCB is the only state agency with permitting authority over the proposed project, it is the appropriate lead agency. It is assumed that the RWQCB will determine that a Mitigated Negative Declaration would be the appropriate CEQA document and that this EA can be used in lieu of it.

1.9 REPORT ORGANIZATION

The EA is organized into eight major sections. Section 1.0 is the introduction, and Section 2.0 describes all alternatives considered for the project. Section 3.0 discusses the environmental resources potentially affected by the project and the environmental consequences for each of the viable alternatives. Section 4.0 discusses cumulative impacts, and environmental design measures are discussed in Section 5.0. Sections 6.0, 7.0, and 8.0 present a list of the references cited in the document, a list of acronyms and abbreviations used in the document, and a list of the persons involved in the preparation of the document, respectively. Correspondence generated during the preparation of the EA is presented in Appendix A. Appendix B is the Biological Survey Report, Appendix C is the BLM and California list of protected species, and Appendix D is the Air Quality Calculations completed for this project.

SECTION 2.0
PROPOSED ACTION AND ALTERNATIVES

2.0 PROPOSED ACTION AND ALTERNATIVES

There are three alternatives carried forward for evaluation in the EA: 1) the No Action Alternative, 2) the Proposed Action Alternative (Preferred Alternative), 3) and the BP Hill Improvement Alternative. The following sections discuss the components necessary for the proposed road improvements and the proposed alternatives for this project.

On April 1, 2008, the Secretary of DHS, pursuant to his authority under Section 102(c) of IIRIRA, exercised his authority to waive certain environmental and other laws in order to ensure the expeditious construction of TI along the U.S./Mexico border. The proposed improvement and construction, operation, and maintenance of approximately 1.6 miles of all-weather road addressed in this EA is part of a larger TI project, portions of which are waived from NEPA and other Federal regulatory compliance by the Secretary of DHS. The other elements of the larger TI project include the improvement, operation, and maintenance of two staging areas, two access roads, and border road to the east and west of the proposed project area. As part of the Secretary of the DHS's commitment to environmental stewardship under the waiver, CBP published the May 2008 ESP for the Construction, Operation, and Maintenance of Tactical Infrastructure, U.S. Border Patrol, El Centro Sector, California, which describes the proposed TI and any potential environmental impacts.

2.1 NO ACTION ALTERNATIVE

The No Action Alternative would preclude the improvement and construction, operation, and maintenance of approximately 1.6 miles of road as described in the Proposed Action. USBP agents would continue to face safety related issues while trying to maintain and access the BP Hill RVSS tower, would have long drive times to reach patrol areas, and would be restricted in their abilities to assist with interdictions and apprehensions. The No Action Alternative does not meet the purpose and need for the proposed project but will be carried forward for analysis, as required by the CEQ regulations, and will serve as the baseline for comparison to other action alternatives.

2.2 PROPOSED ACTION ALTERNATIVE

CBP proposes to improve and construct, operate, and maintain approximately 1.6 miles of road near the U.S./Mexico border (see Figure 1-1). The Proposed Action comprises improvement of an existing border road and construction of a new access road to the top of BP Hill. The Proposed Action Alternative is CBP's Preferred Alternative.

2.2.1 Road Improvements

Improvements would include widening the existing border road (Photographs 2-1 and 2-2) for 1.4 miles from a width of 15 feet to a width of 20 feet with 2-foot shoulders, installing drainage ditches, rip-rap lining at inlet and outlet structures, and other ancillary structures (e.g., low-water crossings and culverts), and applying an all-weather surface. There is a possibility that bridges would be used in lieu of low-water crossings or culverts. These bridges would be one-piece, prefabricated, delivered onsite, and installed within the road footprint. A drag road approximately 10 feet wide would also be constructed along the northern boundary of the

improved border road. The combined temporary and permanent footprint of the road improvements would be approximately 120 feet wide by 1.4 miles long. Within this footprint, approximately 80 feet would be temporary and 40 feet would be permanent.



Photograph 2-1. Existing border road in eastern portion of project area.



Photograph 2-2. Existing border road in western portion of project area.

The new access road to BP Hill (0.2 mile in length) would be constructed to 16 feet wide and designed to not exceed a 12 percent slope. Construction would include the installation of drainage ditches and other ancillary structures, as well as the application of all-weather surfacing. The total permanent footprint for the new access road to BP Hill could be 30 feet wide by 0.2 mile long. The temporary footprint could be 90 feet wide by 0.2 mile long. Upon completion of the improvements and construction activities, all temporarily disturbed areas would be rehabilitated per BLM guidelines.

All-weather surfacing consists of adding aggregate and a soil-stabilizing or binding agent (e.g., PennzSuppress®) to the surface of the road. This would be done once the construction is completed to reduce erosion and maintenance activities. Maintenance of this road would include filling holes with aggregate, smoothing the road, and applying a top shot of the soil-stabilizing agent to the surface on at least an annual basis to ensure road surface longevity. Water bars or other water conveyance techniques would be installed at various locations along the road to direct stormwater into parallel ditches or downslope to reduce erosion of the road surface.

2.2.2 Staging Areas

Five staging areas (50 feet by 50 feet) would be constructed along the proposed all-weather road (Figure 2-1). The total footprint of the staging areas would not exceed 0.3 acres. Upon completion of the improvement activities, all temporarily impacted areas, such as the staging areas, would be rehabilitated.

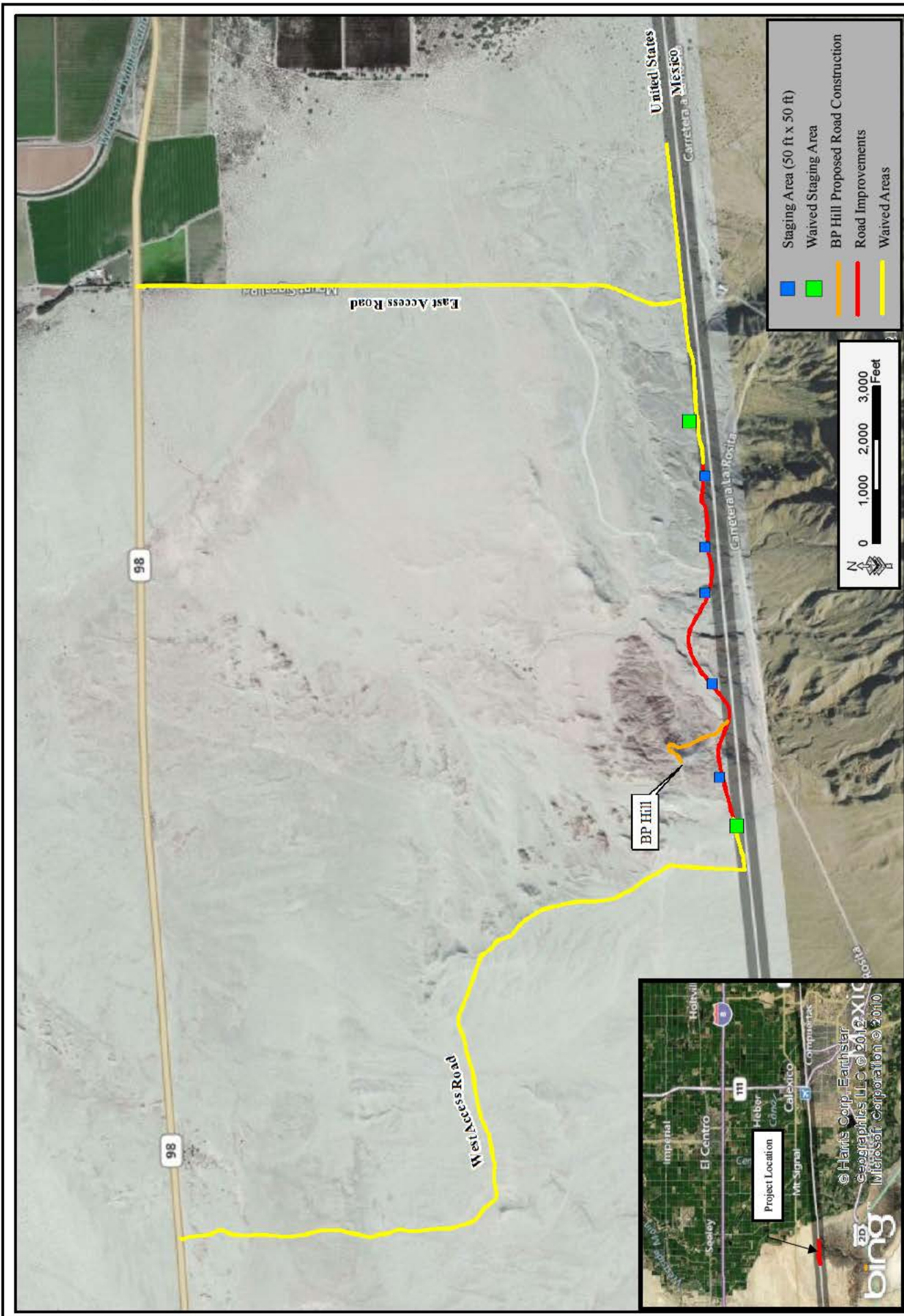


Figure 2-1: Proposed Action Alternative Map

2.2.3 Water Usage

In order to accomplish the road improvements and construction efforts, CBP would use a commercial vendor or obtain water from the All-American Canal, if possible. Water would be trucked into the site via a water truck or portable water tank and delivered to the project area in order to provide the correct moisture content for the soil during improvement and construction activities. Water would also be used to control fugitive dust emissions during those activities. It is estimated that approximately 4.9 acre-feet per mile of roadway would be needed for construction purposes (Fitts 2012).

2.2.4 Construction Personnel and Equipment

CBP maintenance staff, Joint Task Force North units, National Guard units, or private contractors would complete the proposed construction and improvements of the roadways. Equipment staging would occur at the staging areas discussed above. The equipment anticipated to be used during the construction includes a backhoe, trencher, bulldozer, grader, dump truck, front-end loader, flatbed truck, water truck, and roller/compactor.

2.3 BP HILL IMPROVEMENT ALTERNATIVE

The third alternative carried forward for analysis includes the improvement, operation, and maintenance of the existing border road and construction and use of the five new staging areas as presented in the Proposed Action Alternative. However, rather than construct a new access road to the BP Hill RVSS tower site, CBP would improve the existing access road, which is approximately 0.3 mile long, by widening it to 16 feet, installing ancillary structures, all-weather surfacing, and reducing the grade through cut and fill activities (Figure 2-2). The total footprint for the improvement of the existing BP Hill access road would be 30 feet wide by 0.3 mile long. Only an area 16 feet wide would be permanently disturbed. The remaining 14 feet of footprint would be disturbed temporarily during improvement efforts. Additionally, all temporarily impacted areas would be rehabilitated upon completion of the construction and improvement activities.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED

Two alternatives were considered but eliminated from further consideration. The first alternative was to construct a new road parallel to the U.S./Mexico border within the 60-foot Roosevelt Reservation. However, the local topography includes towering hills and deep ravines that would require extensive earth moving and engineering. Therefore, this alternative was eliminated from further consideration.

The other alternative considered but eliminated was to only improve limited areas within the existing border road and BP Hill. Due to the impassability of the entire road, only improving limited areas would still leave a vulnerable gap in the border road and would not meet the purpose and need of the proposed project. Therefore, this alternative was eliminated from further consideration.

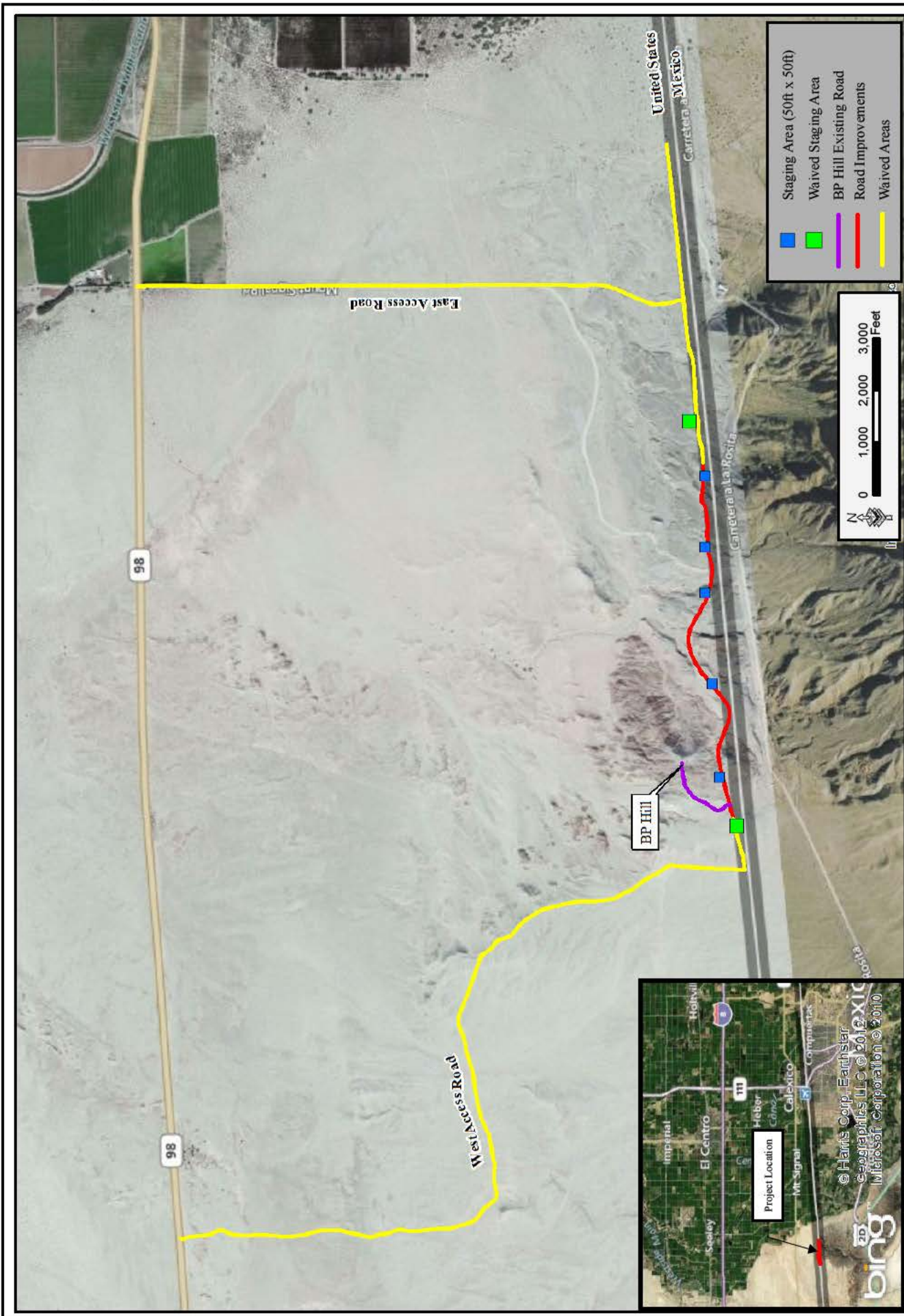


Figure 2-2: BP Hill Improvement Alternative Map

2.5 SUMMARY

The No Action Alternative, Proposed Action Alternative, and BP Hill Improvement Alternative have been carried forward for analysis. As shown in Table 2-1, only the Proposed Action and BP Hill Improvement Alternative fully support the purpose and need as described in Section 1.3. Table 2-2 summarizes the impacts of the Proposed Action Alternative, No Action Alternative, and the BP Hill Improvement Alternative on the resources evaluated in the EA.

Table 2-1. Alternatives Matrix

Purpose and Need	No Action Alternative	Proposed Action Alternative	BP Hill Improvement Alternative
Will the alternative provide increased effectiveness for USBP agents in the performance of their duties?	No	Yes	Yes
Will the alternative provide safe access to the west desert area within the El Centro Station's AOR?	No	Yes	Yes
Will the alternative provide a more safe, effective, and efficient working environment for USBP agents?	No	Yes	Yes

Table 2-2. Summary of Impacts

Affected Environment	No Action Alternative	Proposed Action Alternative	BP Hill Improvement Alternative
Land Use	No improvements or construction would occur within the project area. Therefore, there would be no direct impacts. However, long-term indirect impacts on land use would continue as a result of illegal cross-border violator (CBV) activities.	The Proposed Action would change the land use of up to 7.5 acres from undeveloped to CBP infrastructure, which is considered a moderate impact on land use. This land use would be in compliance with BLM guidance and policy for the proposed project.	This alternative would have impacts similar to those described for the Proposed Action Alternative. However, up to 0.2 acre less would be developed under this alternative.
Soils	No direct impacts on soils would occur. However, long-term indirect impacts on soils would continue as a result of CBV activities.	Up to 7.5 acres of soils would be lost as a result of the Proposed Action Alternative. Temporary impacts on up to 23.5 acres would occur; however, this area would be rehabilitated upon completion of the construction activities. Negligible impacts on soils would occur as a result of the Proposed Action.	This alternative would have impacts similar to those described for the Proposed Action Alternative. However, up to 0.2 acre less would be developed under this alternative.
Geology	No direct impacts on geologic resources would occur.	Negligible impacts on geologic resources would occur as a result of this alternative.	The same impacts would occur as described in the Proposed Action Alternative.
Vegetation	No direct impacts would occur. However, long-term indirect impacts on vegetation communities would continue as a result of illegal CBV activities that create trails, damage vegetation, and promote the dispersal and establishment of invasive species.	Up to 7.5 acres of vegetation would be lost as a result of the Proposed Action Alternative. Temporary impacts on up to 23.5 acres would occur; however, this area would be rehabilitated upon completion of the construction activities. Negligible impacts on vegetation would occur as a result of the Proposed Action Alternative.	This alternative would have impacts similar to those described for the Proposed Action Alternative. However, up to 0.2 acre less would be developed under this alternative.
Wildlife	Under the No Action Alternative, no direct impacts on wildlife habitats would occur. However, illegal cross-border activity would continue to disturb wildlife and degrade wildlife habitat.	Wildlife habitat would be permanently and temporally impacted. However, due to the habitat being locally and regionally common any impacts are considered negligible.	This alternative would have impacts similar to those described for the Proposed Action Alternative. However, up to 0.2 acre less would be developed under this alternative.

Table 2-2, continued

Affected Environment	No Action Alternative	Proposed Action Alternative	BP Hill Improvement Alternative
Protected Species	Under the No Action Alternative, there would be no direct impacts on threatened or endangered species or their habitats. However, the indirect and long-term impacts of CBV activity on habitats throughout the project region and surrounding areas would continue to disturb threatened or endangered species and their habitats.	The Proposed Action Alternative would have no effects on Federally listed or state-listed species. However, the FTHL (<i>Phrynosoma mcallii</i>), which is a conservation species was observed within the project area. CBP would mitigate impacts per the Flat-Tailed Horned Lizard Rangeland Management Strategy to a negligible level. No major impacts would occur on the FTHL.	The same impacts would occur as described in the Proposed Action Alternative.
Cultural Resources	Under the No Action Alternative, no direct impacts on cultural resources would occur. However, cultural resources sites would continue to be impacted by illegal CBV activities.	No adverse effects on architectural or aboveground resources that are eligible for the National Register of Historic Places (NRHP) are anticipated, and no adverse effects on cultural resources are anticipated from the implementation of the Proposed Action Alternative.	The same impacts would occur as described in the Proposed Action Alternative.
Air Quality	No equipment would be installed, so no direct impacts on air quality from construction would occur.	Temporary and minor increases in air emissions would occur from the use of heavy equipment during improvement or construction of the roads. Minor, long-term beneficial impacts would occur due to the use of the all-weather surface. There would be no violations of air quality standards and no conflicts with the state implementation plans (SIP); therefore, impacts on air quality from the implementation of the Proposed Action Alternative would be minor.	The same impacts would occur as described in the Proposed Action Alternative.
Noise	Under the No Action Alternative, no direct impacts on noise would occur.	The noise impacts from construction and maintenance activities would be short-term and minor.	The same impacts would occur as described in the Proposed Action Alternative.
Aesthetics and Visual Resources	No impacts on aesthetic or visual resources would occur because no construction activities would take place. However, a reduction of aesthetic and visual resources created by CBV activities and resulting law enforcement actions would continue and likely increase.	The Proposed Action Alternative would have a long-term, minor adverse effect on the viewshed and aesthetic qualities of the project area.	The same impacts would occur as described in the Proposed Action Alternative.

Table 2-2, continued

Affected Environment	No Action Alternative	Proposed Action Alternative	BP Hill Improvement Alternative
Hazardous Materials	The No Action Alternative would not contribute any hazardous waste or materials to the project area, as no construction would take place.	The Proposed Action Alternative would not result in the exposure of the environment or the public to any hazardous materials. The potential exists for minor releases of petroleum, oil, and lubricants (POL) during construction or operational activities. Best management practices (BMP) would be put in place to minimize any potential contamination at the proposed site during construction activities and operation.	The same impacts would occur as described in the Proposed Action Alternative.
Socioeconomics	The No Action Alternative would result in no new impacts on socioeconomic within the region, as no road construction and improvements would occur.	No major adverse impacts would occur as a result of the Proposed Action Alternative.	The same impacts would occur as described in the Proposed Action Alternative.
Human Health and Safety	No construction or improvements would occur, so no direct impacts would occur. However, USBP agents would continue to face safety related issues while trying to maintain and access the BP Hill RVSS tower, as well as patrol the existing border road.	No major adverse impacts would occur as a result of the Proposed Action Alternative.	The same impacts would occur as described in the Proposed Action Alternative.
Sustainability and Greening	No construction or improvements would occur, so no direct impacts would occur.	No major adverse impacts would occur as a result of the Proposed Action Alternative.	The same impacts would occur as described in the Proposed Action Alternative.

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SECTION 3.0
AFFECTED ENVIRONMENT AND CONSEQUENCES

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 PRELIMINARY IMPACT SCOPING

This section of the EA describes the natural and human environment that exists within the project site and region of influence (ROI), and the potential impacts of the Proposed Action Alternative, BP Hill Improvement Alternative, and No Action Alternative outlined in Section 2.0 of this document. The ROI for this project is Imperial County. Only those resources with the potential to be affected by the Proposed Action are described, per CEQ regulation (40 CFR 1501.7 [3]). The impact analysis presented in this EA is based upon existing regulatory standards, scientific and environmental knowledge, and best professional opinions.

Impacts (consequence or effect) can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). As discussed in this section, the alternatives evaluated may create temporary (lasting the duration of construction), short-term (up to 3 years), long-term (greater than 3 years), or permanent impacts or effects.

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. The intensity thresholds are defined as follows:

- **Negligible:** A resource would not be affected or the effects would be at or below the level of detection, and changes would not result in any measurable or perceptible consequences.
- **Minor:** Effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. Mitigation measures, if needed to offset adverse effects, would be simple and achievable.
- **Moderate:** Effects on a resource would be readily detectable, long-term, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.
- **Major:** Effects on a resource would be obvious, long-term, and would have substantial consequences on a regional scale. Extensive mitigation measures to offset the adverse effects would be required, and success of the mitigation measures would not be guaranteed.

Some resource discussions are limited in scope due to the lack of direct effect from the proposed project on the resource, or because that particular resource is not located within the project area. Resources dismissed from further discussion are:

Wild and Scenic Rivers

The proposed road improvements and construction would not affect any reach of river designated as Wild and Scenic, as none are located in the vicinity of the proposed corridor.

Utilities and Infrastructure

The road improvements would not require an increase in electrical demand, and no increase on other infrastructure is anticipated.

Aquatic Resources

There are no perennial waterbodies near the project area. Only intermittent waterbodies, which are predominantly dry most of the year and have no flowing water except directly after a rainfall event, are found in the project area. Therefore, no impacts on aquatic environments or species would be anticipated.

Floodplains

The Federal Emergency Management Agency (FEMA) indicates that the project corridor area is located within a 500-year floodplain (FEMA 2008). This area has a 0.002 percent annual chance to flood; therefore, the risk of flooding is very low. The proposed road construction and improvements would not result in an increase of flood risk, duration, elevation, or patterns.

Environmental Justice

EO 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires the consideration of impacts and adverse effects on minority populations and low-income populations. The project corridor is located along an existing highway in rural areas with no surrounding community nearby. Adverse impacts on minority and low-income populations would not occur.

Protection of Children

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires each Federal agency to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. No children live in proximity to the project corridor; therefore, the road improvements and construction would not adversely affect any children.

The anticipated permanent and temporary impacts resulting from the proposed infrastructure in the project corridor are summarized in Table 3-1. These impacts are considered worst case scenario and represent the maximum acreage anticipated as a result of improvement and construction activities.

3.2 LAND USE

3.2.1 Affected Environment

The project corridor is located within the Yuha Basin ACEC on lands managed by BLM. The Yuha Basin ACEC was designated by the BLM for the purpose of protecting sensitive natural and cultural resources as part of the BLM California Desert District multiple use plan (BLM

Table 3-1. Summary of Impacts of Project Components by Alternative

Type of Project	Proposed Action Alternative			BP Hill Improvement Alternative		
	Miles	Number	Acres	Miles	Number	Acres
PERMANENT IMPACTS						
Roadway Improvements (All-Weather Road, 40-foot Right-of-Way [ROW])	1.4		6.8	1.4		6.8
BP Hill Roadway Construction All-Weather Road, up to 30-foot ROW)	0.2		0.7			
BP Hill Roadway Improvement (All-Weather Road, up to 16-foot ROW)				0.3		0.5
Total Permanent Impacts			7.5			7.3
TEMPORARY IMPACTS						
Roadway Improvements (80-foot ROW)	1.4		13.5	1.4		13.5
BP Hill Roadway Construction (90-foot ROW)	0.2		2.2			
BP Hill Roadway Improvement (24-foot ROW)				0.3		0.6
Staging Area (50 feet by 50 feet)		5	0.3		5	0.3
Total Temporary Impacts			16			14.4
TOTAL ACRES IMPACTED IN PROJECT FOOTPRINT			23.5			21.7

* Acres and widths of road improvements or construction are considered maximum anticipated.

1999). This area is also classified as the Yuha Desert Management Area (YDMA) for the FTHL (*Phrynosoma mcallii*). The YDMA encompasses approximately 60,000 acres. Approximately 57,200 acres of the YDMA are under Federal ownership. As part of the FTHL Rangewide Management Strategy, the cumulative new disturbance per management area since 1997 may not exceed 1 percent of the total management area acreage on Federal lands (i.e., 572 acres).

Other than the presence of the existing border road and BP Hill access road and RVSS site, the area including and surrounding the project corridor is largely undisturbed (Figure 3-1). IID had an extant gravel/sand quarry located near the eastern terminus of the project area. This site is currently not in use and has been returned to the BLM. In general, vacant desert land exists adjacent to the project corridor in all directions. Agricultural fields, which surround the cities of Calexico (U.S.) and Mexicali (Mexico), begin approximately 1.6 miles to the east, with the residential portions of Calexico and the smaller city of Seeley beginning approximately 10 miles to the east and northeast.

3.2.2 Environmental Consequences

3.2.2.1 No Action Alternative

Under the No Action Alternative, no road improvements or construction would occur; therefore, no new impacts, either beneficial or adverse, would occur on land use within the project region.

3.2.2.2 Proposed Action Alternative

Through the implementation of the Proposed Action Alternative, moderate impacts on land use are expected. The permanent disturbance of up to 7.5 acres of the YDMA would occur as a result of the improvement and construction activities. This amount of disturbance would not cause the BLM to exceed its cumulative cap of one percent of the total area of the YDMA. Further, CBP would compensate BLM for all impacts within the YDMA. Land in the immediate surrounding area would remain uninhabited, and the presence of the proposed roadway would not have an impact on local agricultural or residential areas.

3.2.2.3 BP Hill Improvement Alternative

Impacts for this alternative would be similar to those outlined for the Proposed Action Alternative. However, only up to 7.3 acres of YDMA would be permanently disturbed.

3.3 SOILS

3.3.1 Affected Environment

The Imperial Valley, located within the Salton Trough, is a broad, flat, alluvial area that lies partly below sea level, bounded to the east by branches of the San Andreas Fault and the Brawley Seismic Zone, and to the west by the San Jacinto-Coyote Creek and Elsinore-Laguna Salada Faults (Imperial County/BLM 2012).

Soils found in the project area remain unclassified by the Natural Resource Conservation Service (NRCS) Database; however, soil surveys from similar areas of comparable elevation located approximately 13 miles to the west classify the soil as Rositas. Rositas soils are very deep, formed in sand aeolian material, and are somewhat excessively drained with negligible to low runoff and rapid permeability.

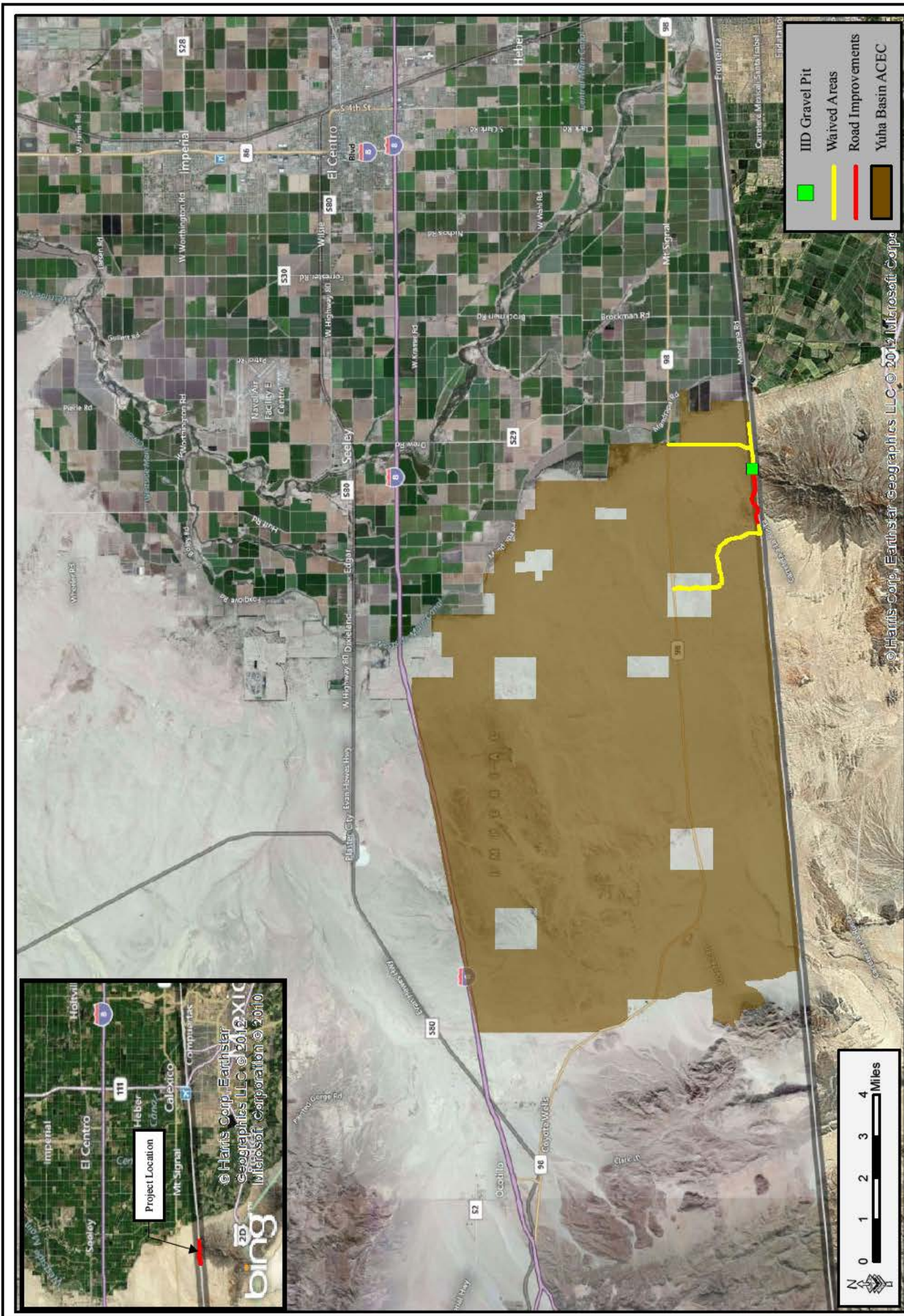


Figure 3-1: Land Use Map

Quaternary lake deposits, alluvium, stream channel deposits, fan deposits, and Pleistocene non-marine deposits comprise the majority of the material with local origin from the Inkopah and Jacumba Mountains to the west and south, and from the Coyote Mountains to the north.

3.3.2 Environmental Consequences

3.3.2.1 No Action Alternative

Under the No Action Alternative, soils within the project corridor would remain the same and no direct impacts would occur. However, possible indirect impacts from the degradation of soils might occur from the unabated illegal traffic in the project area.

3.3.2.2 Proposed Action Alternative

The road improvements would occur along an extant border road, which has become impassable due to lack of maintenance and repair efforts. With implementation of the Proposed Action Alternative, there would be up to 7.5 acres of direct permanent impacts and up to 23.5 acres of temporary impacts on soils. These soils are common locally and regionally. Therefore, no major impacts are expected.

Short-term impacts, such as increased runoff, can be expected on soils from the improvement and construction of the roads; however, these impacts would be alleviated once construction is finished. Long-term effects on soils would be compaction from vehicles on the roads. Pre- and post-construction Best Management Practices (BMP) would be developed and implemented to reduce or eliminate erosion and downstream sedimentation. Compaction techniques and erosion control measures, such as waterbars, gabions, straw bales, and the use of riprap or sediment traps, are some of the BMPs that would be implemented to avoid or minimize potential erosion.

Beneficial indirect impacts on soils north of the project corridor due to less disturbance and; therefore, less compaction and erosion would potentially occur as USBP agents are better able to detect, deter, and apprehend illegal cross-border violators (CBV) as a result of this alternative.

3.3.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the impacts on soils would be similar to those described for the Proposed Action Alternative. However, this alternative would permanently (up to 7.3 acres) and temporarily (up to 21.7 acres) impact less than the Proposed Action Alternative.

3.4 GEOLOGY

3.4.1 Affected Environment

The project area is located in the Colorado Desert geomorphic province, which was formed as a depression between the Mojave desert to the east and the peninsular ranges to the west. The province lies over the sediment-filled valley formed by the southern extension of the San Andreas Fault system. It covers the extent of the ancient Lake Cahuilla, the current remnant of which is the Salton Sea to the north. Subsurface rocks are Pleistocene and Recent Quaternary sediments (California Geological Survey 2002 and 2010). Signal Mountain is an exposed example of the older, indurated Pleistocene sedimentary rocks.

Groundwater in the region is contained in unconsolidated sands and silts with little to no horizontal barriers to groundwater flow, which is generally to the south and to the east into the Colorado River (California Department of Public Works 2004). The depth to groundwater in the project area is likely over 100 feet below ground surface.

The location of the project area lies over the San Andreas Fault and carries with it the moderately high probability of large damaging earthquake activity (California Department of Conservation 1999). A recent magnitude-7.2 earthquake occurred in the area in 2010.

3.4.2 Environmental Consequences

3.4.2.1 No Action Alternative

As a result of the No Action Alternative, no impacts on geologic resources would occur, as no construction or improvement activities would occur.

3.4.2.2 Proposed Action Alternative

Construction, improvement, and operation of the proposed roads would not disturb or impact any significant geologic resources of importance in the area. Modifications of surface soils and rocks would not impact groundwater-bearing strata in the area, since the depth to groundwater is generally over 100 feet below ground surface. Because the project area is located in a known earthquake hazard zone, there is the potential for any road improvements to be impacted by future earthquakes, resulting in the need for increased road maintenance and rebuilding of some road structures.

3.4.2.3 BP Hill Improvement Alternative

The same impacts as described for the Proposed Action Alternative would occur if this alternative were implemented.

3.5 VEGETATION

3.5.1 Affected Environment

The project area lies in the Lower Colorado River Valley (LCRV) biome of the Sonoran Desert. The vegetation community is broadly classified as Sonoran Desert scrub (Brown 1994). The Sonoran Desert is an extremely arid but hot environment. Where water flow has formed arroyos or channels denser vegetation may form, and outside of these areas that concentrate water vegetation is much sparser.

Site visits and biological surveys of the project area were conducted on June 28, 2012, and are described in a Biological Survey Report (CBP 2012) (Appendix B). During meandering pedestrian surveys, Gulf South Research Corporation (GSRC) biologists noted flora and fauna observed on-site. The project corridor contained less than five percent groundcover, was highly disturbed from past human activities, and the dominant plant species observed was creosote bush, as is typical for this area within the Sonoran Desert (Photograph 3-1 and 3-2).



Photograph 3-1. Vegetation in the project corridor, facing west.



Photograph 3-2. Facing west with creosote bush in foreground.

Among the list of 22 plant species observed was desert holly (*Atriplex hymenelytra*), skeleton weed (*Eriogonum deflexum*), white bursage (*Ambrosia dumosa*), honey mesquite (*Prosopis glandulosa*), and catclaw acacia (*Acacia greggii*). Skeleton weed, honey mesquite, and catclaw acacia were also observed growing along the intermittent washes found in the project corridor. Of the species observed in the project corridor, only Sahara mustard (*Brassica tournefortii*) is considered to be an invasive plant species (CBP 2012). A complete list of species observed is included in Appendix B.

3.5.2 Environmental Consequences

3.5.2.1 No Action Alternative

Under the No Action Alternative, no direct impacts would occur on vegetation communities. However, long-term direct and indirect impacts on vegetation communities would continue and likely increase as a result of CBV activities that damage vegetation, introduce trash and waste, and promote the dispersal and establishment of non-native invasive species. The presence of CBVs and the damage they cause could potentially result in long-term, moderate impacts on vegetation as a result of disturbance and habitat degradation.

3.5.2.2 Proposed Action Alternative

The Proposed Action Alternative would permanently impact up to 7.5 acres of vegetation. Permanent impacts on vegetation include the compaction of the natural substrate and destruction of plants within the road right-of-way (ROW). Additionally, up to 23.5 acres of vegetation would be temporarily impacted during road improvements and construction and the use of turnarounds and staging areas.

Permanent and temporary impacts on vegetation during construction activities would be minimized to the extent practicable through avoidance, minimization, and rehabilitation as discussed in Section 5.0 of this document. Fugitive dust resulting from construction activities would have a minimal effect on plant respiration and photosynthesis. Application of wetting solutions during these activities would further minimize these temporary impacts. Although the direct impacts would permanently remove up to 7.5 acres of vegetation, the impacted vegetation communities and their associated plant species are common throughout Imperial County.

Because maintenance and repair activities would be within the permanently disturbed footprint, no additional impacts would occur.

The effects of the Proposed Action Alternative would not result in the long-term reduction of population viability for any plant species and would not affect any sensitive or rare vegetation communities. Therefore, the direct and indirect impacts on vegetation would not be considered major.

3.5.2.3 BP Hill Improvement Alternative

Under this alternative, vegetation would be permanently and temporarily impacted as described under the Proposed Action Alternative; however, this alternative would impact less acreage (see Table 3-1). The Sonoran Desert scrub vegetation community is extremely common in the vicinity of the project area, and the direct effect of degradation and removal of a total of up to 7.3 acres of vegetation would not have a major adverse effect on vegetation communities in the region. Indirect effects on vegetation would occur as described in the Proposed Action Alternative.

3.6 WILDLIFE

3.6.1 Affected Environment

The Sonoran Desert is extremely hot, and many animals are nocturnal. Many of the animals that inhabit the Sonoran Desert are found throughout the warmer and drier regions of the southwestern United States (Brown 1994). Common mammals include multiple species of bat, coyote (*Canis latrans*), black-tailed jack-rabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), Merriam's kangaroo rat (*Dipodomys merriami*), white-throated woodrat (*Neotoma albigula*), and desert pocket mouse (*Chaetodipus penicillatus*). Less common mammals, like the desert kangaroo rat (*Dipodomys deserti*), Bailey's pocket mouse (*Chaetodipus baileyi*), and round-tailed ground squirrel (*Spermophilus tereticaudus*), have more limited distributions and are more specifically characteristic of Sonoran Desert habitats (Brown 1994).

The project corridor is located in a migratory flyway. Raptors, waterbirds such as brown pelican (*Pelecanus occidentalis*) and cormorant (*Phalacrocoracidae* sp.), as well as shorebirds including mountain plover (*Charadrius montanus*) and snowy plover (*Charadrius nivosus*) migrate through the desert habitat between the Gulf of Mexico and the Salton Sea. Common birds include the road runner (*Geococcyx californianus*), mourning dove (*Zenaida macroura*), lesser nighthawk (*Chordeiles acutipennis*), cactus wren (*Campylorhynchus brunneicapillus*), black-tailed gnatcatcher (*Polioptila melanura*), phainopepla (*Phainopepla nitens*), black-throated sparrow (*Amphispiza bilineata*), Gambel's quail (*Callipepla gambelii*), and northern flicker (*Colaptes auratus*) (Brown 1994). Although less abundant, raptors can be common in semidesert grasslands or croplands, and scavengers can be observed throughout the Sonoran Desert. Less than two miles east of the project area are large expanses of irrigated cropland that could attract or concentrate bird species, which may occasionally wander into the project area.

The diverse reptilian fauna in this habitat of the western Sonoran Desert includes desert iguana (*Dipsosaurus dorsalis*), desert spiny lizard (*Sceloporus magister*), Colorado fringed-toed lizard (*Uma notata*), Colorado desert sidewinder (*Crotalus cerastes laterorepens*), rosy boa (*Lichanura trivirgata*), and western shovelnose snake (*Chionactis occipitalis*).

Wildlife observed during biological surveys of the project area included mourning dove, lesser nighthawk, black-throated sparrow, tiger whiptail (*Aspidoscelis tigris*), and long-tailed brush lizard (*Urosaurus graciosus*) (CBP 2012). Although not observed during the surveys, tracks and/or scat were identified within the project corridor for the following species: FTHL, desert kangaroo rat, coyote, kit fox (*Vulpes macrotis*), and sidewinder (*Crotalus cerastes*) (CBP 2012).

The FTHL is currently being managed by an Interagency Coordinating Committee (ICC) following the species listing as Category 2, Candidate for listing as a threatened or endangered species by the USFWS and a candidate species by the CDFG Commission and subsequent lawsuits. The project is located within one of three management areas in Imperial County managed by BLM. The YDMA was established because it was of sufficient area and habitat quality to maintain a self-sustaining FTHL population. Ongoing monitoring of the species has been conducted in the YDMA for many years. Surveys include an established demographic plot in fairly close proximity to the proposed project. Other monitoring efforts include occupancy surveys that represent 45 established plots in the Yuha Desert. The ICC reports annually on results of the monitoring efforts and authorized impacts within the management areas.

3.6.2 Environmental Consequences

3.6.2.1 No Action Alternative

Under the No Action Alternative, no direct impacts on wildlife or wildlife habitat would occur. However, off-road CBV activity and required interdiction actions would continue to degrade wildlife habitat. This degradation of vegetation communities could potentially impact wildlife through a loss of cover, forage, nesting, and other opportunities, and potentially a loss of suitable habitat over large areas if wildfires are ignited. Off-road vehicle and pedestrian traffic would continue to disturb wildlife species, cause fauna to avoid areas of high illegal traffic volume, and disturb or degrade wildlife habitat.

3.6.2.2 Proposed Action Alternative

Under the Proposed Action, up to 7.5 acres of Yuha Desert ACEC habitat would be directly and permanently impacted and cleared of vegetation. Less mobile individuals such as lizards, snakes, or mice could be impacted as tunnels and burrows collapse during road improvements and construction. During construction most wildlife, however, would presumably avoid direct harm by escaping into surrounding habitat where individuals would be forced to compete with other fauna for food, water, and shelter resources.

Disturbance from construction noise and presence of equipment and people would also impact wildlife. The effects of these disturbances on wildlife would include temporary avoidance of work areas and increased competition for unaffected resources. Due to the limited extent and duration of construction activities, the impacts would be minor. Mitigation measures, including pre-construction surveys for nesting migratory birds, would reduce construction-related impacts; these measures are outlined in Section 5.0 of this EA.

Once the project is complete, the road would be more accessible and frequently used by CBP. The increased use would disturb wildlife, which may seek areas with less human activity. The Proposed Action could result in indirect and long-term beneficial impacts on wildlife by reducing the adverse impacts of CBV activity and the resulting law enforcement response. Direct impacts from off-road enforcement actions would be reduced as agents use the designated and improved roadway.

3.6.2.3 BP Hill Improvement Alternative

With the implementation of the BP Hill Alternative, impacts would be similar to those described for the Proposed Action Alternative.

3.7 THREATENED AND ENDANGERED SPECIES

3.7.1 Affected Environment

The ESA protects endangered and threatened species, as well as the habitat upon which they depend for their survival. Federal agencies are required to implement protective measures to avoid or mitigate effects on listed species and to further the purposes of the ESA whenever practicable. The Secretary of the Interior is responsible for the listing of species and development of recovery plans. USFWS is the primary agency responsible for implementing the ESA and is responsible for birds, terrestrial species, and freshwater species. The USFWS responsibilities under the ESA include (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

An endangered species is a taxonomic group officially recognized by the USFWS as being in danger of extinction throughout all or a significant portion of its range. A threatened species is a taxonomic group likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species are those that have been formally submitted to Congress for official listing as threatened or endangered. Species may be considered endangered or threatened when any of the five following criteria occur: (1) current/imminent destruction, modification, or curtailment of their habitat or range; (2) overuse of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; and (5) other natural or human-induced factors affecting continued existence.

In addition, the USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which the USFWS has sufficient information to support proposals to list as endangered or threatened under the ESA. However, proposed rules have not yet been issued because such actions are precluded at present by other listing activity. Although not afforded protection by the ESA, candidate species may be protected under other Federal or state laws.

Biological surveys of the project area were conducted by GSRC on June 28, 2012. No Federally listed or state-listed species were observed during the biological surveys. However, scat and tracks from FTHL, which is a conservation species, were observed within the project corridor.

3.7.1.1 Federal

Four Federally listed species may potentially occur near the project corridor or similar habitat in Imperial County, California (Table 3-2, Appendix C) (USFWS 2012). Of these four species, none have the potential to occur in the project area because no suitable habitat for any of the listed species is located in the project corridor.

Table 3-2. Federally Listed Species for Imperial County, California

Common/Scientific Name	Federal Status	Habitat	Potential to Occur in the Proposed Project Area
BIRDS			
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Endangered	Inhabits dense shrubs and trees along riparian corridors.	No
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Endangered; Proposed Critical Habitat	Inhabits riparian forests, oak (<i>Quercus</i> spp.) woodlands, and shrub willow (<i>Salix</i> spp.) patches along high-elevation streams and meadows, and broad-leaf deciduous forest along desert washes and streams.	No
Yuma clapper rail (<i>Rallus longirostris yumanensis</i>)	Endangered	Inhabits freshwater marshes containing dense stands of cattail (<i>Typha</i> spp.) and bulrush (<i>Juncus</i> spp.), and mature stands of emergent vegetation along margins of shallow ponds with stable water levels.	No
MAMMALS			
Peninsular bighorn sheep (<i>Ovis Canadensis ssp. Nelson</i>)	Endangered; Critical Habitat	Steep terrain that allows escape from predators and has a high variation in slope and aspect. Also known from alluvial fans, valleys linking mountain chains, and washes with browse plants.	No

Source: USFWS 2012

3.7.1.2 Critical Habitat

The ESA also calls for the conservation of designated "Critical Habitat" – the areas of land, water, and air space that an endangered species requires for survival. Critical Habitat also includes such things as food and water sources, breeding sites, cover or shelter, and sufficient habitat area to provide for normal population growth and behavior. One of the primary threats to many species is the destruction, conversion, or modification of essential habitat by uncontrolled land and water development.

Two of the four Federally-listed species have designated Critical Habitat. They are the southwestern willow flycatcher and peninsular bighorn sheep (see Table 3-2). No Critical Habitat occurs within or adjacent to the project area, and the closest designated Critical Habitat is for peninsular bighorn sheep approximately 15 miles to the west (USFWS 2009).

3.7.1.3 State

The CDFG maintains a list of species that are state-listed as rare, threatened, or endangered (CDFG 2012). This list is available in Appendix C and includes 14 animal and 3 plant species that could occur in Imperial County, California. These species are not necessarily the same as

those protected under the ESA. No individuals or habitat for any of the state-listed threatened or endangered species were observed during biological surveys.

3.7.1.4 BLM Sensitive Species

The BLM publishes a list of special status plants and animals which includes BLM sensitive species on lands in the BLM El Centro district of California, where the project area lies, and those lists are provided in Appendix C. Many of these are also listed by the Federal government or the State of California.

Although no Federally listed or state-listed species were observed during the biological surveys, FTHL was recorded in the project corridor. The FTHL is a BLM sensitive species. In addition, five Federal agencies (including BLM) signed a Memorandum of Agreement to protect the FTHL and its habitat on Federal lands. The Strategy specifies compensatory mitigation for ground disturbing impacts within FTHL management areas.

One burrow complex, presumably inhabited by desert kangaroo rats, that could provide habitat for the BLM-listed western burrowing owl (*Athene cunicularia*) and kit fox (*Vulpes macrotis*) was observed and recorded during the June 2012 survey efforts (CBP 2012). The kit fox, burrowing owl, and badger (*Taxidea taxus*) may occur in the project area, and the BLM indicated that these species are of growing concern to CDFG and to area natural resource managers.

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

Under the No Action Alternative, no direct impacts on threatened or endangered species or their habitats would occur. However, the direct and long-term impacts of CBV and consequent law enforcement activities throughout the project area and surrounding areas would continue to threaten listed species and their habitats. CBV activities create trails, damage vegetation, promote the dispersal and establishment of invasive species, and can result in catastrophic wild fires. These actions have an indirect adverse impact on threatened and endangered plant species by causing harm to individuals and degrading their habitat.

The presence of CBVs and resulting law enforcement activities can disturb sensitive animal species, result in their temporary displacement from vital resources, and potentially result in the loss of individuals due to heightened response and exertion, particularly when exposed to high daytime temperatures. The degree of this impact would be dependent on environmental stressors (i.e., drought, season), the health of the animal, and the duration and frequency of disturbances.

3.7.2.2 Proposed Action Alternative

Under the Proposed Action Alternative, there would be no adverse effects on Federally listed or state-listed threatened and endangered species or their habitats, as none exist within the project area. However, long-term, beneficial effects would occur by lessening impacts of CBV activity on habitats throughout the project area and surrounding desert.

The Proposed Action would potentially impact the habitat of four BLM sensitive species: the western burrowing owl, FTHL, kit fox, and badger. Although potential habitat for the western burrowing owl, kit fox, and badger would be impacted, these species were not observed during

recent biological surveys, and the habitat for these species is both locally and regionally common. Biological monitors would be on-site during construction activities, if a western burrowing owl, kit fox, or badger is seen occupying a burrow or structure in the project area, CDFG recommended buffers would be established until the animal has left the project area. Therefore, any potential impacts would not be considered major.

FTHL habitat would be impacted by the construction activities, and there is the potential for taking individuals. BMPs discussed in Section 5.0 of this document, such as preconstruction surveys and monitoring for the presence of the FTHL during construction activities, as well as compensation for loss of habitat, would reduce the impacts on FTHL. When these BMPs are combined with the fact that there is an abundance of habitat for the FTHL both locally and regionally, no major impacts would occur as a result of the Proposed Action Alternative.

3.7.2.3 BP Hill Improvement Alternative

The BP Hill Alternative would have the same impacts on protected species as discussed under the Proposed Action Alternative.

3.8 WATER RESOURCES

3.8.1 Affected Environment

Water quality for designated beneficial uses is protected by the state and should work in tandem with sections 303 and 305 of the Clean Water Act (CWA).

3.8.1.1 Surface Waters

The proposed project area falls within the Colorado River Basin Hydrologic Region (HR) Unit, 1 of 10 hydrologic regions in California that correspond to major watersheds and drainage areas managed by the California Department of Water Resources. As the Proposed Action project area is located within the Colorado River Basin HR, actions within the area are subject to the management directives of the Water Quality Control Plan (Basin Plan) for the Imperial Valley Planning Area, under the jurisdiction of the Colorado River Basin RWQCB.

The Colorado River provides the dominant water source for the area, with water transported via the All-American Canal. Approximately 3.1 million acre-feet of Colorado River water is diverted through the All-American Canal annually (Alles 2011). Surface waters in the area are predominantly used for irrigation, industrial, and domestic purposes (RWQBC 2006). Other surface waters are located several miles to the northeast and east of the project corridor and include the Salton Sea, the Alamo River, the New River, and the Dixie Drain, which runs adjacent to and drains agriculture fields in western Calexico. There are several other smaller canals in the surrounding area that provide irrigation for agricultural purposes.

3.8.1.2 Groundwater

Groundwater in southern California is supplied from two aquifers: the Basin-Fill and the Alluvium and Older Sediments (INS 2001). The project corridor lies within the Coyote Wells Valley Groundwater Basin, which covers approximately 64,000 acres. The depth to groundwater in the project area is likely over 100 feet below ground surface (California Department of Public Works 2004). Common sources of contamination of groundwater include irrigation return flow,

application of pesticides, improper waste disposal, and untreated wastewater. The general quality of the aquifer is low, with data indicating bicarbonate-chloride as the dominant compound. The total recharge to this basin is principally derived from percolation of precipitation on the valley and ephemeral runoff from the surrounding mountains. Unconfined shallow groundwater exists in parts of the basin, but logs indicate confined groundwater conditions for several wells drilled near Ocotillo and Coyote Wells (CDWR 2004).

3.8.1.3 Waters of the United States and Wetlands

Section 404 of the CWA of 1977 (P.L. 95-217) authorizes the Secretary of the Army, acting through the USACE, to issue permits for the discharge of dredged or fill material into Waters of the U.S., including wetlands. Waters of the U.S. (Section 328.3[2] of the CWA) are those waters used in interstate or foreign commerce, subject to ebb and flow of tide, and all interstate waters including interstate wetlands. Waters of the U.S. are further defined as all other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds or impoundments of waters, tributaries of waters, and territorial seas. Jurisdictional boundaries for Waters of the U.S. are defined in the field as the ordinary high water mark, which is that line on the shore or bank established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Wetlands are those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987).

Waters of the U.S. do occur as ephemeral drainages throughout the project corridor, and the survey identified six ephemeral washes bisecting the project corridor that could potentially be regulated as Waters of the U.S. (Figure 3-2). The total impact on the six potential Waters of the U.S. is less than 0.2 acre. Additionally, no wetlands were observed during the biological survey on June 28, 2012.

3.8.2 Environmental Consequences

3.8.2.1 No Action Alternative

Implementation of the No Action Alternative would not result in any impacts on surface waters, groundwater, or Waters of the U.S.

3.8.2.2 Proposed Action Alternative

Water for construction use would be trucked on site and delivered via water truck. It is estimated that 7.8 acre-feet of water (4.9 acre-feet per mile) would be needed for construction purposes. The water would either be provided from the All-American Canal or through a privately permitted water supplier. The one-time use of water from the All-American Canal could result in a temporary reduction of available water in the region; however, this reduction is *de minimis* when in comparison to the volume of water (i.e., 3.1 million acre-feet per year) flowing through the canal. Also, any water obtained from a private contractor would be from permitted wells that are allowed to withdraw set volumes. This minor extraction would have no measurable impact on the water quality or quantity of the region. BMPs to minimize the potential for runoff and sedimentation of the ephemeral washes would also be incorporated into the design of the project.

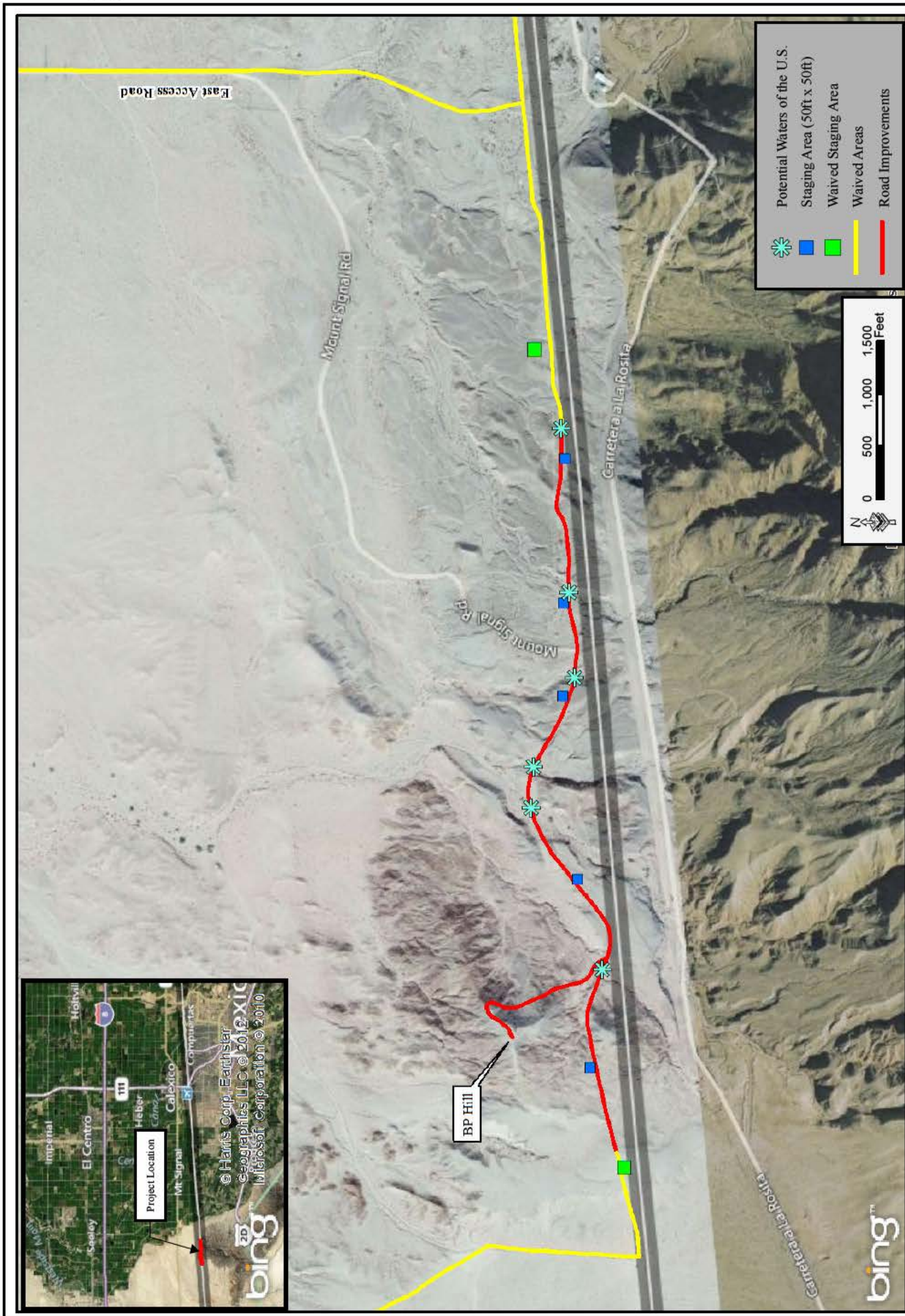


Figure 3-2: Waters of the U.S. within the Project Area

A Stormwater Pollution Prevention Plan (SWPPP) will also be developed and implemented to ensure long-term recovery of the area and to prevent major soil erosion problems.

The Proposed Action Alternative would not result in a permanent impact on any perennial or intermittent streams, as none are present within the project corridor. As mentioned above, six potential jurisdictional ephemeral Waters of the U.S. were identified during field surveys within the project corridor. The six ephemeral washes that are Waters of the U.S. would be traversed using concrete low-water crossings, reinforced concrete pipes, box culverts, or bridges. The expected total impact on those Waters of the U.S. is less than 0.2 acre. The impacted areas associated with these washes range from 0.004 to 0.1 acre. Therefore, each of the crossings would meet the threshold (0.5 acre) for authorization under Section 404 Nationwide Permit 14. Since each has independent utility, each crossing would be considered a single and complete project. Additionally, since all of the Waters of the U.S. crossings do not exceed 0.1 acre these road improvement and construction actions would not require notifying the USACE; however, a Section 401 Water Quality Certification would be obtained from the RWQCB.

The Proposed Action Alternative would not impact any surface water resource sites with the installation of the proposed roadway. Proper maintenance of construction equipment and the use of BMPs during construction activities would minimize the possibility of accidental spills of petroleum, oil, and lubricants (POL) that, if they occurred, could affect surface water and groundwater quality. Operation and maintenance of the proposed roadways would have no effect on the region's surface water or groundwater supplies and/or quality.

3.8.2.3 *BP Hill Improvement Alternative*

Under this alternative, the impacts on surface waters, groundwater, or Waters of the U.S. would be the same as those described for the Proposed Action Alternative.

3.9 AIR QUALITY

3.9.1 Affected Environment

The U.S. Environmental Protection Agency (USEPA) established National Ambient Air Quality Standards (NAAQS) for specific pollutants determined to be of concern with respect to the health and welfare of the general public. Ambient air quality standards are classified as either "primary" or "secondary." The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5), and lead (Pb). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 3-3.

Areas that do not meet these NAAQS standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. The Federal Conformity Final Rule (40 CFR Parts 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. The Federal Conformity Rule was first promulgated in 1993 by the USEPA, following the passage of Amendments to the Clean Air Act in 1990. The rule mandates that a conformity analysis must be performed when a Federal action generates air

pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS.

Table 3-3. National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Times
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour ⁽¹⁾	None	
	35 ppm (40 mg/m ³)	1-hour ⁽¹⁾		
Lead	0.15 µg/m ³ ⁽²⁾	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m ³	Quarterly Average	Same as Primary	
Nitrogen Dioxide	53 ppb ⁽³⁾	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour ⁽⁴⁾	None	
Particulate Matter (PM-10)	150 µg/m ³	24-hour ⁽⁵⁾	Same as Primary	
Particulate Matter (PM-2.5)	15.0 µg/m ³	Annual ⁽⁶⁾ (Arithmetic Average)	Same as Primary	
	35 µg/m ³	24-hour ⁽⁷⁾	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour ⁽⁸⁾	Same as Primary	
	0.08 ppm (1997 std)	8-hour ⁽⁹⁾	Same as Primary	
	0.12 ppm	1-hour ⁽¹⁰⁾	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour ⁽¹⁾
	0.14 ppm			
	75 ppb ⁽¹¹⁾	1-hour	None	

Source: USEPA 2012a at <http://www.epa.gov/air/criteria.html>

Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb - 1 part in 1,000,000,000) by volume, milligrams per cubic meter of air (mg/m³), and micrograms per cubic meter of air (µg/m³).

⁽¹⁾ Not to be exceeded more than once per year.

⁽²⁾ Final rule signed October 15, 2008.

⁽³⁾ The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard

⁽⁴⁾ To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).

⁽⁵⁾ Not to be exceeded more than once per year on average over 3 years.

⁽⁶⁾ To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

⁽⁷⁾ To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

⁽⁸⁾ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (effective May 27, 2008).

⁽⁹⁾ (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.

(c) EPA is in the process of reconsidering these standards (set in March 2008).

⁽¹⁰⁾ (a) EPA revoked the [1-hour ozone standard](#) in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").

(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

⁽¹¹⁾ (a) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

A conformity analysis is the process used to determine whether a Federal action meets the requirements of the General Conformity Rule. It requires the responsible Federal agency to evaluate the nature of a proposed action and associated air pollutant emissions and calculate emissions as a result of the proposed action. If the emissions exceed established limits, known as de minimis thresholds, the proponent is required to implement appropriate mitigation measures.

Both the Federal government and the State of California monitor air quality in California. The USEPA classifies Imperial County as a moderate non-attainment area for 8-hour ozone, serious non-attainment for PM-10, and moderate non-attainment of PM-2.5 (EPA 2012b). California Air Resources Board (CARB) classifies Imperial County as in non-attainment for ozone, PM-2.5 and PM-10 (CARB 2010). Table 3-4 presents a summary of attainment and maintenance status for NAAQS and California Ambient Air Quality Standards (CAAQS) in Imperial County.

Table 3-4. NAAQS and CAAQS Air Quality Status in Imperial County

Pollutant	Federal Designation	State Designation
O ₃	Non-attainment (Moderate)	Non-attainment
CO	Attainment	Attainment
PM-10	Non-Attainment (Serious)	Non-attainment
PM-2.5	Non-attainment (Moderate)	Non-attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Pb	Attainment	Attainment
Sulfates	No Federal standard	Attainment
Hydrogen Sulfide	No Federal standard	Unclassified
Visibility-Reducing Particles	No Federal standard	Unclassified

Source: USEPA 2012b and CARB 2012

3.9.1.1 Greenhouse Gases and Climate Change

Global climate change refers to a change in the average weather on the earth. Greenhouse gases (GHG) are gases that trap heat in the atmosphere. They include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated gases including chlorofluorocarbons (CFC) and hydrochlorofluorocarbons (HFC), and halons, as well as ground-level O₃ (California Energy Commission 2007).

The major GHG-producing sectors in society include transportation, utilities (e.g., coal and gas power plants), industry/manufacturing, agriculture, and residential. End-use sector sources of GHG emissions include transportation (40.7 percent), electricity generation (22.2 percent), industry (20.5 percent), agriculture and forestry (8.3 percent), and other (8.3 percent) (California Energy Commission 2007). The main sources of increased concentrations of GHG due to human activity include the combustion of fossil fuels and deforestation (CO₂), livestock and rice farming, land use and wetland depletions, landfill emissions (CH₄), refrigeration system and fire suppression system use and manufacturing (CFC), and agricultural activities, including the use of fertilizers (California Energy Commission 2007).

Final Mandatory GHG Inventory Rule

In response to the Consolidation Appropriations Act (House Resolution 2764; PL 110–161), USEPA has issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires

large sources that emit 25,000 metric tons (27,557 U.S. tons) or more per year of GHG emissions to report GHG emissions in the United States, collect accurate and timely emissions data to inform future policy decisions, and submit annual GHG reports to the USEPA. The final rule was signed by the Administrator on September 22, 2009, published on October 30, 2009, and made effective December 29, 2009.

GHG Threshold of Significance

CEQ drafted guidelines for determining meaningful GHG decision-making analysis. The CEQ guidance states that if the Project would be reasonably anticipated to cause direct emissions of 25,000 metric tons (27,557 U.S. tons) or more of CO₂ GHG emissions on an annual basis, agencies should consider this a threshold for decision makers and the public. CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHG (CEQ 2010).

The GHG covered by EO 13514 are CO₂, CH₄, N₂O, HFC, perfluorocarbons, and sulfur hexafluoride. These GHG have varying heat-trapping abilities and atmospheric lifetimes. CO₂ equivalency (CO₂e) is a measuring methodology used to compare the heat-trapping impact from various greenhouse gases relative to CO₂. Some gases have a greater global warming potential than others. Nitrous oxides (NO_x), for instance, have a global warming potential that is 310 times greater than an equivalent amount of CO₂, and CH₄ is 21 times greater than an equivalent amount of CO₂ (USEPA 2010).

3.9.2 Environmental Consequences

3.9.2.1 No Action Alternative

The No Action Alternative would not result in any direct impacts on air quality because there would be no construction activities. However, fugitive dust emissions created by illegal off-road vehicle traffic and resulting law enforcement actions and vehicle traffic would continue and likely increase. These fugitive dust emissions would continue to adversely affect the air quality of the region.

3.9.2.2 Proposed Action Alternative

Temporary and minor increases in air pollution would occur from the use of construction equipment (combustion emissions) and the disturbance of soils (fugitive dust) during construction. The following paragraphs describe the methodologies used to estimate air emissions produced by the construction activities.

Fugitive dust emissions were calculated using USEPA's preferred emission factor of 0.19 ton per acre per month (Midwest Research Institute 1996), which is a more current standard than the 1985 PM-10 emission factor of 1.2 tons per acre-month presented in AP-42 Section 13 Miscellaneous Sources 13.2.3.3 (USEPA 2001).

NONROAD2008a model was used to estimate air emissions from construction equipment. It is USEPA's preferred model for estimating emissions from non-road sources (USEPA 2009a). Combustion emission calculations were made for standard construction equipment, such as a

backhoe, bulldozer, dump truck, and cement truck. Assumptions were made regarding the total number of days and hours each piece of equipment would be used.

Construction workers would temporarily increase the combustion emissions in the airshed during their commute to and from the project area. Emissions from trucks delivering materials such as cement, fill, and supplies would also contribute to the overall air emission budget. Emissions from delivery trucks and construction worker commuters traveling to the job site were calculated using USEPA's preferred on-road vehicle emission model MOVES2010a (USEPA 2009b).

The total air quality emissions from the construction activities were calculated and compared to the *de minimis* thresholds of the General Conformity Rule. Summaries of the total emissions for construction activities are presented in Table 3-5. Details of the conformity analyses are presented in Appendix D.

Table 3-5. Total Air Emissions (tons/year) from the Proposed Action Construction versus the *de minimis* Threshold Levels-Imperial County

Pollutant	Total (tons/year)	<i>de minimis</i> Thresholds (tons/year) ¹
CO	9.52	100
Volatile Organic Compounds (VOC)	6.23	100
Nitrous Oxides (NOx)	16.36	100
PM-10	5.91	70
PM-2.5	1.74	100
SO ₂	1.92	100
CO ₂ and CO ₂ equivalents	6,338	27,557

Source: 40 CFR 51.853 and Gulf South Research Corporation (GSRC) model projections.

¹ Note that Imperial County is in non-attainment for Ozone, PM-10 (serious), and PM 2.5 (USEPA 2010 and CARB 2012).

Several sources of air pollutants would contribute to the overall air impacts of the construction project. The air results in Table 3-5 included emissions from the following sources.

- Combustion engines of construction equipment
- Construction workers commuting to and from work
- Supply trucks delivering materials to construction site
- Fugitive dust from job-site ground disturbances

As can be seen from the tables above, the proposed construction and operational activities do not exceed Federal *de minimis* thresholds for NAAQS, CAAQS, and GHG and, thus, would not require a Conformity Determination. As there are no violations of air quality standards and no conflicts with the state implementation plans, the impacts on air quality from the implementation of the Proposed Action would not be major. BMPs would be incorporated to ensure that fugitive dust and other air quality constituent emission levels do not rise above the minimum threshold as required per 40 CFR 51.853(b)(1), and are located in Section 5.8.

3.9.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the total air quality emissions from the construction activities would be similar to those calculated for the Proposed Action Alternative. The proposed construction and operational activities would not be expected to exceed Federal *de minimis* thresholds for NAAQS, CAAQS, and GHG and, similar to the Proposed Action Alternative, would not require a Conformity Determination. As there are no violations of air quality standards and no conflicts with the state implementation plans, the impacts on air quality from the implementation of this alternative would be minor. BMPs would be utilized to ensure that emission levels are below Federal minimum thresholds.

3.10 NOISE

3.10.1 Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective effects (i.e., hearing loss, damage to structures, etc.) or subjective judgments (e.g., community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The threshold of human hearing is approximately 3 dB, and the threshold of discomfort or pain is around 120 dB. The A-weighted decibel (dBA) is a measurement of sound pressure adjusted to conform with the frequency response of the human ear. The dBA metric is most commonly used for the measurement of environmental and industrial noise.

Noise levels occurring at night generally produce a greater annoyance than do the same levels occurring during the day. It is generally agreed that people perceive intrusive noise at night as being 10 dBA louder than the same level of intrusive noise during the day, at least in terms of its potential for causing community annoyance. This perception is largely because background environmental sound levels at night in most areas are also about 10 dBA lower than those during the day.

Long-term noise levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise metric recommended by the USEPA and has been adopted by most Federal agencies (USEPA 1974). A DNL of 65 dBA is the level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like construction.

Residential Neighborhoods

Acceptable noise levels have been established by the U.S. Department of Housing and Urban Development (HUD) for construction activities in residential areas (HUD 1984):

Acceptable (not exceeding 65 dBA) – The noise exposure may be of some concern, but common building construction will make the indoor environment acceptable, and the outdoor environment will be reasonably pleasant for recreation and play.

Normally Unacceptable (above 65 but not greater than 75 dBA) – The noise exposure is significantly more severe; barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building construction may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.

Unacceptable (greater than 75 dBA) – The noise exposure at the site is so severe that the construction costs to make the indoor noise environment acceptable may be prohibitive, and the outdoor environment would still be unacceptable.

Noise Attenuation

As a general rule of thumb, noise generated by a stationary noise source, or “point source,” will decrease by approximately 6 dBA over hard surfaces and 9 dBA over soft surfaces for each doubling of the distance. For example, if a noise source produces a noise level of 85 dBA at a reference distance of 50 feet over a hard surface, then the noise level would be 79 dBA at a distance of 100 feet from the noise source, 73 dBA at a distance of 200 feet, and so on. To estimate the attenuation of the noise over a given distance, the following relationship is utilized:

$$\text{Equation 1: } dBA_2 = dBA_1 - 20 \log^{(d_2/d_1)}$$

Where:

dBA_2 = dBA at distance 2 from source (predicted)
 dBA_1 = dBA at distance 1 from source (measured)
 d_2 = Distance to location 2 from the source
 d_1 = Distance to location 1 from the source

Source: California Department of Transportation (Caltrans) 1998

The project corridor is located in a rural area and the closest sensitive noise receptor is a residential home located approximately 2.2 miles north of the project corridor.

3.10.2 Environmental Consequences

3.10.2.1 No Action Alternative

Under the No Action Alternative, the sensitive noise receptors and wildlife near the proposed project site would not experience construction noise emissions; however, noise emissions associated with CBV off-road travel and consequent law enforcement actions would be long-term and minor, and would continue under the No Action Alternative.

3.10.2.2 Proposed Action Alternative

Construction Noise

The proposed construction activities would require the use of common construction equipment. Table 3-6 presents noise emission levels for construction equipment expected to be used during the proposed construction activities. Anticipated sound levels at 50 feet from various types of construction equipment range from 76 dBA to 84 dBA, based on data from the Federal Highway Administration (FHWA) 2007.

Table 3-6. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances¹

Noise Source	50 feet	100 feet	200 feet	500 feet	1000 feet
Backhoe	78	72	66	58	51
Dump Truck	76	70	64	56	49
Excavator	81	75	69	61	54
Concrete mixer truck	79	73	67	59	52
Bulldozer	84	78	72	64	57
Front-end loader	82	76	70	62	55

Source: FHWA 2007

¹The dBA at 50 feet is a measured noise emission. The 100- to 1,000-foot results are GSRC modeled estimates.

Construction would involve the use of a bulldozer, which has a noise emission level of 84 dBA at 50 feet from the source. Assuming the worst case scenario, the noise model (Caltrans 1998) estimates that noise emissions of 84 dBA would have to travel 450 feet before they would attenuate to an acceptable level of 65 dBA. To achieve an attenuation of 84 dBA to a normally unacceptable level of 75 dBA, the distance from the noise source to the receptor would need to be 140 feet. The closest sensitive noise receptor near the project corridor is over 11,000 feet away; therefore, the noise impacts from construction activities would be considered negligible.

3.10.2.3 BP Hill Improvement Alternative

Impacts as a result of this alternative would be the same as those described for the Proposed Action Alternative.

3.11 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

3.11.1 Affected Environmental

3.11.1.1 Current Investigations

Prior to fieldwork, GSRC conducted a search of records on file at South Coastal Information Center of the California Historic Resources Information System at San Diego State University. Previous investigations and known cultural resources within a 1-mile radius of the project area were also cross-checked with records at the BLM El Centro Field Office. The review of cultural resources records indicates that 33 known previous projects were conducted within 1-mile surrounding the project corridor. These investigations have resulted in the identification of 39 archaeological sites (38 prehistoric and 1 historic). Two previously recorded sites, CA-IMP4833 and CA-IMP-4829, were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a historic cairn and trail segment located near the eastern end of the road. CA-IMP-4829 is described as a prehistoric quartz chipping station in the same vicinity. In addition, one isolated feature (13-009617), which consists of International Boundary Monument No. 225, was also identified adjacent to the project corridor.

GSRC Archaeologists David Hart, Dean Barnes, and Adam Searcy conducted the Class III intensive survey of the entire project area under California BLM Permit No. CA-12-09; Fieldwork Authorization No. CA-670-12-086-FA-01 from July 9 through July 11, 2012. GSRC has submitted a Draft Cultural Resources Survey Report to the BLM El Centro Field Office for review and approval. Mr. John Bathke, Tribe Historic Preservation Officer of the Fort Yuma

Quechan Tribe was on-site while GSRC conducted the survey. No new archaeological sites and nine isolated occurrences (IOs) were identified and recorded. The IOs consist of five General Land Office (GLO) historic survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

GSRC attempted to relocate both of the previously recorded archaeological sites, CA-IMP-4829 and CA-IMP-4833, as part of the pedestrian survey. GSRC determined that both sites have been completely destroyed by an extensive gravel quarry operated by the Imperial Irrigation District.

There were no aboveground historic structures within a 1-mile radius of the APE.

3.11.1.2 Tribal Concerns

Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and defines procedures governing Federal agencies' statutory responsibilities. Revisions to these procedures emphasized consultation with Native American tribes as part of the Section 106 process for all Federal undertakings subject to Section 106 review, regardless of whether or not the undertaking is on tribal land. GSRC requested a Sacred Lands File and Native American Contacts List Requests on behalf of CBP on June 14, 2012, from the Native American Heritage Commission (NAHC). On June 18, 2012, the NAHC conducted a Sacred Lands File search of its inventory and did not identify any Native American cultural resources in the APE (Appendix A). However, the project is proximate to Native American cultural resources (NAHC 2012).

3.11.2 Environmental Consequences

3.11.2.1 No Action Alternative

No new impacts on cultural resources would occur upon implementation of the No Action Alternative, as no improvement or construction activities would take place. No changes in ongoing operations would occur with this alternative.

3.11.2.2 Proposed Action Alternative

Two NRHP-eligible historic objects, International Boundary Monuments No. 224 and No. 225, were identified through the records search and fieldwork. Both monuments would be avoided during construction; therefore, no impacts would occur to the monuments. In the absence of any other intact NRHP-eligible archaeological sites or historic properties located within the project corridor, no adverse impacts are expected to occur on any cultural resources or historic properties as a result of the Proposed Action Alternative. The California SHPO has concurred with CBP's determination of no adverse impacts (Appendix A). Additionally, BMPs as described in Section 5.7 would be implemented in an effort to avoid or minimize impacts on the GLO markers.

3.11.2.3 BP Hill Improvement Alternative

The impacts under the BP Hill Improvement Alternative are expected to be the same as those outlined under the Proposed Action Alternative.

3.12 ROADWAYS AND TRAFFIC

3.12.1 Affected Environment

The only paved road that has regular vehicle traffic near the project corridor is SR 98, which is approximately 2 miles north of the project corridor. SR 98 would be used to access the project corridor from the west and east via existing unimproved roads. Vehicles expected to travel SR 98 during construction activities include transport vehicles and delivery trucks.

3.12.2 Environmental Consequences

3.12.2.1 No Action Alternative

The No Action Alternative would not increase the use of roadways, and traffic volumes would not change because no construction or improvements would occur.

3.12.2.2 Proposed Action Alternative

Vehicle traffic along SR 98 would be increased by approximately 40 vehicles per day during the construction period. This increase in daily traffic volume would consist of heavy-duty delivery trucks and construction personnel passenger vehicles. During project construction, the delivery of materials and equipment could cause minor delays along the affected segment of SR 98.

The 2011 annual average daily traffic volume on SR 98 (Imperial Highway portion) was approximately 1,650 vehicles per day (Caltrans 2012). The potential increase (2 percent) of traffic associated with this alternative is well below the capacity of SR 98. Although additional construction traffic would impair traffic flow on SR 98, these impacts would be temporary and, therefore, minimal.

3.12.2.3 BP Hill Improvement Alternative

Under this alternative, the impacts on roadways and traffic within the project area would be similar to those described for Proposed Action Alternative.

3.13 AESTHETICS AND VISUAL RESOURCES

3.13.1 Affected Environment

Aesthetic resources consist of the natural and man-made landscape features that appear indigenous to the area and give a particular environment its visual characteristics. Construction would occur in the Yuha Basin ACEC on Federal lands managed by the BLM. BLM manages these lands to ensure that activities preserve the character of the landscape. Lands controlled by BLM are assigned a visual resource inventory class, which has a two-fold purpose. First, it serves as an inventory tool that portrays the relative value of the visual resources, and secondly, it serves as a management tool that portrays the visual management objectives.

Visual resources are divided into four Visual Resource Management (VRM) classes. The project area and its vicinity are characterized as VRM Class III. The objective of VRM Class III is to partially retain the existing character of the landscape. Management activities can attract attention but should not dominate the view of the public. The level of change to the characteristic landscape can be moderate to high.

The project corridor has limited aesthetic value due to past and ongoing human activities within and adjacent to the project corridor. The project corridor is adjacent to CBP infrastructure (i.e., vehicle barriers), IID gravel/sand quarry, and a water treatment facility and associated roads in Mexico. In addition, the project corridor has been degraded due to illegal foot and vehicle traffic and subsequent law enforcement actions.

3.13.2 Environmental Consequences

3.13.2.1 No Action Alternative

Aesthetics in the project corridor would continue to diminish with the implementation of the No Action Alternative. The vegetation and landscape within the area would continue to be destroyed and trampled. Thus, negative impacts on aesthetics and visual resources in the area would be expected to continue with the selection of the No Action Alternative.

3.13.2.2 Proposed Action Alternative

Degradation of the aesthetic value of the project area would occur during construction, within the immediate area. It should be noted, however, that the proposed site is adjacent to the U.S./Mexico border, which has been heavily degraded due to illegal vehicle/foot traffic and the subsequent USBP actions required to monitor and halt/apprehend these illegal activities. A minor to negligible visual impact would occur initially after construction activities but would be reduced over time. The varied and undulating terrain along the project corridor would preclude sight of the proposed construction and improvement activities, except in the immediate vicinity and/or from high vantage points. The Proposed Action Alternative is consistent with the visual resource management goals of the BLM. Thus, no major impacts on aesthetics and visual resources within the project corridor are expected.

3.13.2.3 BP Hill Improvement Alternative

Under this alternative, the impacts on aesthetics and visual resources within the area would be the same as those described for the Proposed Action Alternative.

3.14 HAZARDOUS MATERIALS

3.14.1 Affected Environment

There are a total of 10 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Superfund sites identified within Imperial County; however, none are located on or near the proposed project corridor (USEPA 2012). Only one site, located north of the City of Calexico and approximately 15 miles from the proposed site location, is designated as a Superfund site and is currently listed as having National Priorities List (NPL) status. In addition, no Resource Conservation and Recovery Act (RCRA) violation and corrective action sites, Leaking Underground Storage Tanks sites, NPL sites, or No Further Remedial Action Planned sites are known to exist near the proposed project corridor (USEPA 2012c).

No visual evidence of hazardous materials or environmental liabilities, including odors, drums, stained soil, stressed vegetation, wastewater, wells, and/or septic tanks, were observed during the site visit on June 28, 2012. According to USEPA (2012c), there is no known or suspected toxic and/or hazardous material contamination in the area surrounding the proposed project corridor, and there are no known historic land uses at the proposed sites that might have resulted in toxic

or hazardous material contamination of the underlying soil and/or groundwater resources. A transaction screen assessment, in accordance with American Society for Testing and Materials (ASTM) standard E1528-06 was performed for the project corridor, and no potential environmental concerns were identified.

3.14.2 Environmental Consequences

3.14.2.1 No Action Alternative

No impacts would occur on hazardous materials or wastes upon implementation of the No Action Alternative.

3.14.2.2 Proposed Action Alternative

No hazardous materials were observed during field surveys. In addition, no known state or Federal sites with known contamination exists in the project corridor area. Temporary impacts could occur, as the potential exists that POL and other hazardous materials could be released during improvement and construction activities. Through the use of proper BMPs (see Section 5), frequent vehicle inspections, and careful handling of hazardous materials, the possibility of either leaks or spills would be minimized; thus, no or negligible impacts are expected to occur.

3.14.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the impacts from hazardous wastes and materials within the project area would be the same as those described for the Proposed Action Alternative.

3.15 SOCIOECONOMICS

3.15.1 Affected Environment

This socioeconomics section outlines the basic attributes of population and economic activity in Imperial County, California, and the City of Calexico. The area is sparsely populated and relatively low-income, and in 2011, Imperial County had the highest unemployment rate of any county in the Nation, with an annual average unemployment rate of 29.7 percent.

3.15.1.1 Population

Population data for Imperial County, Calexico, and the study area census tract are shown in Table 3-7. Imperial County and Calexico grew rapidly, 22.6 and 42.3 percent, respectively, over the last decade, while California's population growth (10 percent) was in line with growth across the Nation (9.7 percent).

Table 3-7. Population

	Census Tract 123.01	Calexico	Imperial County	California
2010 Population	5,633	38,572	174,528	37,253,956
2000 Population	5,202	27,109	142,361	33,871,648
Percent Change	8.3	42.3	22.6	10.0

Source: U.S. Census Bureau 2000 and 2010a.

The project area is a high minority area, as shown in Table 3-8. According to the 2010 Census, more than 80 percent of the population of Imperial County and more than 96 percent of

Calexico's population reports being of Hispanic or Latino origin. Slightly more than half of the population of Census Tract 123.01 reports being of Hispanic or Latino origin, with the census tract also reporting almost 28 percent Black or African American.

Table 3-8. Race and Ethnicity

	Hispanic	White, Not Hispanic	Black or African American
Imperial County	80.4	13.7	3.8
Calexico	96.8	1.7	0.6
Census Tract 123.01	51.1	19.3	27.8
California	37.6	40.1	7.2
United States	16.3	63.7	13.6

Source: U.S. Census Bureau 2010a.

As shown in Table 3-9, American Community Survey estimates show that Imperial County has a much lower percentage of high school and college graduates than the State of California and the Nation. In Imperial County, only 62.3 percent of persons age 25 and above have a high school credential compared to more than 80 percent for the State of California and 85 percent for the Nation. Only about 12 percent of Imperial County residents have a bachelor's degree or higher compared to more than 30 percent for California and almost 28 percent for the Nation.

Table 3-9. Educational Attainment

Percent of Persons Age 25+	Imperial County	California	United States
High school graduate	62.3%	80.7%	85.0%
Bachelor's degree or higher	12.2%	30.1%	27.9%

Source: U.S. Census Bureau 2010b

3.15.1.2 Employment, Poverty Levels, and Income

In 2011, the annual average labor force in Imperial County was 77,561. The unemployment rate was 29.7 percent, the highest county unemployment rate in the Nation. It was more than triple the National unemployment rate of 8.9 percent and well above the 11.7 percent unemployment rate for the State of California (U.S. Bureau of Labor Statistics 2011).

The economy of the region is heavily based on agriculture, with farms irrigated using water from the Colorado River via the All-American Canal. The county is an important producer of vegetable and melon crops, field crops, and livestock, with top commodities including cattle, lettuce, and alfalfa (Imperial County 2010).

County Business Patterns data show that employment in Imperial County is concentrated in the "retail," "healthcare and social assistance," and "accommodation and food services" categories, as shown in Table 3-10. Together they account for approximately 51 percent of employment in Imperial County, compared to 35 percent for California and 38 percent for the U.S. The "retail" and "accommodation and food services" industries are historically lower-paying industries. Industries that are typically higher-paying, such as "information" and "professional, scientific,

and technical services,” account for only about 4 percent of employment in Imperial County compared to 13 percent for the State of California.

Table 3-10. Employment by Industry Sector (Percent of Total)

	Imperial County	California	United States
Forestry, fishing, hunting, and agricultural support	2%	<1%	<1%
Mining, quarrying, and oil and gas extraction	<1%	<1%	1%
Utilities	NA	NA	1%
Construction	5%	5%	5%
Manufacturing	11%	10%	10%
Wholesale trade	6%	6%	5%
Retail trade	25%	12%	13%
Transportation and warehousing	5%	3%	4%
Information	1%	4%	3%
Finance and insurance	3%	5%	5%
Real estate and rental and leasing	2%	2%	2%
Professional, scientific, and technical services	3%	9%	7%
Management of companies and enterprises	<1%	2%	2%
Admin & Support; Waste Management & Remediation Services	5%	8%	8%
Educational services	1%	3%	3%
Health care and social assistance	14%	13%	15%
Arts, entertainment, and recreation	2%	<1%	2%
Accommodation and food services	12%	10%	10%
Other services (except public administration)	3%	4%	5%
Industries not classified	<1%	<1%	NA

Source: U.S. Census Bureau 2009

Income and poverty data are shown in Table 3-11. Per capita income for Imperial County is very low at \$27,342, which is 68.5 percent of the National average. Per capita income for California, \$42,514, is more than 106 percent of the National average. Median household income for Imperial County and Calexico are also well below California and the Nation (U.S. Bureau of Economic Analysis [BEA], 2009).

Table 3-11. Income and Poverty

	Census Tract 123.01	Calexico	Imperial County	California	United States
Per capita personal income (dollars), 2009		NA	\$27,342	\$42,514	\$39,937
Per capita income as a percent of U.S., 2009		NA	68.5	106.5	100
Median Household Income (2006-2010)		\$34,848	\$38,685	\$60,883	\$51,914
Persons of all ages below poverty level, percent, 2006-2010	19.5	22.1	21.4	13.7	13.8

Sources: U.S. Census Bureau 2010b and U.S. BEA 2009.

As might be expected based on the income numbers and unemployment rate, the poverty rates for Imperial County and the City of Calexico (21.4 and 22.1 percent, respectively) are well above the poverty rates for California (13.7 percent) and the Nation (13.8 percent) (U.S. Census Bureau 2010b).

3.15.1.3 Housing

Data on housing units in the project area, California, and the Nation are presented in Table 3-12. These data show that in Census Tract 123.01, a much higher than average percentage of the population lives in the homes they own, with 74 percent of the homes owner-occupied, compared to about 55 percent for Imperial County and 65 percent for the Nation. The homeowner and rental vacancy rates in Census Tract 123.01 are also much higher than the county, the state, and the Nation.

Table 3-12. Housing Units

Geographic Area	Total Housing Units	Occupied			Homeowner Vacancy Rate* (Percent)	Rental Vacancy Rate** (Percent)	Vacant Units for Rent
		Units	Percent Owner Occupied	Percent Renter Occupied			
Census Tract 123.01	975	448	74.0	26.0	7.1	16.1	151
Calexico	10,651	10,116	53.7	46.3	2.6	3.1	23
Imperial County	56,067	49,126	55.9	44.1	3.5	7.5	1,762
State of California	13,680,081	12,577,498	55.9	44.1	2.1	6.3	374,610
United States	131,704,730	116,716,292	65.1	34.9	2.4	9.2	4,137,567

Source: U.S. Census Bureau 2010a

*Homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale."

** Rental vacancy rate is the proportion of the rental inventory that is vacant "for rent."

3.15.2 Environmental Consequences

3.15.2.1 No Action Alternative

The No Action Alternative would result in no new impacts on socioeconomics within the region, as no road construction and improvements would occur.

3.15.2.2 Proposed Action Alternative

The proposed project area is located approximately 10 miles west of the nearest populated area, Calexico, California. During construction there would be a temporary but minimal increase in population from the addition of construction crews in the area. No housing units or businesses are located within the footprint of the Proposed Action Alternative, so no displacement of existing people or businesses would be anticipated. Construction crews would stay at hotels. As a result, no additional demand for housing is anticipated during construction. No major adverse impacts on the regional economy or demographics would be anticipated from the Proposed Action Alternative. However, the proposed improvements would have temporary cumulative beneficial impacts on the region's economy due to temporary employment and sales taxes generated through the purchase of construction-related items such as fuel and food.

3.15.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the impacts on regional economy or demographics would be the same as those described for the Proposed Action Alternative.

3.16 HUMAN HEALTH AND SAFETY

3.16.1 Affected Environment

Human health effects occur in a variety of forms, such as exposure to chemicals, extreme temperatures, weather, and physical security and safety. Generally, human health factors are driven by factors that differ substantially by geographic area. In the project area, factors that could impact human health range from automobile accidents, extreme weather such as wildfires and high temperatures, and physical security on the site, as well as minimizing the chance that non-site workers could venture on the project site and be harmed. However, the general area surrounding the project site consists of BLM desert scrubland. No residences or community parks are located within 2.0 miles of the project corridor.

3.16.2 Environmental Consequences

3.16.2.1 No Action Alternative

Under the No Action Alternative, no construction would occur; therefore, there would be no direct impacts, either beneficial or adverse, on human health and safety due to construction activities. However, USBP agents would continue to face safety related issues while trying to maintain and access the BP Hill RVSS tower, as well as patrol the existing border road.

3.16.2.2 Proposed Action Alternative

There is little potential for USBP agents, private contractors, BLM personnel, or the general public to be at risk from a human health and safety aspect as a result of the Proposed Action Alternative. Construction would occur during daylight hours, whenever possible. Safety buffer zones would be designated around all construction sites to ensure public health and safety. Automobile traffic associated with construction and operation of the improved roadway is not anticipated to increase the risks of automobile accidents or roadway capacities. Through BMPs developed for general construction practices (see Section 5.0), and because of the rural nature of the project area with no residences located near the project footprint, negligible impacts would be expected.

3.16.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the impacts on human health and safety would be the same as those described for the Proposed Action Alternative.

3.17 SUSTAINABILITY AND GREENING

3.17.1 Affected Environment

In accordance with EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management (72 FR 3919), CBP would incorporate practices in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner in support of its mission. CBP implements practices throughout the agency to:

1) improve energy efficiency and reduce GHG emissions; 2) implement renewable energy projects; 3) reduce water consumption; 4) incorporate sustainable environmental practices such

as recycling and the purchase of recycled-content products; and 5) reduce the quantity of toxic and hazardous materials used and disposed of by the agency.

3.17.2 Environmental Consequences

3.17.2.1 No Action Alternative

The No Action Alternative would not increase the use of fossil fuels or GHG emissions because no additional construction would occur.

3.17.2.2 Proposed Action Alternative

Under the Proposed Action Alternative, the Federal sustainability and greening practices would be implemented, to the maximum extent practicable. No major impacts regarding Sustainability and Greening would occur.

3.17.2.3 BP Hill Improvement Alternative

Under the BP Hill Improvement Alternative, the impacts on sustainability and greening would be the same as those described for the Proposed Action Alternative.

3.18 PALEONTOLOGICAL RESOURCES

3.18.1 Affected Environment

The surface and near-surface geologic units in the project area are of Recent and Holocene age, between 500 and 8,000 years old, and are a result of deposition of sediments in and around the ancient Lake Cahuilla (San Diego State University 2012). Lake Cahuilla was the predecessor of the current Salton Sea, and held a significant volume of fresh to slightly brackish water. Studies of the history of Lake Cahuilla indicate that the lake was active from the Pleistocene glacial periods to as recent as 500 years B.P. Sediments deposited in the lake and on shorelines around the lake contain dead vertebrate (fish) and invertebrate (gastropods and mollusks) organisms, but the types of organisms present in Lake Cahuilla are nearly identical to those presently found in the Salton Sea remnant of the ancient lake. Also, during the active period of Lake Cahuilla, Native American peoples lived around the shores of the lake and harvested organisms for food (Salton Sea Authority 2012). Discarded shells and fish bones would have been reworked by humans and thus would be considered archaeological artifacts, not fossils. The Proposed Action would occur near the center of the former Lake Cahuilla, and sediments in that area would be the youngest due to the retreat of the lake toward the center as water evaporated through time. Therefore, the potential for discovery of significant paleontological resources during any excavation activities is considered low.

3.18.2 Environmental Consequences

3.18.2.1 No Action Alternative

The No Action Alternative would result in no new impacts on paleontological resources within the region, as no road construction or improvements would occur.

3.18.2.2 Proposed Action Alternative

A pedestrian archaeological survey of the project corridor was conducted, and no fossil shells or bones were identified on the surface. No relict shoreline features are present within the project corridor, and significant recently deposited gravel and boulder material is present on the surface.

Any fossilized shells found in these deposits would be loose, and would have no provenance relationship with the original sediments from which they came. Additionally, based on the geotechnical borings and cores recovered for the Proposed Action, no indurated rock strata were recovered (Michael Baker 2012).

Using the BLM Potential Fossil Yield Classification (PFYC) System, the potential for discovery of vertebrate fossils or scientifically significant non-vertebrate fossils would be low, fitting into the PFYC Class 2. The deposits are younger than 10,000 years B.P., any remains found would be identical to currently living organisms, any fossils found would be loose with no indication of provenance, no scientific knowledge could be gained from the study of any loose fossils found, and any concentration of shells or fish bones found would be treated as an archaeological site. As stated in the BLM's Instruction Memorandum Number 2008-009, the assessment or mitigation of paleontological resources in areas classified as Class 2 is not likely to be necessary. CBP would have cultural resources monitors on-site during ground-disturbing activities, which will also reduce the likelihood of impacting unknown paleontological resources. Therefore, CBP considers any potential impacts on this resource from ground-disturbing activities of the Proposed Action to be negligible.

SECTION 4.0
CUMULATIVE IMPACTS

4.0 CUMULATIVE IMPACTS

NEPA regulations define cumulative impacts as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time by various agencies (Federal, state, and local) or individuals. Informed decision making is served by consideration of cumulative impacts resulting from activities that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

This cumulative impacts analysis summarizes expected environmental effects from the combined impacts of past, current, and reasonably foreseeable future activities that affected any part of the human or biological environment impacted by the Proposed Action. Activities were identified for this analysis by reviewing CBP and BLM documents, news/press releases and published media reports, and through consultation with planning and engineering departments of local governments, and state and Federal agencies.

4.1 CBP PROJECTS

USBP has been conducting law enforcement actions along the U.S/Mexico border since its inception in 1924, and has continually transformed its methods as new missions, CBV modes of operations, agent needs, and National enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have affected hundreds of acres of resources in southern California, including the climate and landscapes that support native plants and animals, as well as socioeconomic conditions in border communities.

All CBP actions have been in support of the agency’s mission to gain and maintain control of the United States’ borders. Infrastructure projects have supported the operational methods determined to be the most effective approach to achieving the agency’s mission. Each of these projects has been compliant with NEPA, and measures to avoid, minimize, or mitigate for the adverse effects on the human and biological environment have been developed and implemented on a project-specific basis. With continued funding and implementation of BMPs developed as part of past, ongoing, and future actions, including environmental education and training of its agents, use of biological and archaeological monitors, and restoration activities, the direct impacts of these projects have been and would be prevented or minimized.

As mentioned previously, CBP published the May 2008 Environmental Stewardship Plan (ESP) for the Construction, Operation, and Maintenance of Tactical Infrastructure, U.S. Border Patrol (USBP), El Centro Sector, California, which described the proposed TI and any potential environmental impacts. The TI to be constructed within the El Centro Sector was divided into five segments designated as BV-1, B-2, B-4, B5-A, and B-5B. Segments BV-1 and B-2 adjoin the current project area from the west and east, respectively. Within these segments, 71.8 acres

were impacted from the construction of fence, access and patrol roads, and staging areas. The total project footprint for all TI constructed as part of the El Centro project was 326 acres.

The Proposed Action Alternative addressed in this EA is part of a larger TI project, portions of which are waived from NEPA and other Federal regulatory compliance by the Secretary of DHS. The other elements of the larger TI project include the improvement, operation, and maintenance of two staging areas, two access roads, and border road to the east and west of the proposed project area. In addition to the Proposed Action Alternative and other elements that are covered by the Secretary's waiver and are part of the larger TI project, CBP has proposed and is evaluating a program of ongoing maintenance and repair of existing tactical infrastructure within the ROI. CBP has considered both the Proposed Action Alternative and the other elements in examining cumulative impacts

4.2 PRIVATE/OTHER AGENCY/ORGANIZATION PROJECTS

Numerous private renewable energy projects have been identified as either ongoing or proposed near the project area that could have a cumulative impact when combined with the Proposed Action Alternative (BLM 2012b). These activities are described below.

- **Calexico Solar Farm I, Under Construction:** Solar photovoltaic project encompassing 1,013 acres of farmland along the All-American Canal, west of Calexico, California.
- **Calexico Solar Farm II, Ongoing:** Solar photovoltaic project encompassing 1,477 acres of farmland near the All-American Canal, west of Calexico, California.
- **Mount Signal Solar Farm, Ongoing:** A proposed 200-megawatt (MW), 1,375-acre solar project with a biomass generation component and 230-kilovolt transmission line. This project would be located on existing farmlands.
- **Imperial Solar Energy Center South Solar Farm, Ongoing:** This project is a proposed 200 MW solar facility with a transmission line and associated road widening on 946.6 acres of existing farmlands, which is located west of Calexico near the All-American Canal.
- **Centinela Solar Farm, Ongoing:** This proposed solar farm consists of 2,067 acres. The solar farm would be located on existing farmland located near SR 98, west of Calexico.
- **Acorn Greenworks Solar Farm, Ongoing:** This project would be located north of SR 98 on approximately 693 acres and would consist of a 150 MW solar energy facility.
- **Silverleaf Solar Farm, Ongoing:** The Silverleaf Solar Farm is proposed north of SR 98 and south of Interstate 8 near the western boundary of the YDMA in existing farmland. The project would encompass 1,096 acres and would be a 160 MW solar photovoltaic energy facility.
- **Campo Verde Solar Farm, Ongoing:** Over 2,260 acres of farmland would be converted to a 226 MW solar energy facility.
- **Imperial Valley Solar West Solar Farm, Ongoing:** This project entails a 1,130-acre, 250 MW solar energy facility, and associated transmission line.
- **Sunrise Powerlink-Transmission, Project Complete:** This project consists of the construction of a 117-mile transmission line from San Diego County to the Imperial Valley Substation. The total acreage impacted as a result of the project is approximately 282.3 acres.

Although the renewable energy projects described above are primarily located on private lands, a few of the projects do have components that traverse BLM lands. In general, only a transmission line needs to be constructed across BLM lands with minimal disturbance being created. BLM is also in the process of potentially approving a renewable energy project wholly within BLM lands (i.e., Ocotillo Solar Project). The Ocotillo Solar Project would impact approximately 102 acres of locally and regionally common creosote-white bursage vegetative community. No major adverse impacts on Federally protected species, Waters of the U.S., or cultural resources are expected as a result of the project.

4.3 IDENTIFICATION OF CUMULATIVE EFFECTS ISSUES

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. These intensity thresholds were previously defined in Section 3.1.

4.3.1 Land Use

A major impact would occur if any action is inconsistent with adopted land use plans or if an action would substantially alter those resources required for supporting or benefiting the current use. Improvements and construction of the roads would change land use from recreation to CBP infrastructure. This change would be minor because it would be located near the heavily disturbed U.S./Mexico border (which is typically not used for recreation) and within an existing road. CBV activities and CBP and law enforcement activities have historically and recently cumulatively impacted land uses for public lands in Southern California. Although land use in Southern California has changed dramatically over time, in recent history, management of the lands affected by the Proposed Action Alternative has been consistent with the mission of BLM. Additionally, the combination of the Proposed Action Alternative and other planned projects within the YDMA would not exceed the one percent cap of cumulative impacts as allowed per the FTHL Rangewide Management Strategy. Therefore, when the Proposed Action Alternative is combined with other projects in the area, it would have a negligible cumulative effect on the ability of land managers to implement land use policies.

4.3.2 Soils

A major impact would occur if the action exacerbates or promotes long-term erosion, if the soils are inappropriate for the proposed construction and would create a risk to life or property, or if there would be a substantial reduction in agricultural production or loss of prime farmland soils. Within the project area, it is estimated that the CBP would remove up to 7.5 acres of primarily disturbed soils from production. Other CBP projects, such as the pedestrian and vehicle fence projects in southern Imperial County, have resulted in hundreds of acres of soils disturbance; however, these soils were regionally and locally common. Although the road improvements and construction would impact negligible amounts of soils, the cumulative impacts on soils from CBP projects, private entity projects, and land management activities from other agencies, such as BLM, would not be considered a major cumulative adverse impact.

4.3.3 Geology

The Proposed Action Alternative would not affect geologic resources. Therefore, this action, when combined with other existing and proposed projects in the region, would result in a negligible cumulative impact on geologic resources.

4.3.4 Vegetation

The significance threshold for vegetation would include a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. The proposed project would permanently impact up to 7.5 acres that is sparsely vegetated (less than five percent ground cover). The other CBP projects in the region were also located in degraded, sparsely vegetated areas (Algododunes Dunes and All-American Canal). The solar farms planned in the region would be constructed primarily on existing agricultural lands. Therefore, when the Proposed Action Alternative is combined with other private and BLM projects in the region, negligible cumulative impacts on native vegetation communities would occur.

4.3.5 Wildlife

The significance threshold for wildlife and aquatic resources would include a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. Past CBP projects were completed within areas that were degraded from past activities and within areas of sparse vegetation. As mentioned previously, the other ongoing or proposed projects in the region are primarily located within existing agricultural areas. Most of the land use in the region is undeveloped and would be unchanged, even with the Proposed Action Alternative and other development projects. Therefore, this proposed project, in conjunction with other regionally proposed projects, would have a negligible impact on regional wildlife populations due to loss of habitat.

4.3.6 Protected Species and Critical Habitats

A major impact on threatened and endangered species would occur if any action resulted in a jeopardy opinion for any endangered, threatened, or rare species. No adverse cumulative impacts would occur, as the Proposed Action Alternative would have no effects on any Federally-listed or state-listed threatened or endangered species. Conversely, the Proposed Action Alternative would have an adverse effect on one conservation species, FTHL, due to habitat loss and potential individual mortality. Although up to 7.5 acres of habitat would be permanently impacted, only 3.6 of those acres are considered undisturbed. CBP has agreed to implement mitigation measures (minimize impacts, provide biological monitors, and provide compensation) that would offset any impacts to achieve no adverse impacts on the FTHL or its habitat. This project when combined with other ground-disturbing or development projects in the region, would have minor cumulative impacts on FTHL.

4.3.7 Water Resources

The construction, improvement, and maintenance of proposed roadways would have no impact on groundwater or wetlands and less than 0.2 acre of surface waters (ephemeral washes) would be impacted. The implementation of BMPs would reduce erosion and sedimentation during

construction to negligible levels and would eliminate post-construction erosion and sedimentation from the project area. The same measures would be implemented for other construction projects; therefore, cumulative impacts would be considered negligible.

4.3.8 Air Quality

Numerous activities have affected air quality throughout the region. As part of compliance with the Federal General Conformity Rule, GSRC performed an air conformity analysis during the development of this EA. It was determined that the impacts of the Proposed Action Alternative would be temporary, minor, and below the *de minimis* threshold presented in the General Conformity Rule. Other projects in the airshed do not exceed *de minimis* thresholds and the combination of these projects should not cause an exceedance of Federal ambient air quality standards. Thus, the Proposed Action Alternative in combination with other projects would have a negligible adverse cumulative effect on air quality. Long-term beneficial impacts from the reduction of fugitive dust would occur as the solar farms are constructed within old agricultural fields.

4.3.9 Noise

Actions would be considered to cause major impacts if they permanently increase ambient noise levels over 65 dBA. Most of the noise generated by the Proposed Action Alternative would occur during construction and, thus, would not contribute to cumulative impacts on ambient noise levels. Maintenance activities along the roads would create a minor increase in ambient noise levels; however, potential sources of noise from periodic maintenance operations are not sufficient (temporal or spatial) to increase day-night average ambient noise levels above the 50 dBA range at the proposed site. The other projects occurring or potentially occurring within the ROI are removed from the proposed project area and construction activities would likely not be contemporaneous. Therefore, the potential for cumulative impacts is negligible.

4.3.10 Cultural Resources

The Proposed Action Alternative would not affect cultural resources or historic properties. Therefore, this action, when combined with other existing and proposed projects in the region, would result in a negligible cumulative impact on cultural resources or historic properties.

4.3.11 Aesthetics and Visual Resources

Actions that cause the permanent loss of the characteristics that make an area visually unique or sensitive would be considered to cause a major impact. No major impacts on visual resources would occur from implementing the Proposed Action Alternative, due in part to the site being previously disturbed, adjacent to existing CBP infrastructure, a gravel/sand quarry, and other development in Mexico. This project, in conjunction with other projects in the region, would not result in major adverse cumulative impacts on the region's visual resources.

4.3.12 Hazardous Materials

The Proposed Action includes measures to reduce the potential effects of pollutants associated with the handling of POL, VOC, and hazardous materials, and would have a minor cumulative effect on hazardous waste.

4.3.13 Socioeconomic

Construction of the proposed improvements would have temporary cumulative beneficial impacts on the region's economy due to temporary employment and sales taxes generated through the purchase of construction-related items such as fuel and food. When combined with the other currently proposed or ongoing projects within the region, the Proposed Action Alternative is considered to have minor beneficial cumulative impacts.

4.3.14 Human Health and Safety

No health or safety risks would be created by the Proposed Action Alternative. In fact, the improvements are intended to reduce safety risks to USBP agents and the public, especially when agents are able to be more effective in reaching currently less accessible areas. When combined with other ongoing and proposed projects in the region, the Proposed Action Alternative would have a negligible cumulative effect.

SECTION 5.0
BEST MANAGEMENT PRACTICES

5.0 BEST MANAGEMENT PRACTICES

It is CBP's policy to reduce impacts through a sequence of avoidance, minimization, mitigation, and compensation. This chapter describes those measures that would be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. BMPs are presented for each resource category potentially affected.

5.1 PROJECT PLANNING/DESIGN – GENERAL CONSTRUCTION

The all-weather road will be sited, designed, and improved/constructed to avoid or minimize habitat loss within or adjacent to the footprint. The amount of aboveground obstacles associated with the site will be minimized.

CBP will ensure that all construction will follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

CBP will incorporate BMPs relating to project area delineation, water sources, waste management, and site restoration into project planning and implementation for construction and maintenance.

5.2 GENERAL CONSTRUCTION ACTIVITIES

CBP will clearly demarcate project construction area perimeters with a representative from the land management agency. No disturbance outside that perimeter will be authorized without prior coordination and approval of the land manager.

Within the designated disturbance area, CBP will minimize the area to be disturbed by limiting deliveries of materials and equipment to only those needed for effective project implementation.

CBP will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. This wash water is toxic to wildlife. Storage tanks must have proper air space (to avoid rainfall-induced overtopping), be on-ground containers, and be located in upland areas instead of washes.

In the event that CBP contaminates soil or water resources as a result of the proposed project, the contaminated soil or water will be remediated as per BLM requirements.

CBP will avoid transmitting disease vectors, introducing invasive non-native species, and depleting natural aquatic systems by using wells, irrigation water sources, or treated municipal sources for construction or irrigation purposes instead of natural sources.

CBP will place drip pans under parked equipment and establish containment zones when refueling vehicles or equipment.

5.3 VEGETATION

CBP will minimize habitat disturbance by restricting vegetation removal to the smallest possible project footprint. Native seeds or plants, which are compatible with the enhancement of protected species, will be used to the greatest extent practicable, as required under Section 7(a)(1) of the ESA, to rehabilitate staging areas and other temporarily disturbed areas. Additionally, organic material will be collected and stockpiled during construction to be used for erosion control after construction while the areas naturally rehabilitate.

Construction equipment will be cleaned at temporary staging areas, in accordance with BMPs, prior to entering and departing project areas to minimize the spread and establishment of non-native invasive plant species.

5.4 WILDLIFE RESOURCES

The Migratory Bird Treaty Act (MBTA) (16 USC 703-712, [1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989]) requires that Federal agencies coordinate with the USFWS if a construction activity would result in the take of a migratory bird. If construction or clearing activities are scheduled during nesting season (February 15 through September 1), surveys will be performed to identify active nests. If construction activities will result in the take of a migratory bird, then coordination with the USFWS and CDFG will be required and applicable permits would be obtained prior to construction or clearing activities. Another mitigation measure that would be considered is to schedule all construction activities outside nesting season, negating the requirement for nesting bird surveys.

CBP will not, for any length of time, permit any pets inside the project area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

5.5 PROTECTED SPECIES

Construction equipment will be cleaned prior to entering and departing the project corridor area to minimize the spread and establishment of nonnative invasive plant species. Soil disturbances in temporary impact areas would be rehabilitated. Designated travel corridors would be marked with easily observed removable or biodegradable markers, and travel would be restricted to established road construction areas.

A qualified monitor will be present during the improvement, construction, and maintenance of the proposed roads in FTHL habitat. Duties of the monitor(s) would include surveying the roadways prior to improvement/construction and removing and relocating lizards outside the project area. In addition, CBP would compensate for loss of habitat using the formula outlined in the FTHL Rangewide Management Strategy.

Based upon field visits, aerial photography, and discussions with BLM, CBP has determined that of the potential 7.5 acres of habitat permanently impacted only 3.6 of those acres are considered undisturbed native habitat (the new BP Hill road is included in this acreage). The remaining 3.9 acres consists of previously disturbed habitat in the form of the existing roadway (15 feet wide)

and the extant IID gravel/sand quarry area (the eastern 2,300 feet of the project corridor). Figure 5-1 is a schematic showing how CBP classified the disturbed versus undisturbed acreages along the existing border road.

The Rangewide Management Strategy formula uses a multiplying factor (M) ranging from 3 to 6 to be applied to the affected acreage to obtain an adjusted compensation acreage. The formula is as follows:

$$M = 3 + A + G + E + D$$

- A Adjacent habitat impacts:
 - a) Adjacent lands will not be affected.....0
 - b) Adjacent lands will receive direct or indirect deleterious impacts.....0.5

- G Growth-inducing effects within FTHL habitat:
 - a) The project will have no growth-inducing effects0
 - b) The project will have growth-inducing effects.....0.5

- E Existing disturbance on-site:
 - a) There is moderate to heavy existing habitat disturbance0
 - b) There is little or no existing habitat disturbance.....1

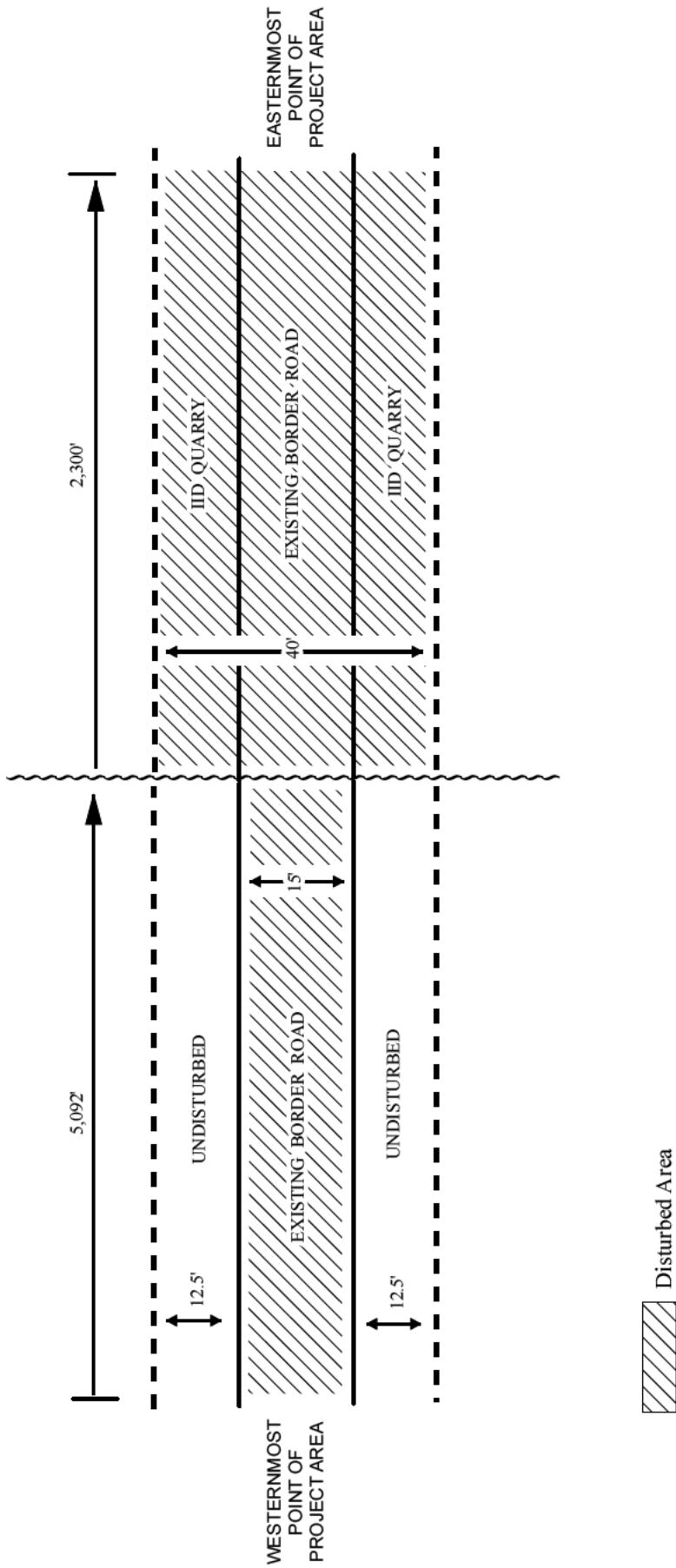
- D Duration of effect:
 - a) The effects of the project are expected to be short-term (less than 10 years).....0
 - b) The effects of the project are expected to be long-term (greater than 10 years)..... 1

CBP calculated M for the project areas classified as being undisturbed as, $M = 3 + 0 + 0 + 1 + 1$, generating a compensation ratio of 5:1. For project areas classified as being disturbed, CBP calculated M as, $M = 3 + 0 + 0 + 0 + 1$. Table 5-1 provides the required compensation ratio for impacts on FTHL habitat.

Table 5-1. Compensation for Impacts on FTHL habitat

Land Classification	Compensation Ratio	Impact Area (Acres)	Required Compensation Area (Acres)
Undisturbed	5:1	3.6	18.0
Disturbed	4:1	3.9	15.6

The total compensation for impacts on FTHL habitat will be up to 33.6 acres.



NOT TO SCALE

Figure 5-1. Schematic Showing Disturbed Versus Undisturbed Areas

During FTHL monitoring efforts, the on-site biologist will also survey for western burrowing owls, kit fox, and badgers. If an individual of any of these three species are seen occupying a burrow or structure in the project, CDFG recommended buffers will be provided until the animal has left the project area. In the event, a western burrowing owl is observed; one-way doors on burrows may be used to evict the owl during the non-breeding season.

5.6 WATER RESOURCES

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease during heavy rains and would not resume until conditions are suitable for the movement of equipment and material. No refueling or storage will take place within 100 feet of drainages.

CBP will avoid contaminating natural aquatic systems with runoff by limiting all equipment maintenance, staging, laydown, and dispensing of fuel, oil, etc., to designated upland areas.

A SWPPP will be prepared. A Spill Prevention Control and Countermeasures Plan will be maintained to ensure that all are aware of its implementation requirements in the event of a spill.

5.7 CULTURAL RESOURCES

Cultural resource monitors will be on site during all ground-disturbing activities for the Proposed Action Alternative. Additionally, the five GLO survey markers will be flagged for avoidance prior to improvement or construction activities.

Should any archaeological artifacts be found during staging or installation activities, the appropriate BLM archaeologist or cultural resources specialist would be notified immediately. All work will cease until an evaluation of the discovery is made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

5.8 AIR QUALITY

In order to minimize the amount of project-related dust emissions, the contractors will comply with Imperial County Air Pollution Control District's requirements (Rule 800) for control of particulate matter (PM-10). Rule 800 provides guidance for contractors that: (1) minimize land disturbance; (2) insure saturation of exposed areas; and (3) control fugitive dust caused by hauling activities and vehicular travel on unpaved road surfaces. In addition, all construction equipment shall be maintained and operated in a manner that produces the least amount of emissions. All construction equipment and vehicles and must be maintained in good operating condition, free from leaks.

5.9 NOISE

During the construction and improvement and maintenance of the proposed roadways, short-term noise impacts are anticipated. All applicable Occupational Safety and Health Administration regulations and requirements will be followed. On-site activities would be restricted to daylight

hours, to the greatest extent practicable. All equipment will possess properly working mufflers and would be kept properly tuned to reduce backfires.

5.10 HAZARDOUS MATERIALS

BMPs will be implemented as standard operating procedures during all construction activities, and will include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will 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 will be completed in accordance with accepted industry and regulatory guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although it is unlikely that a major spill would occur, any spill of reportable quantities will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock) will be used to absorb and contain the spill.

CBP will contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the construction and maintenance sites. This will assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

CBP will minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.

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

Solid waste receptacles will be maintained at the construction staging area. Non-hazardous solid waste (trash and waste construction materials) will be collected and deposited in on-site receptacles. Solid waste will be collected and disposed of by a local waste disposal contractor.

SECTION 6.0
REFERENCES



6.0 REFERENCES

- Alles, David L. (editor). 2011. *The Lower Colorado River*. Available online:
<http://fire.biol.wvu.edu/trent/alles/LowerColorado.pdf>.
- Brown. 1994. *Biotic Communities, Southwestern United States and Northwestern Mexico*. University of Utah Press. Salt Lake City. 342 pp.
- Bureau of Land Management (BLM). 1999. *The California Desert Conservation Area Plan 1980 as amended*. Available online:
http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf Accessed: May 9, 2012.
- BLM. 2012b. *Draft Environmental Impact Statement, Draft CDCA Plan Amendment, Ocotillo Sol Project, Volume I of II, April 2012*. Available online:
http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/elcentro/nepa/ocotillosol.Par.49849.File.dat/Ocotillo_Sol_DEIS_Volume1_508.pdf. Accessed: July 2012.
- California Air Resources Board (CARB). 2012. Air Quality Standards and Area Designations. Last Accessed: 8/9/2012. <http://www.arb.ca.gov/desig/desig.htm>.
- California Department of Conservation. 1999. Fault-Rupture Hazard Zones in California, Division of Mines and Geology Special Publication 42, by Earl W. Hart and William A. Bryant.
- California Department of Fish and Game (CDFG). 2012. State and Federally Listed Endangered and Threatened Animals of California. Available at:
<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf>. Last Accessed: May 8, 2012.
- California Department of Public Works. 2004. California's Groundwater, Bulletin 118, Yuma Valley Groundwater Basin, updated February 27, 2004.
- California Department of Transportation (Caltrans). 1998. Technical Noise Supplement by the California Department of Transportation Environmental Program Environmental Engineering-Noise, Air Quality, and Hazardous Waste Management Office. October 1998. Page 24-28.
- Caltrans. 2012. Traffic and Vehicle Data Systems Unit, 2011 All Traffic Volumes on CSHS. Internet URL: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2011all/Route92-98.html>.
- California Department of Water Resources (CDWR). 2004. Coyote Wells Valley Groundwater Basin.

- California Energy Commission. 2007. 2007 Integrated Energy Policy Report, CEC-100-2007-008-CMF.
- California Geological Survey. 2002. California Geomorphic Provinces, Note 36.
- California Geological Survey. 2010. 2010 Geologic Map of California.
- Colorado River Basin Regional Water Quality Control Board. 2006. *Water Quality Control Plan – Colorado River Basin – Region 7*. Internet URL: http://www.swrcb.ca.gov/rwqcb7/publications_forms/publications/index.shtml. Last Accessed: October 2010.
- Council on Environmental Quality (CEQ). 2010. *Memorandum for Heads of Federal Departments and Agencies. Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*. Nancy H. Sutley, February 18, 2010.
- Federal Emergency Management Agency (FEMA). 2008. Imperial County, California and Unincorporated Areas, Panel 2050 of 2300. Effective Date of Countywide Flood Insurance Rate Map September 26, 2008.
- Federal Highway Administration (FHWA). 2007. *Special Report: Highway Construction Noise: Measurement, Prediction, and Mitigation, Appendix A Construction Equipment Noise Levels and Ranges*. Internet URL: www.fhwa.dot.gov/environment/noise/highway/hcn06.htm.
- Fitts, Carmen. 2012. Personal communication via email to Mr. Josh McEnany (GSRC) from Ms. Carmen Fitz (HDR). 31 July, 2012.
- Immigration and Naturalization Services. 2001. *Programmatic Environmental Impact Statement for the Continuation of Immigration and Naturalization Service/Joint Task Force – Six Operations, Port Arthur, Texas to San Diego, California*.
- Imperial County/BLM. 2012. Ocotillo Wind Energy Facility *Final EIR*. Sections available online: <http://www.icpds.com/?pid=2843> Accessed: May 9, 2012.
- Imperial County, Office of Agricultural Commissioner. 2010. *Agricultural Crop and Livestock Report, 2010*. Internet URL: http://www.co.imperial.ca.us/ag/Crop_&_Livestock_Reports/Crop_&_Livestock_Report_2010.pdf.
- Midwest Research Institute. 1996. Improvement of Specific Emission Factors (BACM Project No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract 95040, Diamond Bar, CA. March 1996.
- Salton Sea Authority. 2012. *Prehistoric Native American Responses to Ancient Lake Cahuilla*. Internet URL: http://www.saltonsea.ca.gov/pdfs/hydrology/ancient_lake_cahuilla.pdf.

- San Diego State University. 2012. Ancient Lake Cahuilla, excerpted from *Geology of the Imperial Valley*. Internet URL:
<http://www.sci.sdsu.edu/salton/AncientLakeCahuilla.html>.
- U.S. Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation.
- U.S. Bureau of Labor Statistics. 2011. Economy at a Glance, El Paso, Texas MSA. Internet URL: http://www.bls.gov/eag/eag.tx_elpaso_msa.htm.
- U.S. Census Bureau. 2000. 2000 Decennial Census. Internet URL:
<http://factfinder2.census.gov/>.
- U.S. Census Bureau. 2009. County Business Patterns, 2009 data. Internet URL:
<http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl>.
- U.S. Census Bureau. 2010a. 2010 Decennial Census. Internet URL:
<http://factfinder2.census.gov/>.
- U.S. Census Bureau. 2010b. American Community Survey (ACS), 5-Year Estimates, 2006-2010. Internet URL: <http://factfinder2.census.gov/>.
- U. S. Customs and Border Patrol (CBP). 2012. *Biological Survey for the West Desert Road Calexico Station, El Centro Sector*. GSRC biologist, Josh McEnany and John Ginter. June 28, 2012.
- U.S. Environmental Protection Agency. USEPA. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Report 550/9-74-004.
- USEPA. 2001. Procedures Document for National Emission Inventory, Criteria Air Pollutants 1985-1999. USEPA-454/R-01-006. Office of Air Quality Planning and Standards Research Triangle Park NC 27711.
- USEPA. 2009a. Frequently Asked Questions About NONROAD 2008. Office of Transportation and Air Quality. USEPA-420-F-09-21, April 2009.
- USEPA. 2009b. Policy Guidance on the Use of MOVES2010 for State Implementation Plan Development, Transportation Conformity and Other Purposes. Office of Transportation and Air Quality. USEPA-420-B-09-046.
- USEPA. 2010. Reference, Table and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks. Internet URL:
<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>.
- USEPA. 2012a. National Ambient Air Quality Standards (NAAQS). Internet URL:
<http://www.epa.gov/air/criteria.html>. Last Accessed. 4/11/2012.

- USEPA. 2012b. Welcome to the Green Book Nonattainment Areas for Criteria Pollutants. Internet URL: www.epa.gov/oar/oaqps/greenbk.
- USEPA. 2012c. Superfund; CERCLIS Hazardous Waste Sites. Internet URL: <http://cumulis.epa.gov/superpad/cursites/srchrslt.cfm?Start=176&sortby=cnty>. Last Updated: March 2012.
- United States Fish and Wildlife Service (USFWS). 2009. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Peninsular Bighorn Sheep and Determination of a Distinct Population Segment of Desert Bighorn Sheep (*Ovis Canadensis nelsoni*). Final Rule. Published April 14, 2009.
- USFWS. 2012. Natural Resources of Concern, Imperial County California. Internet URL: <http://ecos.fws.gov/ipac/wizard/pdf/trustResourceListAsPdf!prepareAsPdf.action>. Last Accessed: May 2012.
- USFWS. 2011. Flat-tailed Horned Lizard (*Phrynosoma mcallii*). Internet URL: <http://www.fws.gov/southwest/es/arizona/Flat.htm>. U.S. Fish and Wildlife Service Arizona Ecological Services. Last Updated May 2011. Last Accessed: July 2012.
- U.S. Housing and Urban Development (HUD). 1984. 24 CFR Part 51 - Environmental Criteria and Standards Sec. 51.103 Criteria and standards 44 FR 40861, July 12, 1979, as amended at 49 FR 12214, Mar. 29, 1984.

SECTION 7.0
ACRONYMS AND ABBREVIATIONS

7.0 ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
AOR	Area of Responsibility
ASTM International	formerly known as American Society for Testing and Materials (ASTM)
BEA	Bureau of Economic Analysis
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBP	U.S. Customs and Border Protection
CBV	Cross-Border Violators
CDFG	California Department of Fish and Game
CEPA	California Environment Protection Agency
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂ -E	CO ₂ equivalent
CWA	Clean Water Act
dB	Decibel
dBA	A-Weighted Decibel
DHS	Department of Homeland Security
DNL	Day-Night Sound Level
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
ESP	Environmental Stewardship Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM&E	Facilities Management and Engineering
FR	Federal Register
FTHL	Flat-tail horned lizard
GHG	greenhouse gases
GLO	General Land Office
GSRC	Gulf South Research Corporation
HFC	hydrochlorofluorocarbons

HR	Hydrologic Region
HUD	U.S. Department of Housing and Urban Development
ICC	Interagency Coordinating Committee
IID	Imperial Irrigation District
INA	Immigration and Nationality Act
INS	Immigration and Naturalization Service
IOs	isolated occurrences
IIRIRA	Illegal Immigration Reform and Immigrant Responsibility Act
LCRV	Lower Colorado River Valley
M	multiplying factor
mg/m ³	milligram per cubic meter
MOU	Memorandum of Understanding
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NO ₂	nitrogen dioxide
NOA	Notice of Availability
NO _x	nitrous oxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Properties
NPL	National Priorities List
O ₃	ozone
Pb	lead
PL	Public Law
PM-10	Particulate Matter <10 micrometers
PM-2.5	Particulate Matter <2.5 micrometers
POE	Ports of Entry
POL	petroleum, oil, and lubricants
ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
ROW	Right-of-Way
RVSS	Remote Video Surveillance System
RWQCB	California Regional Water Quality Control Board
SHPO	State Historic Preservation Officer
SIP	state implementation plans
SO ₂	sulfur dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TI	tactical infrastructure
TMDL	total maximum daily load
U.S.	United States
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol

USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USIBWC	U.S. Section, International Boundary and Water Commission
VOC	volatile organic compounds
VRM	Visual Resource Management
YDMA	Yuma Desert Management Area
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter

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SECTION 8.0
LIST OF PREPARERS



8.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this EA.

Name	Agency/Organization	Discipline/Expertise	Experience	Role in Preparing EA
Richard Dill	USACE, Fort Worth	Engineering Program Manager	18 years engineering and project management	USACE program management and EA review
Hope Pollmann	USACE, Fort Worth	Environmental Planning	8 years environmental management	USACE project management and EA review
John Petrilla	CBP, FM&E	Environmental Protection Specialist	5 years environmental management	CBP project management, EA review and coordination
Chris Ingram	GSRC	Biology/Ecology	33 years of EA/EIS studies	EA review
Josh McEnany	GSRC	Forest Management	12 years of natural resources and NEPA	Project management, EA preparation, and biological surveys
David Hart	GSRC	Archaeology	17 years of professional archaeology/cultural resources studies	Cultural resources surveys
Missy Singleton	GSRC	Natural Resources	9 years of natural resources and NEPA	EA preparation (Roadways and Traffic, Sustainability and Greening, and Aesthetic and Visual Resources)
Ben Tomson	GSRC	Biology	2 years of natural resources and NEPA	EA preparation (Land Use, Geology and Soils, Water Resources)
Rob Meyers	GSRC	Environmental Science	8 years of NEPA and natural resources	EA preparation (Vegetation, Wildlife, and Protected Species)
Steve Kolian	GSRC	Environmental Science	12 years of natural resources	EA preparation (Air and Noise Resources)
Ann Guissinger	GSRC	Economics	30 years economic analysis	EA preparation (Socioeconomics and Environmental Justice and Protection of Children)
Steve Oivanki	GSRC	Geology/NEPA	20 years of natural resources and NEPA	EA preparation (Hazardous Materials and Geology)

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**APPENDIX A
CORRESPONDENCE**



MAY 30 2012



**U.S. Customs and
Border Protection**

Daniel Steward, Resources Branch Chief
El Centro Field Office
Bureau of Land Management
1661 S. 4th St.
El Centro, CA 92243

Subject: Request that BLM Act as a Cooperating Agency in the Environmental Assessment Preparation for the West Desert All-Weather Road and BP Hill Access Road

Dear Mr. Steward:

As you know, U.S. Customs and Border Protection (CBP) is currently examining a proposal to construct a new all-weather road within the U.S. Border Patrol's (USBP) El Centro Sector along the U.S./Mexico border from approximately Border Monument 224 to Border Monument 225 and an access to BP Hill (USBP surveillance camera tower location). As part of the planning process for the proposed project, CBP will prepare an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA). Among the alternative alignments that are being considered for the proposed all-weather road are ones that cross lands managed by the U.S. Bureau of Land Management (BLM).

The purpose of this letter is to convey CBP's formal request that, pursuant to 40 C.F.R. § 1501.6, BLM participate as a cooperating agency in CBP's NEPA process for the proposed all-weather road construction. Given BLM's history and background with the area, CBP believes that BLM will have knowledge and expertise that is beneficial to the NEPA process and CBP's evaluation of alternatives.

If BLM is amenable to participating as a cooperating agency in the NEPA process for the proposed project, please sign and date the acknowledgement on the following page and return it.

If you have any questions, please contact John Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you very much for your attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", with a long horizontal flourish extending to the right.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Mr. Daniel Steward
Page 2

Acknowledged and agreed for the U.S. Bureau of Land Management by:

Name:

Title:

Date:

MAY 30 2012



**U.S. Customs and
Border Protection**

Daniel Steward, Resources Branch Chief
El Centro Field Office
Bureau of Land Management
1661 S. 4th St.
El Centro, CA 92243

Subject: Request that BLM Act as a Cooperating Agency in the Environmental Assessment Preparation for the West Desert All-Weather Road and BP Hill Access Road

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The purpose of this letter is to convey CBP's formal request that, pursuant to 40 C.F.R. § 1501.6, BLM participate as a cooperating agency in CBP's NEPA process for the proposed all-weather road construction. Given BLM's history and background with the area, CBP believes that BLM will have knowledge and expertise that is beneficial to the NEPA process and CBP's evaluation of alternatives.

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If you have any questions, please contact John Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you very much for your attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", written over a light blue circular stamp.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Acknowledged and agreed for the U.S. Bureau of Land Management by:


Name: _____


Title: _____


Date: _____



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

El Centro Field Office

1661 South 4th Street

El Centro, CA 92243-4561

<http://www.blm.gov/ca/st/en/fo/elcentro.html>

14 June 2012

In Reply Refer to

2800 (P)

CA670.39

CACA-53512

Christopher J. Colacicco, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office
1300 Pennsylvania Avenue NW
Washington, DC 20229

Dear Mr. Colacicco:

The Bureau of Land Management (BLM) has received your request for BLM to Act as Cooperating Agency in the NEPA process for the West Desert All-Weather Road and BP Hill Access Road.

We have reviewed your request and agree to participate as a cooperating agency in U.S. Customs and Border Protection's (CBP) NEPA process. Enclosed is the fully executed copy of the request.

If you have any questions regarding your request, please contact Daniel Steward, Supervisory Resource Management Specialist, Resources and Planning at (760) 337-4400 or via email at msteward@blm.gov.

Sincerely,

Thomas F. Zale
Acting Field Manager

Enclosures (1):

1-Request that BLM act as Cooperating Agency

JUL 25 2012



**U.S. Customs and
Border Protection**

U.S. Section, International Boundary and Water Commission
Operations and Management Division
ATTN: Mr. John Merino, P.E.
4171 N. Mesa Street, Bldg. C 100
El Paso, TX 79902

Dear Mr. Merino:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. John Merino
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



Figure 1: Project Area Map



**U.S. Customs and
Border Protection**

JUL 25 2012

United States Fish and Wildlife Service
Palm Springs Field Office
Attn: Ken Corey
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

Dear Mr. Corey:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

We are currently in the process of gathering the most current information available regarding Federal and state-listed species, sensitive and unique areas, and other resources potentially occurring within the project areas. CBP respectfully requests that your agency provide a list of rare or unique plant communities, threatened, endangered, and candidate species, and designated critical habit that occur within the project areas, along with a location map for those resources that you believe may be affected by the proposed CBP activities in Imperial County, California.

We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Ken Corey
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Division, South Coast Branch
ATTN: Lanika Cervantes
6010 Hidden Valley Road, Suite 105
Carlsbad, CA 92011

Dear Ms. Cervantes:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Ms. Lanika Cervantes
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Mr. Milford Wayne Donaldson, FAIA
California State Historic Preservation Officer
ATTN: Susan Stratton, Senior State Archaeologist
Office of Historic Preservation
1416 9th Street, Room 1442-7
Sacramento, CA 95814

Dear Ms. Stratton:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

We are currently in the process of gathering the most current information available, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. CBP respectfully requests that you provide information on any cultural resources that you believe may be affected by the proposed CBP activities in San Diego County, California. A cultural survey is being conducted for the proposed project areas, and we will provide you with a copy of the cultural resources report for your comment once it is prepared.

Ms. Susan Stratton

Page 2

We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Imperial Irrigation District
ATTN: Donald Vargas, Environmental Specialist
1699 West Main Street, Suite A
El Centro, CA 92243

Dear Mr. Vargas:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Donald Vargas
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Imperial Irrigation District
ATTN: Alfred Ornelas, Project Manager
1699 West Main Street, Suite A
El Centro, CA 92243

Dear Mr. Ornelas:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Alfred Ornelas
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

California Regional Water Quality Control Board
Colorado River Basin
ATTN: Robert Perdue, Executive Officer
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Dear Mr. Perdue:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Robert Perdue

Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

California State Clearing House
ATTN: Mr. Scott Morgan, Acting Director
P.O. Box 3044
Sacramento, CA 95812-3044

Dear Mr. Morgan:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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We are currently in the process of gathering the most current information available regarding Federal and state-listed species, sensitive and unique areas, and other resources potentially occurring within the project areas. CBP respectfully requests that your agency provide a list of sensitive species and land issues that occur within the project areas, along with a description of the sensitive resources (e.g., rare or unique plant communities, threatened, endangered, and candidate species), and a location map for those resources that you believe may be affected by the proposed CBP activities in Imperial County, California.

Mr. Scott Morgan
Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

California Environmental Protection Agency
ATTN: Ricardo Martinez, Assistant Secretary of Border Affairs
1001 I Street
P.O. Box 2815
Sacramento, CA 95814

Dear Mr. Martinez:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Ricardo Martinez

Page 2

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco

Director

Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Ralph Goff., Chairman
Campo Band of Kumeyaay Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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We are currently in the process of gathering the most current information available, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. To ensure that any areas of sacred or spiritual significance to Native American groups are considered, we would appreciate your help in identifying any interests or concerns regarding any cultural resources that you believe may be affected by the proposed project. We welcome your comments on this undertaking and look forward to hearing any concerns you may have regarding cultural resources, Traditional Cultural Properties (TCPs), and Indian sacred sites within the propose project area. A cultural survey is being conducted for the proposed project areas, and we will provide you with a copy of the cultural resources report for your comment once it is prepared.

Honorable Ralph Goff., Chairman

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
6 Old Mine Road
Boulevard, CA 91905

Dear Chairman Elliott:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Honorable Leroy Elliott, Chairman

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Gwendolyn Parada, Chairperson
La Posta Band of Mission Indians
1048 Crestwood Road
Boulevard, CA 92905

Dear Chairperson Parada:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Honorable Gwendolyn Parada, Chairperson

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1

JUL 25 2012



**U.S. Customs and
Border Protection**

Honorable Keeny Escalanti Sr., President
Fort Yuma Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Dear President Escalanti:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

The road improvements would occur from Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, to Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders and include any necessary drainage structures. A 10-foot-wide drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor and on the eastern and western terminus. Additionally, several temporary passing zones would be created along the western access road to accommodate two-way traffic during construction. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures and all-weather surfacing (Figure 1).

We are currently in the process of gathering the most current information available, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. To ensure that any areas of sacred or spiritual significance to Native American groups are considered, we would appreciate your help in identifying any interests or concerns regarding any cultural resources that you believe may be affected by the proposed project. We welcome your comments on this undertaking and look forward to hearing any concerns you may have regarding cultural resources, Traditional Cultural Properties (TCPs), and Indian sacred sites within the propose project area. A cultural survey is being conducted for the proposed project areas, and we will provide you with a copy of the cultural resources report for your comment once it is prepared.

Honorable Keeny Escalanti Sr., President

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Will Micklin, Executive Director
Ewiiapaayp Tribal Office
4054 Willows Road
Alpine, CA 91901

Dear Director Micklin:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Honorable Will Micklin, Executive Director

Page 2

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Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



U.S. Customs and
Border Protection

JUL 25 2012

Ms. Jill McCormick, Tribal Archaeologist
Cocopah Museum/Cultural Resources Department
County 15th & Ave. G
Sommerton, AZ 85350

Dear Ms. McCormick:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Ms. Jill McCormick, Tribal Archaeologist
Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Mr. John P. Bathke, THPO
Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Dear Mr. Bathke:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Mr. John P. Bathke, THPO

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Preston J. Arrow-weed
Ah-Mut-Pipa Foundation
P.O. Box 160
Bard, CA 92222

Dear Honorable Arrow-weed:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Honorable Preston J. Arrow-weed

Page 2

We intend to provide your organization with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1

JUL 25 2012



**U.S. Customs and
Border Protection**

Mr. Frank Brown, Coordinator
Inter-Tribal Cultural Resource Protection Council
240 Brown Road
Alpine, CA 91901

Dear Mr. Brown:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Mr. Frank Brown, Coordinator

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Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



**U.S. Customs and
Border Protection**

JUL 25 2012

Honorable Bernice Paipa, Vice Spokesperson
Kumeyaay Cultural Restoration Committee
1095 Barona Road
Lakeside, CA 92040

Dear Vice Spokesperson Paipa:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that will address the potential effects, beneficial and adverse, resulting from the proposed improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) Calexico Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions.

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Honorable Bernice Paipa, Vice Spokesperson

Page 2

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Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at John.Petrilla@dhs.gov. Thank you for your cooperation.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure: Figure 1



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

August 7, 2012

Mr. John Petrilla
U.S. Customs & Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Road, Room 5020
Laguna Niguel, California 92677-3400

Dear Mr. Petrilla:

The United States Section, International Boundary and Water Commission (USIBWC), is in receipt of your letter regarding the preparation of a draft Environmental Assessment (EA) for the construction of 2 miles of all weather road in the U.S. Border Patrol's Calexico Area of Responsibility, from border monument 224 to border monument 225.

The USIBWC has the responsibility to access, maintain, and utilize the international boundary monuments along the U.S. – Mexico international land boundary. The USIBWC is charged with these duties through treaties between the United States and Mexico. We require that the proposed works and related facilities not affect the permanence of the existing boundary monuments nor impede access for their inspection and maintenance. In addition, any proposed construction must allow for line of sight visibility between each of the boundary monuments. The majority of the monuments along the international boundary are eligible for inclusion in the national historic register under Criterion A- a structure "...associated with events that have made a significant contribution to the broad patterns of our history." Therefore, we request that you provide full consideration to the monuments in your EA and avoid or minimize any potential adverse effects.

The USIBWC also requires that engineering drawings be submitted to the USIBWC for review and approval prior to beginning any construction near the international boundary. These drawings must show the location of each component in relation to the international boundary and the monuments. The USIBWC requires that all structures be off-set from the international boundary by a minimum of 3 feet and allow a clear line of sight between any affected boundary monuments. Construction should maintain best management practices to prevent runoff or degradation of air quality during construction. The USIBWC requests that proposed construction activities be accomplished in a manner that does not change historic surface runoff characteristics at the international border. The USIBWC will not approve any construction near the international boundary in the United States that increases, concentrates, or relocates overland drainage flows into either country. This requirement is intended to ensure that developments in one country will not cause damage to lands or resources in the other country. The USIBWC will need copies of any hydrological or hydraulic studies and site specific drawings for work proposed in the vicinity of the international boundary, particularly if culverts, roads or other

structures are proposed to be constructed in any drainage courses that cross the boundary. We will also require that you assure that structures constructed along the U.S.-Mexico border are maintained in an adequate manner and that liability issues created by these structures are addressed.

If you have any questions, please feel free to call me at (915) 832-4749 or Mr. Wayne Belzer at (915) 832-4703.

Sincerely,

A handwritten signature in cursive script, appearing to read "John L. Merino".

John L. Merino, P.E.
Principal Engineer

Josh McEnany

Sent: Wednesday, August 22, 2012 5:46 PM
To: PETRILLA, JOHN
Subject: Road Improvement Project along US/Mexico Border

In Reply Refer To:
FWS-IMP-11B0229-12SL0539

Dear Mr. Petrilla,

This email is in response to your request, dated July 25, 2012, for information on federally listed, proposed, and candidate species; critical habitat; sensitive and unique areas, and other resources that may occur in the vicinity of the proposed road improvement project along the US/Mexico border in the Yuha Desert Flat-tailed Horned Lizard Management Area (FTHL MA), Imperial County, California.

Although we do not have site-specific biological survey information, we are providing the following list of species known to occur in the general area to assist your office in the preparation of a draft environmental assessment for the project.

Sensitive Species Within Project Area

Flat-tailed horned lizard (*Phrynosoma mcallii*) Burrowing owl (*Athene cunicularia*) Golden Eagle (*Aquila chrysaetos*)

No designated critical habitat for federally listed species occurs within the project area.

Because the project area is within a designated FTHL MA, we recommend you adhere to the avoidance, minimization, and mitigation measures outlined within the flat-tailed horned lizard Rangewide Management Strategy (RMS) and you coordinate closely with the Bureau of Land Management (BLM), El Centro office, to ensure you minimize flat-tailed horned lizard mortality from construction, operations, and maintenance of the road. A digital copy of the RMS is available at: <http://www.fws.gov/southwest/es/arizona/Flat.htm> www.fws.gov/southwest/es/arizona/Flat.htm

We appreciate the opportunity to provide input on this project and are available to help develop measures to avoid and minimize adverse impacts to trust resources that occur within your project area. If you have any questions, please feel free to contact me - thanks!

Felicia M. Sirchia
Fish & Wildlife Biologist
U.S. Fish and Wildlife Service
Palm Springs Fish and Wildlife Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262
Phone 760.322.2070 x205
Fax 760.322.4648

NOV 13 2012



**U.S. Customs and
Border Protection**

California State Clearinghouse
ATTN: Mr. Scott Morgan, Acting Director
1400 Tenth Street
Sacramento, CA 95814

Dear Mr. Morgan:

U.S. Customs and Border Protection (CBP) is pleased to forward 15 copies of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) El Centro Station's Area of Responsibility (AOR). Also enclosed is a Notice of Completion and Environmental Document Transmittal form. CBP requests your participation in this public review process and your distribution of the enclosed Draft EA and Draft FONSI to appropriate State of California agencies.

The 30-day public comment period begins on November 15, 2012 and comments must be received by December 15, 2012 to be considered for incorporation into the Final EA. Any comments concerning the Draft EA and Draft FONSI may be sent by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: West Desert Road Project

Lead Agency: U.S. Customs and Border Protection Contact Person: John Petrilla
Mailing Address: 24000 Avila Road, Suite 5020 Phone: (949) 360-2382
City: Laguna Niguel Zip: 92677 County: Orange

Project Location: County: Imperial City/Nearest Community: Calexico
Cross Streets: State Route 98 and Signal Road Zip Code: 92231
Longitude/Latitude (degrees, minutes and seconds): 32 ° 38 ' 57.95" N / 115 ° 42 ' 29.14" W Total Acres: 7.5
Assessor's Parcel No.: Mount Signal Quadrangle Section: 23, 24, 6 Twp.: 17 S Range: 12 E Base: _____
Within 2 Miles: State Hwy #: State Route 98 Waterways: All-American Canal
Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR EA Final Document
 Neg Dec (Prior SCH No.) _____ Draft EIS Other: _____
 Mit Neg Dec Other: _____ FONSI

Local Action Type:

General Plan Update Specific Plan Rezone Annexation
 General Plan Amendment Master Plan Prezone Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other: _____

Development Type:

Residential: Units _____ Acres _____
 Office: Sq.ft. _____ Acres _____ Employees _____ Transportation: Type CBP Infrastructure
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW
 Educational: _____ Waste Treatment: Type _____ MGD
 Recreational: _____ Hazardous Waste: Type _____
 Water Facilities: Type _____ MGD Other: _____

Project Issues Discussed in Document:

Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Soil Erosion/Compaction/Grading Growth Inducement
 Coastal Zone Noise Solid Waste Land Use
 Drainage/Absorption Population/Housing Balance Toxic/Hazardous Cumulative Effects
 Economic/Jobs Public Services/Facilities Traffic/Circulation Other: _____

Present Land Use/Zoning/General Plan Designation:

Currently Roosevelt Reservation and Bureau of Land Management Yuha Desert Management Area for the FTHL

Project Description: (please use a separate page if necessary)

The Proposed Action comprises improvement of an existing border road and construction of a new access road to the top of BP Hill RVSS tower. The border road improvements would occur from near Border Monument 224 to near Border Monument 225. The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X". If you have already sent your document to the agency please denote that with an "S".

- | | |
|--|--|
| <input type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input type="checkbox"/> Caltrans District # _____ | <input type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB # <u>7</u> |
| <input type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region # <u>6</u> | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Health Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Housing & Community Development | |
| <input type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date November 15, 2012 Ending Date December 15, 2012

Lead Agency (Complete if applicable):

Consulting Firm: <u>Gulf South Research Corporation</u>	Applicant: _____
Address: <u>8081 GSRI Avenue</u>	Address: _____
City/State/Zip: <u>Baton Rouge, LA 70820</u>	City/State/Zip: _____
Contact: <u>Josh McEnany</u>	Phone: _____
Phone: <u>(225) 757-8088</u>	

Signature of Lead Agency Representative:  Date: 5 Nov 12

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. Robert Perdue, Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Dear Mr. Perdue:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
<http://ecso.swf.usace.army.mil/pages/publicreview.cfm>.

The 30-day public comment period begins on November 15, 2012 and comments must be received by December 15, 2012 to be considered for incorporation into the Final EA. Any comments concerning the Draft EA and Draft FONSI may be sent by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", written over the printed name and title of Christopher J. Colacicco.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

NOV 13 2012



**U.S. Customs and
Border Protection**

Mr. Ricardo Martinez
Assistant Secretary of Border Affairs
California Environmental Protection Agency
1001 I Street, P.O. Box 3044
Sacramento, CA 95812

Dear Mr. Martinez:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", written over a horizontal line.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. Ken Corey
U.S. Fish and Wildlife Service
Palm Springs Field Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Dear Mr. Corey:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Ms. Kimberly Nicol
Regional Manager
California Department of Fish and Game
Inland Desert Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764

Dear Ms. Nicol:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. John Merino, P.E.
Principal Engineer
U.S. Section, International Boundary and Water Commission
Operations and Management Division
4171 N. Mesa Street, Bldg C. 100
El Paso, TX 79902

Dear Mr. Merino:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director

Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Ms. Lanika Cervantes
U.S. Army Corps of Engineers, Los Angeles District
Regulatory Division, South Coast Branch
6010 Hidden Valley Road, Suite 105
Carlsbad, CA 92011

Dear Ms. Cervantes:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. Donald Vargas
Imperial Irrigation District
1699 West Main Street, Suite A
El Centro, CA 92243

Dear Mr. Vargas:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. Alfred Ornelas
Imperial Irrigation District
1700 West Main Street, Suite A
El Centro, CA 92243

Dear Mr. Ornelas:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Ms. Carol Roland-Nawi
Office of Historic Preservation
California State Historic Preservation Officer
1416 9th Street, Room 1442-7
Sacramento, CA 95814

Dear Ms. Roland-Nawi:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Honorable Ralph Goff., Chairman
Campo Band of Kumeyaay Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

NOV 13 2012



**U.S. Customs and
Border Protection**

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
6 Old Mine Road
Boulevard, CA 91905

Dear Chairman Elliott:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

NOV 13 2012



**U.S. Customs and
Border Protection**

Honorable Gwendolyn Parada, Chairperson
La Posta Band of Mission Indians
1048 Crestwood Road
Boulevard, CA 92905

Dear Chairperson Parada:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

NOV 13 2012



**U.S. Customs and
Border Protection**

Honorable Keeny Escalanti Sr., President
Fort Yuma Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Dear President Escalanti:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

NOV 13 2012



**U.S. Customs and
Border Protection**

Honorable Will Micklin
Executive Director
Ewiiapaayp Tribal Office
4054 Willows Road
Alpine, CA 91901

Dear Director Micklin:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Ms. Jill McCormick
Tribal Archaeologist
Cocopah Museum/Cultural Resources Department
County 15th & Ave. G
Sommerton, AZ 85350

Dear Ms. McCormick:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. John P. Bathke
Tribal Historic Preservation Officer
Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Dear Mr. Bathke:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Honorable Preston J. Arrow-weed
Ah-Mut-Pipa Foundation
P.O. Box 160
Bard, CA 92222

Dear Honorable Arrow-weed:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
<http://ecso.swf.usace.army.mil/pages/publicreview.cfm>.

The 30-day public comment period begins on November 15, 2012 and comments must be received by December 15, 2012 to be considered for incorporation into the Final EA. Any comments concerning the Draft EA and Draft FONSI may be sent by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", with a long horizontal flourish extending to the right.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Mr. Frank Brown
Coordinator
Inter-Tribal Cultural Resource Protection Council
240 Brown Road
Alpine, CA 91901

Dear Mr. Brown:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco", written over a horizontal line.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Honorable Bernice Paipa
Vice Spokesperson
Kumeyaay Cultural Restoration Committee
1095 Barona Road
Lakeside, CA 92040

Dear Vice Spokesperson Paipa:

U.S. Customs and Border Protection (CBP) is pleased to forward a copy of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. CBP invites your participation in this public review process and requests any comments you may have on the enclosed Draft EA and Draft FONSI. The Draft EA and Draft FONSI can also be viewed via the Internet at the following address:
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Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Director
El Centro Public Library
539 West State Street
El Centro, CA 92243

Dear Sir or Madam:

U.S. Customs and Border Protection (CBP) request that your library make available to the public the enclosed Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. Please make the Draft EA and Draft FONSI available for public review along with a copy of this letter. The public comment period begins on November 15, 2012 and comments must be received by December 15, 2012. The enclosed document is also available for review at <http://ecso.swf.usace.army.mil/pages/publicreview.cfm>.

Any comments concerning the Draft EA and Draft FONSI may be sent by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

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Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

NOV 13 2012

Director
Calexico City Library
850 Encinas Avenue
Calexico, CA 92231

Dear Sir or Madam:

U.S. Customs and Border Protection (CBP) requests that your library make available to the public the enclosed Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the proposed improvement, construction, operation, and maintenance of approximately 1.6 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. Please make the Draft EA and Draft FONSI available for public review along with a copy of this letter. The public comment period begins on November 15, 2012 and comments must be received by December 15, 2012. The enclosed document is also available for review at <http://ecso.swf.usace.army.mil/pages/publicreview.cfm>.

Any comments concerning the Draft EA and Draft FONSI may be sent by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

Thank you very much for your cooperation and assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Colacicco".

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

**AFFIDAVIT OF PUBLICATION
(2015.5 C.C.P.)**

STATE OF CALIFORNIA

County of Imperial

I, _____, a resident of the County aforesaid;
over the age of eighteen years, and
a party to or interested in the above
mentioned matter. I am the principal clerk*
and printer of the

IMPERIAL VALLEY PRESS

Newspaper of general circulation,
printed and published daily in the City of
El Centro, County of Imperial and which
said paper has been adjudged a
newspaper of general circulation by the
Superior Court of the County of Imperial,
State of California, under the date of
October 9, 1951, Case Number 26775;
a copy of the notice, of which the annexed is
a true and correct copy, has been published in
the regular and entire issue of said
newspaper and not in any supplement
thereof on the following dates, to-wit:

Nov 15

the year 20 12

I hereby certify (or declare) under penalty of
perjury that the foregoing is true and
correct.



SIGNATURE

I, _____, Foreman of the Printer, or
Principal Clerk of the Printer

11-15 2012
El Centro, California.

This space is for the County Clerk's
Filing Stamp:

Proof of Publication of:

NOTICE OF AVAILABILITY

DRAFT ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED IMPROVEMENT AND CONSTRUCTION, OPERATION, AND MAINTENANCE OF PROPOSED ALL-WEATHER ROAD IN THE EL CENTRO STATION AREA OF RESPONSIBILITY U.S. CUSTOMS AND BORDER PROTECTION, U.S. BORDER PATROL, EL CENTRO SECTOR

November 2012

The public is hereby notified of the availability of the draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) prepared by U.S. Customs and Border Protection (CBP) for the improvement and construction, operation, and maintenance of approximately 1.6 miles of all-weather roads. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California.

The draft EA and draft FONSI will be available at the El Centro Public Library, 539 West State Street, El Centro, California 92243 and the Calexico City Library, 850 Encinas Avenue, Calexico, California 92231. It is also available for download at the following URL address: <http://ecso.swf.usace.army.mil/Pages/Publicreview.cfm>.

The 30-day public comment period begins with publication of this Notice of Availability, expected to occur on November 15, 2012 and closes on December 15, 2012. Comments on the draft EA and draft FONSI should be submitted by mail to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400
N15

L177



THE COCOPAH INDIAN TRIBE

Cultural Resource Department

14515 S. Veterans Drive

Somerton, Arizona 85350

Telephone (928) 627-4849

Cell (928) 503-2291

Fax (928) 627-3173

CCR-018-12-006

November 19, 2012

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd. Room 5020
Laguna Niguel, CA 92677-3400

RE: Request for Comments for U.S. Customs and Border Protection Improvement and Construction, Operation, and Maintenance of Proposed All – Weather Road in the El Centro Station Area of Responsibility

Dear Mr. Petrilla:

The Cultural Resources Department of the Cocopah Indian Tribe appreciates your consultation efforts on this project. We are pleased that you contacted this department on this cultural resource issue for the purpose of solicitation of our input and to address our concerns on this matter. We concur with the Finding of No Significant Impact (FONSI) determination made by your agency. We would like to continue to be kept informed on the progression of the project and be a part of the consultation process in the future

If you have any questions or need additional information please feel free to contact the cultural resource department. We will be happy to assist you with any future concerns or questions.

Sincerely,


H. Jill McCormick, M.A.

Cultural Resource Manager

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-6251
 Fax (916) 657-5390
 Web Site www.nahc.ca.gov
 e-mail: ds_nahc@pacbell.net



November 20, 2012

Mr. John Petrilla
 Office of Healthcare Programs
**U.S. Customs & Border Protection | Facilities
 Management and Engineering**

24000 Avila Road, Room 5020
 Laguna Niguel, CA 92677-3400

Sent by U.S. Mail

No. of Pages: 5

Re: **"SCH#2012114001; NEPA 'Document: Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the West Desert Road Project;' located in the El Centro Sector, Imperial County, California**

Dear Mr. Petrilla:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106, [4f], 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC did conduct a Sacred Lands File (SLF) search of its Inventory and Native American cultural resources **were not identified** in the location you specified. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American

CBP
 FACILITIES MGMT & ENG
 LAGUNA NIGUEL, CA

2012 NOV 26 A 7:10

U.S. DEPARTMENT OF
 HOMELAND SECURITY

individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to the data by Native American tribes and Native American elders. In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites.

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

Attached is a list of Native American contacts is attached to assist you pursuant to Section 800.2(c)(1)(i) and Section 800.2(c)(2); they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

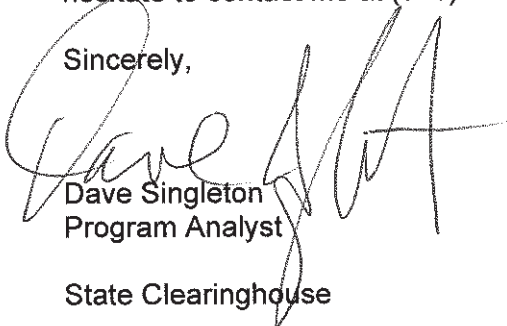
Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, recommended for serious consideration are the federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) NAGPRA (25 U.S.C. 3001-3013) as appropriate. In addition, consider the 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes and are supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491

and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Singleton". The signature is written in a cursive, somewhat stylized font. The first name "Dave" is written in a larger, more prominent script, while "Singleton" is written in a smaller, more compact script. The signature is positioned to the right of the typed name.

Dave Singleton
Program Analyst

State Clearinghouse

Attachment: Native American Contacts list

**Native American Contacts
Imperial County
November 20, 2012**

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 Diegueno/Kumeyaay
Boulevard , CA 91905
gparada@lapostacasino.
(619) 478-2113
619-478-2125

Fort Yuma Quechan Indian Nation
Keeny Escalanti, Sr., President
PO Box 1899 Quechan
Yuma , AZ 85366
qitpres@quechantribe.com
(760) 572-0213
(760) 572-2102 FAX

Manzanita Band of Kumeyaay Nation
Leroy J. Elliott, Chairperson
PO Box 1302 Kumeyaay
Boulevard , CA 91905
ljbirdsinger@aol.com
(619) 766-4930
(619) 766-4957 Fax

Ewiiapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
wmicklin@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 Diegueno/Kumeyaay
Campo , CA 91906
chairgoff@aol.com
(619) 478-9046
(619) 478-5818 Fax

Cocopah Museum/Cultural Resources Dept.
H. Jill McCormick, Tribal Archaeologist
County 15th & Ave. G Cocopah
Sommerton , AZ 85350
culturalres@cocopah.com
(928) 530-2291 - cell
(928) 627-2280 - fax

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 Diegueno -
Pine Valley , CA 91962
(619) 709-4207

Augustine Band of Cahuilla Mission Indians
Karen Kupcha
P.O. Box 849 Cahuilla
Coachella , CA 92236
(760) 398-4722
916-369-7161 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012114001; NEPA Document: Environmental Assessment (EA), Finding of No Significant Impact (FONSI) for the West Desert Road Project of the of the U.S. Customs and Border Protection; located in the El Centro Sector; Imperial County, California

**Native American Contacts
Imperial County
November 20, 2012**

Quenchan Indian Nation
John P. Bathke, THPO
P.O. Box 1899 Quechan
Yuma , AZ 85366
jbathke@quechantribe.
(928) 920-6068 - CELL
(760) 572-2423
(760) 572-0515 - FAX

Ah-Mut-Pipa Foundation
Preston J. Arrow-weed
P.O. Box 160 Quechan
Bard , CA 92222 Kumeyaay
ahmut@earthlink.net
(928) 388-9456

Inter-Tribal Cultural Resource Protection Council
Frank Brown, Coordinator
240 Brown Road Diegueno/Kumeyaay
Alpine , CA 91901
frankbrown6928@gmail.com
(619) 884-6437

Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 478-2113
(KCRC is a Colation of 12
Kumeyaay Governments

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH 2012114001

NEPA

Project Title: West Desert Road Project

Lead Agency: U.S. Customs and Border Protection Contact Person: John Petrilla
Mailing Address: 24000 Avila Road, Suite 5020 Phone: (949) 360-2382
City: Laguna Niguel Zip: 92677 County: Orange

Project Location: County: Imperial City/Nearest Community: Calexico
Cross Streets: State Route 98 and Signal Road Zip Code: 92231
Longitude/Latitude (degrees, minutes and seconds): 32 038 57.95 N / 115 042 29.14 W Total Acres: 7.5
Assessor's Parcel No.: Mount Signal Quadrangle Section: 23, 24 Twp.: 17 S Range: 12 E Base:
Within 2 Miles: State Hwy #: State Route 98 Waterways: All-American Canal
Airports: Railways: Schools:

RECEIVED

Document Type:

CEQA: [] NOP [] Draft EIR NEPA: [] NOI Other: [] Joint Document
[] Early Cons [] Supplemental EIR [] EA [] Final Document
[] Neg Dec (Prior SCH No.) [] Draft EIS [] Other:
[] Mit Neg Dec Other:

STATE CLEARINGHOUSE

Local Action Type:

[] General Plan Update [] Specific Plan [] Rezone [] Annexation
[] General Plan Amendment [] Master Plan [] Prezone [] Redevelopment
[] General Plan Element [] Planned Unit Development [] Use Permit [] Coastal Permit
[] Community Plan [] Site Plan [] Land Division (Subdivision, etc.) [] Other:

Development Type:

[] Residential: Units Acres
[] Office: Sq.ft. Acres Employees [X] Transportation: Type CBP Infrastructure
[] Commercial: Sq.ft. Acres Employees [] Mining: Mineral
[] Industrial: Sq.ft. Acres Employees [] Power: Type MW
[] Educational: [] Waste Treatment: Type MGD
[] Recreational: [] Hazardous Waste: Type
[] Water Facilities: Type MGD [] Other:

Project Issues Discussed in Document:

[X] Aesthetic/Visual [] Fiscal [] Recreation/Parks [X] Vegetation
[] Agricultural Land [X] Flood Plain/Flooding [] Schools/Universities [X] Water Quality
[X] Air Quality [X] Forest Land/Fire Hazard [] Septic Systems [X] Water Supply/Groundwater
[X] Archeological/Historical [] Geologic/Seismic [] Sewer Capacity [X] Wetland/Riparian
[X] Biological Resources [] Minerals [X] Soil Erosion/Compaction/Grading [] Growth Inducement
[] Coastal Zone [X] Noise [X] Solid Waste [X] Land Use
[X] Drainage/Absorption [X] Population/Housing Balance [X] Toxic/Hazardous [X] Cumulative Effects
[X] Economic/Jobs [X] Public Services/Facilities [X] Traffic/Circulation [] Other:

Present Land Use/Zoning/General Plan Designation:

Currently Roosevelt Reservation and Bureau of Land Management Yuha Desert Management Area for the FTHL

Project Description: (please use a separate page if necessary)

The Proposed Action comprises improvement of an existing border road and construction of a new access road to the top of BP Hill RVSS tower. The border road improvements would occur from near Border Monument 224 to near Border Monument 225. The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed.

OK

State Clearinghouse Contact: (916) 445-0613

State Review Began: 11-15-2012

SCH COMPLIANCE 12-14-2012

Project Sent to the following State Agencies

- [X] Resources State/Consumer Svcs
Boating & Waterways General Services
Coastal Comm Cal EPA
Colorado Rvr Bd ARB: Airport/Energy Projects
Conservation ARB: Transportation Projects
[X] Fish & Game # 10 ARB: Major Industrial Projects
Delta Protection Comm SWRCB: Div. Financial Assist.
Cal Fire SWRCB: Wtr Quality
[X] Historic Preservation SWRCB: Wtr Rights
[X] Parks & Rec [X] Reg. WQCB # 7
Central Valley Flood Prot. Toxic Sub Ctrl-CTC
Bay Cons & Dev Comm. Yth/Adlt Corrections
[X] DWR Corrections
[X] Cal EMA
Resources, Recycling and Recovery
Bus Transp Hous Independent Comm
Aeronautics Energy Commission
[X] CHP [X] NAHC
[X] Caltrans # 11 Public Utilities Comm
Trans Planning [X] State Lands Comm
Housing & Com Dev Tahoe Rgl Plan Agency
Food & Agriculture
Public Health

Please note State Clearinghouse Number (SCH#) on all Comments

SCH#: 2012114001

Please forward late comments directly to the Lead Agency

AQMD/APCD 10

(Resources: 11/17)



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 27, 2012

Mr. John Petrilla
U.S. Customs & Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Road, Room 5020
Laguna Niguel, California 92677-3400

Dear Mr. Petrilla:

The United States Section, International Boundary and Water Commission (USIBWC) is in receipt of your draft Environmental Assessment and draft Finding of No Significant Impact for the construction of 2 miles of all weather road in the U.S. Border Patrol's Calexico Area of Responsibility, from border monument 224 to border monument 225.

As mentioned in our previous letter concerning this project, The USIBWC has responsibility through treaties between the United States and Mexico to maintain the integrity of the border. Included is the demarcation of the boundary through the maintenance of permanent boundary monuments to include access for their inspection and maintenance. Any proposed construction must allow for line of sight visibility between each of the boundary monuments. The USIBWC requires that all structures be off-set from the international boundary by a minimum of 3 feet and allow a clear line of sight between any affected boundary monuments.

The USIBWC in its international duties also requires that proposed construction activities be accomplished in a manner that does not change historic surface runoff characteristics at the international border. The USIBWC will not approve any construction near the international boundary in the United States that increases, concentrates, or relocates overland drainage flows into either country. This requirement is intended to ensure that developments in one country will not cause damage to lands or resources in the other country.

When available, the USIBWC requests the preliminary design drawings and hydraulic studies be submitted to the USIBWC for review and approval prior to beginning any construction near the international boundary. This is to insure that the construction will not impact the border and comply with international treaties.

If you have any questions, please feel free to call me at (915) 832-4749 or Mr. Wayne Belzer at (915) 832-4703.

Sincerely,


John L. Merino, P.E.
Principal Engineer

DEC 06 2012



**U.S. Customs and
Border Protection**

The Honorable Anthony R. Pico
Chairperson
Viejas Band of Kumeyaay Indians
1 Viejas Grade Road
Alpine, CA 91901

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Pico:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Dan Tucker
Chairperson
Sycuan Band of the Kumeyaay Nation
5459 Sycuan Rd.
El Cajon, CA 92021

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Tucker:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

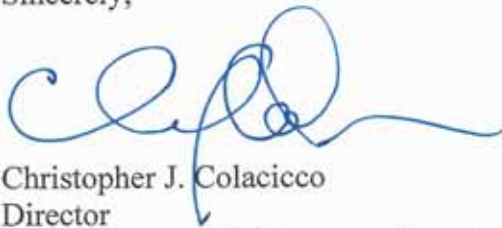
Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Edwin Romero
Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, CA 92040

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Romero:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Michael Garcia
Vice Chairperson
Ewiiapaayp Tribal Office
4055 Willows Rd.
Alpine, CA 91901

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Vice Chairperson Garcia:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

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CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

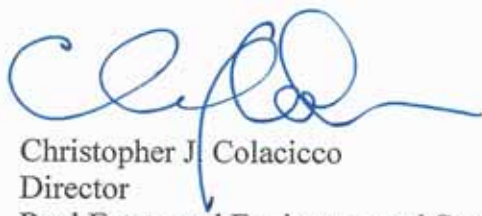
Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Leroy J. Elliott
Chairperson
Manzanita Band of Kumeyaay Nation
4 Old Mine Road
Boulevard, CA 91905

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Elliott:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

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Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

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Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Gwendolyn Parada
Chairperson
La Posta Band of Mission Indians
8 Crestwood Road
Boulevard, CA 91905

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Parada:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Area of Potential Effect

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As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

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Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

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Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

Mr. Paul Cuero
Kumeyaay Cultural Heritage Preservation
36190 Church Road, Suite 5
Campo, CA 91906

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Mr. Cuero:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

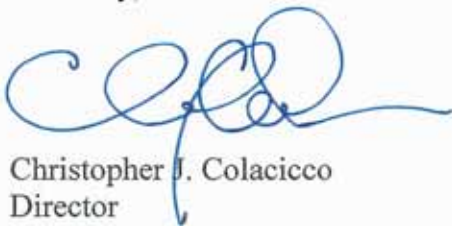
Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

Mr. Will Micklin
Executive Director
Ewiiapaayp Tribal Office
4054 Willows Rd.
Alpine, CA 91901

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Mr. Micklin:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

Ms. Jill McCormick
Tribal Archaeologist
Cocapah Museum
County 15th and Ave. G
Sommerton, AZ 85350

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Ms. McCormick:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

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No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Ralph Goff
Chairperson
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Goff:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Area of Potential Effect

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Identification and Evaluation of Historic Properties

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Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

Ms. Carol Roland-Nawi, SHPO
Office of Historic Preservation
California Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Ms. Roland-Nawi:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

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Identification and Evaluation of Historic Properties

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Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1). CBP requests SHPO concurrence with this determination.

Pursuant to Section 800.2(c)(1)(i) and Section 800.2(c)(2), CBP is also inviting the following tribes to consult concerning this undertaking. The consultation letter is also enclosed.

Barona Band of Mission Indians	Manzanita Band of Kumeyaay Indians
Campo Band of Mission Indians	Mesa Grande Band of Mission Indians
Cocopah Indian Tribe	San Pasqual Band of Diegueño Indians
Ewiiapaayp Band of Kumeyaay Indians	Santa Ysabel Band of Diegueno Indians
Fort Yuma Quechan Indian Tribe	Sycuan Band of Kumeyaay Nation
Jamul Indian Village of California	Torres-Martinez Desert Cahuilla Indians
Kwaaymii Laguna Band of Indians	Viejas Band of Kumeyaay Indians
La Posta Band of Kumeyaay Indians	

Your prompt attention to this request would be greatly appreciated. Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosures

DEC 06 2012



**U.S. Customs and
Border Protection**

The Honorable Kenneth A. Meza
Chairperson
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Meza:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Determination of Effects on Historic Properties

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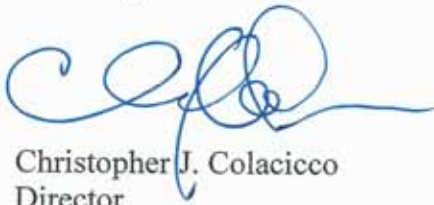
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Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
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Laguna Niguel, CA 92677-3400

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Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

DEC 06 2012



**U.S. Customs and
Border Protection**

The Honorable Carmen Lucas
Chairperson
Kwaaymii Laguna Band of Mission Indians
P.O. Box 775
Pine Valley, CA 91962

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Lucas:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

DEC 06 2012



**U.S. Customs and
Border Protection**

The Honorable Mark Romero
Chairperson
Mesa Grande Band of Mission Indians
P.O. Box 270
Santa Ysabel, CA 92082

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Romero:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

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CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

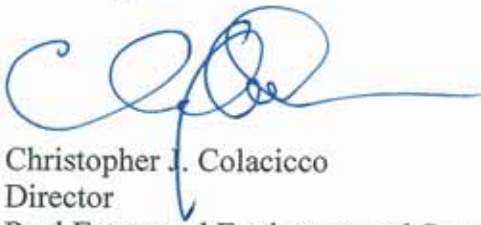
Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Keeny Escalanti
President
Fort Yuma Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear President Escalanti:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

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No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

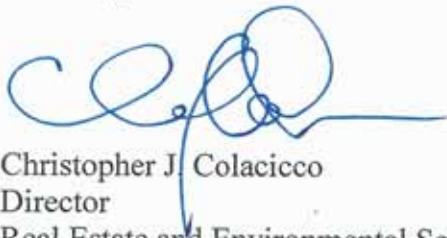
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Please direct all correspondence to:

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U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

Mr. John P. Bathke
THPO
Quechan Indian Nation
P.O. Box 1899
Yuma, AZ 85366

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Mr. Bathke:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

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Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

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CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

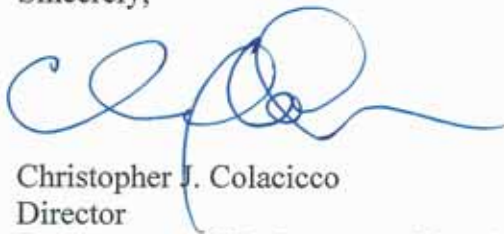
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Facilities Management and Engineering
Laguna Niguel Facilities Center
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Laguna Niguel, CA 92677-3400

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Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Allen E. Lawson
Chairperson
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Lawson:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Area of Potential Effect

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Determination of Effects on Historic Properties

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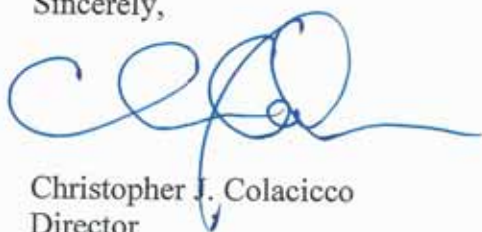
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U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

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Sincerely,

A handwritten signature in blue ink, appearing to read 'CJ Colacicco', with a long horizontal flourish extending to the right.

Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Virgil Perez
Chairperson
Santa Ysabel Band of Diegueno Indians
P.O. Box 130
Santa Ysabel, CA 92070

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Perez:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

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Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure

DEC 06 2012



**U.S. Customs and
Border Protection**

The Honorable Mary L. Resvaloso
Chairperson
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Resvaloso:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

DEC 06 2012

The Honorable Allen E. Lawson
Chairperson
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Subject: Proposed Improvement and Construction, Operation, and Maintenance of
Approximately 1.6 Miles of All-Weather Road in Imperial County, California

Dear Chairperson Lawson:

U.S. Customs and Border Protection (CBP) is proposing the improvement and construction, operation, and maintenance of approximately 1.6 miles of road along the U.S./Mexico border west of Calexico, California. The proposed all-weather roads are located west of the All-American Canal adjacent to and within U.S. Bureau of Land Management (BLM) lands, near the U.S./Mexico border in Imperial County, California. Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800 "Protection of Historic Properties (Section 106)," this letter and enclosures are being transmitted to initiate consultation, identify historic properties, and to assess adverse effects of this undertaking.

Description of Undertaking

Improvements to an existing border road would occur from near Border Monument 224 (approximately N 32° 38.96544, W 115° 42.1974), to near Border Monument 225 (approximately N32° 38.89518, W115° 43.52994). The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed. This road would be a 16-foot-wide road with necessary drainage structures to include all-weather surfacing.

Area of Potential Effect

The area of potential effect (APE) for the proposed undertaking includes the existing border road to be improved and the proposed alignment of the new access road leading to BP Hill, as well as an approximately 200-foot-wide corridor (300-foot-wide in some locations) along them that would take into account any temporary impacts from road improvement and construction

activities. A large portion of the APE has been previously disturbed by an extensive gravel quarry, while other disturbances include the existing road footprint, refuse, and erosion.

Identification and Evaluation of Historic Properties

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, a Class III pedestrian survey of the entire APE was completed to determine if cultural resources (archaeological sites, isolated finds, or historic structures) are present. Enclosed please find a copy of the cultural resources technical report titled *A Class III Cultural Resources Survey of the Proposed Improvement and Construction, Operation, and Maintenance of Approximately 1.6 Miles of All-Weather Road in the El Centro Area of Responsibility, U.S. Customs and Border Protection, El Centro Sector, Imperial County, California* for your records and comment.

As part of the background research, two previously recorded sites were identified as being located within or adjacent to the project corridor. CA-IMP-4833 is described as a cairn and trail segment located near the eastern end of the border road. CA-IMP-4829 is described as a quartz chipping station in the same vicinity. Attempts to relocate both sites were made; however, both sites have been completely destroyed by the extensive gravel quarry operated by the Imperial Irrigation District. During surveys, an isolated feature (13-009617), which consists of International Boundary Monument No. 225, was relocated.

No new archaeological sites were identified during the Class III survey of the project corridor. However, the survey of the APE did result in the identification of nine isolated finds. The isolated finds consist of five historic General Land Office survey markers, a scatter of milled lumber and nails, International Boundary Monument No. 224, a tobacco tin, and a shell fragment.

CBP has determined that the isolated artifacts, survey markers, and destroyed archaeological sites are not eligible for listing in the National Register of Historic Places (NRHP). Both International Boundary Monuments are eligible for listing on the NRHP under criteria A and C, and as such will be avoided by all road improvement and construction activities.

Determination of Effects on Historic Properties

Based on the location of the International Boundary Monuments in relation to the proposed road improvement and construction activities, the commitment by CBP to avoid the International Boundary Monuments during all road improvement and construction activities, and the absence of other historic buildings, structures, sites, districts or objects located within the APE, CBP has made a determination of no historic properties present or affected for this undertaking pursuant to Section 800.4(d)(1).

Please let us know if you have any concerns or would like to provide any additional information relative to the proposed undertaking within 30 days of receipt of this letter. Your prompt attention to this request would be greatly appreciated.

Please direct all correspondence to:

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

If you require additional information or have any questions, please contact Mr. Petrilla at (949) 360-2382 or by email at john.petrilla@dhs.gov. Thank you.

Sincerely,



Christopher J. Colacicco
Director
Real Estate and Environmental Services Division
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



IID

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www.iid.com

GS-ES

December 12, 2012

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

**SUBJECT: US CBP Improvement and Construction, Operation & Maintenance
Proposed All-Weather Road near the U.S./Mexico Border**

Dear Mr. Petrilla:

On November 13, 2012, the U.S. Customs and Border Protection (CBP) issued a Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the improvement, construction, operation and maintenance of an all-weather road along the U.S./Mexico Border. The Proposed Action would improve and construct, operate, and maintain approximately 1.6 miles of all-weather road near the U.S./Mexico border within the U.S. Border Patrol El Centro Station's Area of Responsibility. The existing 1.4-mile road that would be improved is west of the All-American Canal and adjacent to and within U.S. Bureau of Land Management's Yuha Desert Area of Critical Environmental Concern. The Proposed Action includes improvements to the existing border road, construction of a new access road to the top of BP Hill, and required maintenance activities upon completion of the proposed project. The Proposed Action also includes the construction of a new access road to the top of BP Hill (0.2 mile in length).

The Imperial Irrigation District (IID) has reviewed the Draft EA and Draft FONSI and has the following comments:

1. On page 3-4, 3.2.1 *Affected Environment*, lines 8, 9, 10 state, "IID has an extant gravel/sand quarry located near the eastern terminus of the project area. This site is currently not in use; however, IID could continue operations in the future." (See Figure 3-1, page 3-5)". In 2012 IID relinquished the mineral materials site and did not renew the permit for gravel and clay out of the Mount Signal Gravel Pit. The Bureau of Land Management (BLM) concluded that the IID had completed all the reclamation tasks and responsibilities associated with the operation of the Mount Signal gravel pit and complied with all BLM conditions and general stipulations. The Mount Signal Gravel Pit is located within the

Southwest Quarter of Section 24, Township 17 South, Range 12 East, San Bernardino Meridian.

2. The project site lies outside the All-American Canal (AAC) Service Area Boundary. Thus, the developer is ineligible to draw water from the Westside Main Canal/AAC for this project and will require to contract water from a commercial source.

Should you have any questions, please do not hesitate to contact me by phone at 760-482-3609 or by e-mail at dvargas@iid.com. Thank you for the opportunity to comment on this matter.

Respectfully,



Donald Vargas
Environmental Specialist

Kevin Kelley – General Manager
Jesse Silva – Manager, Water Dept.
Mario Escalera – Interim Deputy Manager - Operations, Energy Dept.
Carl Stills – Interim Deputy Manager – Strategic Planning, Energy Dept.
Paul G. Peschel – Interim General Services Manager
Jeff M. Garber – General Counsel
Tom King – Interim Project Management Officer, Portfolio Mgmt. Office
Carlos Villalon – Asst. Mgr., Water Dept. System Control & Monitoring
Juan Carlos Sandoval. – Asst. Mgr. Energy Dept.
Shayne Ferber – Asst. Supervisor, Real Estate
Vikki Dee Bradshaw – Interim Supervisor, Environmental Services

Josh McEnany

From: Josh McEnany
Sent: Wednesday, January 02, 2013 9:54 AM
To: Josh McEnany
Subject: FW: Improvement and Construction, Operation and Maintenance in Imperial County

From: Julie Hagen [<mailto:jhagen@VIEJAS.com>]
Sent: Thursday, December 27, 2012 8:14 AM
To: PETRILLA, JOHN
Cc: Raymond Cuero; Tina Estrada
Subject: Improvement and Construction, Operation and Maintenance in Imperial County

Good Morning,

Viejas Band of Kumeyaay Indians received your notice on improving an existing border road and we are concern with the fact there are cultural resources in the vicinity. Viejas Band would like to know if there is going to be a Native American Cultural monitor present when you are doing your improvements to help you with avoiding any impacts to cultural resources. Thank you

Julie Hagen
Viejas Band of Kumeyaay Indians
Environmental Coordinator
Phone: 619-659-2339
Cell: 619-890-2346

Public Comment Response Matrix
Draft EA for the Improvement and Construction, Operation, and Maintenance
of Proposed All-Weather Road in the El Centro Station Area of Responsibility,
U.S. Customs and Border Protection (CBP), El Centro Sector

December 2012

#	Location		Comment	Reviewer	CBP's Response
	Page	Line Section			
0					
1		General	The Native American Heritage Commission did conduct a Sacred Lands File (SLF) search of its inventory and Native American cultural resources were not identified in the location you specified.	Dave Singleton, Program Analyst, Native American Heritage Commission	Thank you for your comment and analyses.
2		General	The U.S. Section International Boundary and Water Commission (USIBWC) has responsibility through treaties between the United States and Mexico to maintain the integrity of the border. Included in the demarcation of the boundary through the maintenance of permanent boundary monuments to include access for their inspection and maintenance. Any proposed construction must allow for line of sight visibility between each of the boundary monuments. The USIBWC requires that all structures be off-set from the international boundary by a minimum of 3 feet and allow a clear line of sight between any affected boundary monuments. The USIBWC will not approve any construction near the international boundary in the United States that increases, concentrates, or relocates overland drainage flows into either country.	John L. Merino, Principal Engineer, USIBWC	Thank you for your comment, no structures would be built as part of the Proposed Action.
3		General		John L. Merino, Principal Engineer, USIBWC	Thank you for your comment. No construction or improvement activities would increase, concentrate or relocate any overland drainages flowing into either the United States or Mexico.

Public Comment Response Matrix
Draft EA for the Improvement and Construction, Operation, and Maintenance
of Proposed All-Weather Road in the El Centro Station Area of Responsibility,
U.S. Customs and Border Protection (CBP), El Centro Sector

December 2012

#	Location		Comment	Reviewer	CBP's Response
	Page	Line			
4			General	John L. Merino, Principal Engineer, USIBWC	Thank you for your comment. Design drawings for Phase A (2 Miles of All-Weather Road Improvements from Mount Signal Road moving West) has been submitted to the USIBWC for approval. Phase B will be submitted for approval prior to construction activities occurring.
5			General	Jill McCormick, Cultural Resource Manager, Cocopah Indian Tribe	Thank you for your comment and support. CBP will keep the Cocopah Indian Tribe informed as the project moves forward.
6	3-4	8-10	3.2.1	Donald Vargas, Environmental Specialist, Imperial Irrigation District	The document has been revised to reflect that IID has no intention of using the quarry site in the future.

Public Comment Response Matrix
Draft EA for the Improvement and Construction, Operation, and Maintenance
of Proposed All-Weather Road in the El Centro Station Area of Responsibility,
U.S. Customs and Border Protection (CBP), El Centro Sector

December 2012

#	Location		Comment	Reviewer	CBP's Response	
	Page	Line				Section
7			General	The project site lies outside the All-American Canal (AAC) Service Area Boundary. Thus, the developer is ineligible to draw water from the Westside Main Canal/AAC for this project and will be required to contract water from a commercial source.	Donald Vargas, Environmental Specialist, Imperial Irrigation District	CBP will obtain its water from a contract source.
8			General	Viejas Band of Kumeyaay Indians received your notice on improving an existing border road and we are concern with the fact there are cultural resources in the vicinity. Viejas Band would like to know if there is going to be a Native American Cultural monitor present when you are doing your improvements to help you with avoiding any impacts to cultural resources.	Julie Hagen Viejas Band of Kumeyaay Indians Environmental Coordinator	Native American monitors will be onsite during construction.



THE COCOPAH INDIAN TRIBE

**Cultural Resource Department
14515 S. Veterans Drive
Somerton, Arizona 85350
Telephone (928) 627-4849
Cell (928) 503-2291
Fax (928) 627-3173**

CCR-018-12-007

January 2, 2013

Mr. John Petrilla
U.S. Customs and Border Protection
Facilities Management and Engineering
Laguna Niguel Facilities Center
24000 Avila Rd, Room 5020
Laguna Niguel, CA 92677-3400

RE: Request for Comments for U.S. Customs and Border Protection Proposed
Improvement and Construction, Operation and Maintenance of Approximately 1.6
Miles of All –Weather Road in Imperial County, California

Dear Mr. Petilla:

The Cultural Resources Department of the Cocopah Indian Tribe appreciates your consultation efforts on this project. We are pleased that you contacted this department on this cultural resource issue for the purpose of solicitation of our input and to address our concerns on this matter. We concur with the No Historic Properties Affected determination made by your agency. We would like to continue to be kept informed on the progression of the project and be a part of the consultation process in the future

If you have any questions or need additional information please feel free to contact the cultural resource department. We will be happy to assist you with any future concerns or questions.

Sincerely,

A handwritten signature in blue ink that reads "Jill McCormick".

H. Jill McCormick, M.A.

Cultural Resource Manager



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Ken Alex
Director

December 17, 2012

John Petrilla
U.S. Customs and Border Protection
24000 Avila Road, Suite 5020
Laguna Niguel, CA 92677

Subject: West Desert Road Project
SCH#: 2012114001

Dear John Petrilla:

The State Clearinghouse submitted the above named Joint Document to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 14, 2012, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2012114001
Project Title West Desert Road Project
Lead Agency U.S. Customs and Border Protection

Type JD Joint Document
Description Note: EA / FONSI

The Proposed Action comprises improvement of an existing border road and construction of a new access road to the top of BP Hill RVSS tower. The border road improvements would occur from near Border Monument 224 to near Border Monument 225. The border road would be improved to an all-weather surface road (1.4 miles long) approximately 20 feet wide with 2-foot shoulders and would include any necessary drainage structures (i.e., culverts, low-water crossing, or bridge). A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 0.3 mile within the construction corridor. In addition to the 1.4 miles of road improvement, a new access road (approximately 0.2 mile) leading to the BP Hill RVSS tower from the improved border road would be constructed.

Lead Agency Contact

Name John Petrilla
Agency U.S. Customs and Border Protection
Phone 949 360 2382
email
Address 24000 Avila Road, Suite 5020
City Laguna Niguel
State CA **Zip** 92677
Fax

Project Location

County Imperial
City Calexico
Region
Lat / Long 32° 38' 57.95" N / 115° 42' 29.11" W
Cross Streets SR 98 and Signal Road
Parcel No. Mount Signal Quadrangle
Township 17S **Range** 12E **Section** 23/24 **Base**

Proximity to:

Highways SR 98
Airports
Railways
Waterways All-American Canal
Schools
Land Use Currently Roosevelt Reservation and Bureau of Land Management Yuha Desert Management Area for the FTHL

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 6; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Management Agency, California; California Highway Patrol; Caltrans, District 11; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 7; Native American Heritage Commission; State Lands Commission

Document Details Report
State Clearinghouse Data Base

Date Received 11/15/2012 *Start of Review* 11/15/2012 *End of Review* 12/14/2012

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-6251
 Fax (916) 657-5390
 Web Site www.nahc.ca.gov
 e-mail: ds_nahc@pacbell.net



RECEIVED

November 20, 2012

NOV 27 2012

Mr. John Petrilla
 Office of Healthcare Programs

STATE CLEARING HOUSE

**U.S. Customs & Border Protection | Facilities
 Management and Engineering**

24000 Avila Road, Room 5020
 Laguna Niguel, CA 92677-3400

Clear
 12/14/12
 C

Sent by U.S. Mail

No. of Pages: 5

Re: **"SCH#2012114001; NEPA 'Document: Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the West Desert Road Project;' located in the El Centro Sector; Imperial County, California**

Dear Mr. Petrilla:

The Native American Heritage Commission (NAHC) is the California State 'Trustee Agency' pursuant to Public Resources Code §21070 for the protection of California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*), 36 CFR Part 800.3, .5 and are subject to the Tribal and interested Native American consultation as required by the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470; Section 106, [4f], 110 [f] [k], 304). The provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) and its implementation (43 CFR Part 10.2), and California Government Code §27491 may apply to this project if Native American human remains are inadvertently discovered.

The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts and the Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological, including Native American items at least equal to the California Environmental Quality Act (CEQA.). In most cases, federal environmental policy require that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Statement (EIS).

The NAHC did conduct a Sacred Lands File (SLF) search of its Inventory and Native American cultural resources were not identified in the location you specified. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American

individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact

The NAHC Sacred Lands File Inventory of the Native American Heritage Commission is established by the California Legislature pursuant to California Public Resources Code §§5097.94(a) and 5097.96. The NAHC Sacred Lands Inventory is populated by submission to the data by Native American tribes and Native American elders. In this way it differs from the California and National Register of Historic Places under the jurisdiction of the U.S. Secretary of the Interior.

The NAHC, pursuant to Appendix B of the Guidelines to the California Environmental Quality Act (CEQA) is designated as the agency with expertise in the areas of issues of cultural significance to California Native American communities. Also, in the 1985 California Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites.

Culturally affiliated tribes are to be consulted to determine possible project impacts pursuant to the National Historic Preservation Act, as amended. Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. The NAHC recommends as part of 'due diligence', that you also contact the nearest Information Center of the California Historical Resources Information System (CHRIS) of the State Historic Preservation Office (SHPO) for other possible recorded sites in or near the APE (contact the Office of Historic Preservation at 916-445-7000).

Attached is a list of Native American contacts is attached to assist you pursuant to Section 800.2(c)(1)(i) and Section 800.2(c)(2); they may have knowledge of cultural resources in the project area. It is advisable to contact the persons listed and seek to establish a 'trust' relationship with them; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area.

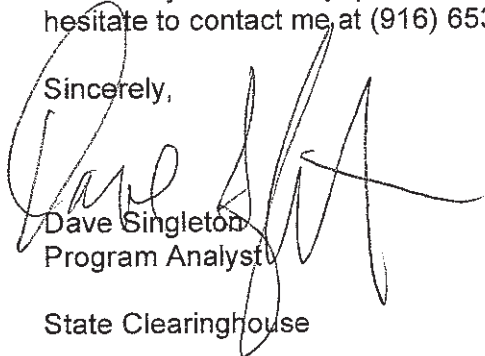
Lead agencies should consider avoidance, in the case of cultural resources that are discovered. A tribe or Native American individual may be the only source of information about a cultural resource; this is consistent with the NHPA (16 U.S.C. 470 *et seq* Sections. 106, 110, and 304) Section 106 Guidelines amended in 2009. Also, recommended for serious consideration are the federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) NAGPRA (25 U.S.C. 3001-3013) as appropriate. In addition, consider the 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes and are supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

NEPA regulations provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Even though a discovery may be in federal property, California Government Code §27460 should be followed in the event of an accidental discovery of human remains during any groundbreaking activity; in such cases California Government Code §27491

and California Health & Safety Code §7050.5 will apply and construction cease in the affected area.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Singleton', is written over the typed name and title.

Dave Singleton
Program Analyst

State Clearinghouse

Attachment: Native American Contacts list

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



December 20, 2012

Reply in Reference To: CBP_2012_1210_001

Christopher Colacicco, Director
Real Estate and Environmental Services
Border Patrol Facilities and Tactical Infrastructure
1301 Constitution Avenue, NW
EPA West Building, B-155
Washington, DC 20229

Re: Section 106 Consultation for Improvement, Construction, Operation and Maintenance of 1.6 Miles of All-Weather Road, Imperial County

Dear Director Colacicco:

Thank you for initiating consultation regarding the U.S. Customs and Border Protection's (CBP) efforts to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation found at 36 CFR Part 800.

You have identified the undertaking as the construction, operation and maintenance of 1.6 miles of all-weather road in Imperial County. Project activities include the improvement of a segment of existing border road between Border Monuments 224 and 225 through widening, installation of drainage features and new access road.

It is my understanding that Native American tribes have been notified about this project but no comments have been received at this time. No listed or eligible National Register resources have been identified within the project area and CBP is requesting my concurrence with their finding of no historic properties affected. After reviewing the information submitted by CBP, I have no objection to this finding. Please be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact Ed Carroll of my staff at (916) 445-7006 or at email at ecarroll@parks.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Susan K. Stratton for".

Carol Roland-Nawi, PhD
State Historic Preservation Officer

APPENDIX B
BIOLOGICAL SURVEY REPORT



Biological Survey for the West Desert Road El Centro Station, El Centro Sector

Dates Surveyed: June 28, 2012
Climate: Calm winds, Sunny, 85° F

Biologist: Josh McEnany Gulf South Research Corporation
John Ginter Gulf South Research Corporation

U.S. Customs and Border Protection (CBP) is proposing the improvement, construction, operation, and maintenance of approximately 2 miles of all-weather road along the U.S./Mexico border within the U.S. Border Patrol (USBP) El Centro Station's Area of Responsibility (AOR). Currently, the existing road is impassable, which creates long drive times for agents to reach patrol areas and restricts agents' abilities to assist with interdictions and apprehensions. The improvements to the West Desert Road begin at the Dump Turnaround (approximately N32° 38.993, W115° 41.996), near Border Monument 224, and extend to the Iron Gate (approximately N32° 38.861, W115° 43.725), near Border Monument 225. The road would be improved to an all-weather surface road (1.8 miles long) approximately 20 feet wide with 2-foot shoulders, and would include any necessary drainage structures. A drag road would also be constructed along the north side of the all-weather surface. Staging areas would be located approximately every 1/3 mile within the construction corridor and at the eastern and western terminuses. In addition to the 1.8 miles of road improvement, a new access road leading to the BP Hill Remote Video Surveillance System (RVSS) (approximately 0.2 mile) from the project road would be constructed (Figure 1). The entire project corridor, which includes the new road to BP Hill, was surveyed on foot (meandering transects) by biologists from Gulf South Research Corporation on June 28, 2012. The survey limits varied from 200 to 300 feet wide, depending on the terrain and suggestions by the project engineer. Vegetation, wildlife, and any potential waters of the United States were identified and recorded as needed. Photographs taken during the field survey are included in Attachment 1, and the location of each photo point is depicted on Figure 1.

The project lies in the Lower Colorado River Valley (LCRV) biome of the Sonoran Desert, and the vegetation community is broadly classified as Sonoran Desert scrub (Brown 1994). The project corridor contained less than five percent groundcover, and the predominant vegetation observed was creosote bush (*Larrea tridentata*), which is typical for this area within the Sonoran Desert. Other species observed included desert holly (*Atriplex hymenelytra*), skeleton weed (*Eriogonum deflexum*), white bursage (*Ambrosia dumosa*), velvet mesquite (*Prosopis velutina*), and catclaw acacia (*Acacia greggii*). Table 1 includes the full list of plant species observed during the survey.

The Sonoran Desert is extremely hot, and many animals are nocturnal or crepuscular. Many of the animals that inhabit the Sonoran Desert are found throughout the warmer and drier regions of the southwestern United States (Brown 1994). Common mammals found in this habitat include multiple species of bats, coyote (*Canis latrans*), black-tailed jack-rabbit (*Lepus californicus*), desert pocket mouse (*Chaetodipus penicillatus*), road runner (*Geococcyx californianus*), mourning dove (*Zenaida macroura*), lesser nighthawk (*Chordeiles acutipennis*), and desert iguana (*Dipsosaurus dorsalis*). The most common wildlife observed during the survey

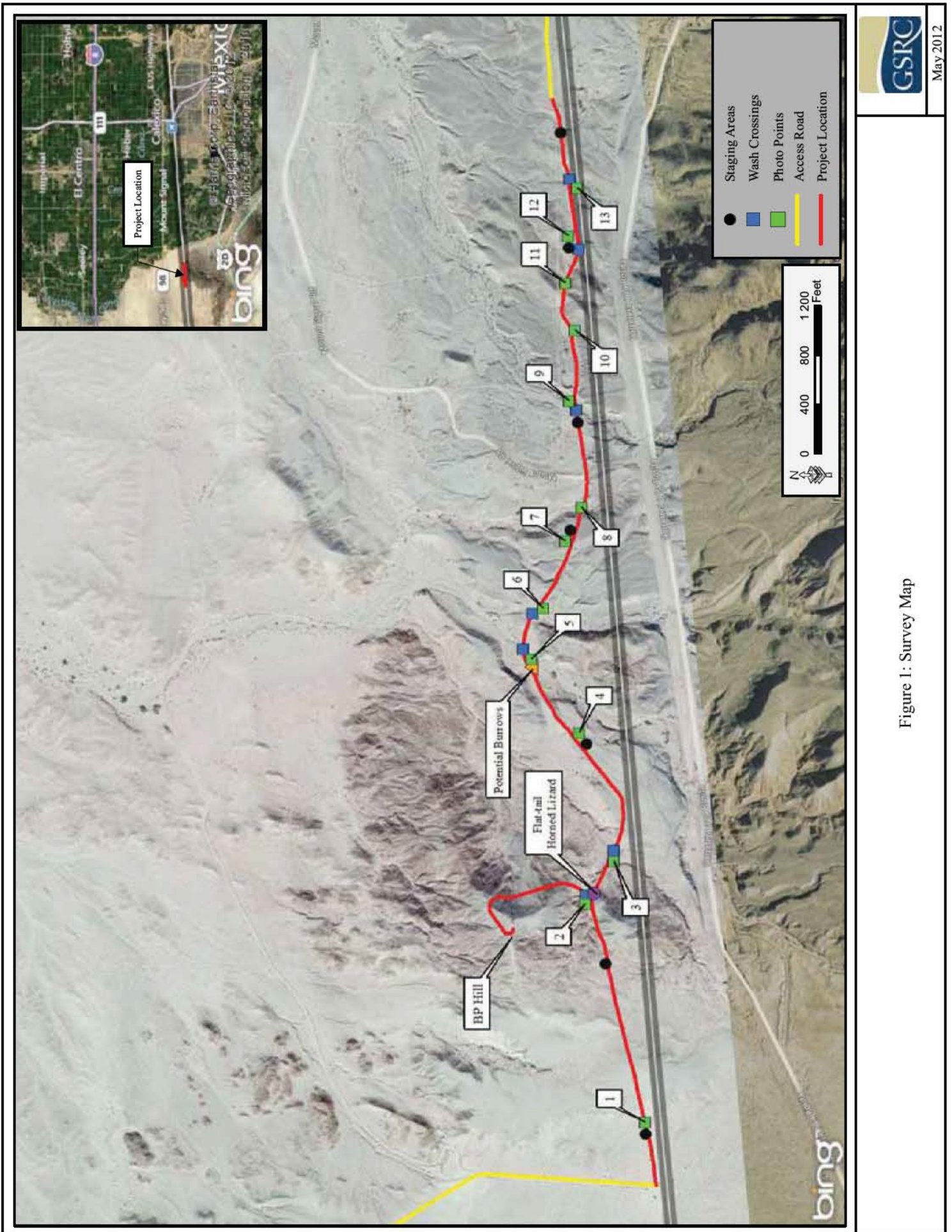


Figure 1: Survey Map

Table 1. Plant Species Observed During the West Desert Road Survey

Common Name	Scientific Name
Velvet mesquite	<i>Prosopis velutina</i>
Desert holly	<i>Atriplex hymenelytra</i>
Cattle saltbush	<i>Atriplex polycarpa</i>
Desert trumpet	<i>Eriogonum inflatum</i>
Catclaw acacia	<i>Acacia greggii</i>
Skeleton weed	<i>Eriogonum deflexum</i>
White bursage	<i>Ambrosia dumosa</i>
Sahara mustard	<i>Brassica tournefortii</i>
Desert Indianwheat	<i>Plantago ovate</i>
White ratany	<i>Krameria grayi</i>
Sweetbush	<i>Bebia juncea</i>
Devil's spineflower	<i>Chorizanthe rigida</i>
Desert lavender	<i>Hyptis emoryi</i>
Wild heliotrope	<i>Phacelia crenulata</i>
Arabian schismus	<i>Schismus arabicus</i>
Sixweeks fescue	<i>Vulpia octoflora</i>
California threeawn	<i>Aristida californica</i>
Desert smoketree	<i>Psorothamnus spinosor</i>
Dyebush	<i>Psorothamnus emoryi</i>
Jointfir	<i>Ephedra nevadensis</i>
Fanleaf crinklemat	<i>Tiquilia plicata</i>
Creosote bush	<i>Larrea tridentata</i>

includes mourning dove, lesser nighthawk, black-throated sparrow (*Amphispiza bilineata*), tiger whiptail (*Aspidoscelis tigris*), and long-tailed brush lizard (*Urosuarus graciosus*). All of the wildlife species observed during the survey are included in Table 2.

Table 2. Wildlife Observed During the West Desert Road Survey

Common Name	Scientific Name
Black-throated sparrow	<i>Amphispiza bilineata</i>
Lesser nighthawk	<i>Chordeiles acutipennis</i>
Mourning dove	<i>Zenaida macroura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Flat-tail horned lizard*	<i>Phrynosoma mcallii</i>
Desert kangaroo rat*	<i>Dipodomys deserti</i>
Coyote*	<i>Canis latrans</i>
Kit fox*	<i>Vulpes macrotis</i>
Sidewinder*	<i>Crotalus cerastes</i>
Tiger whiptail	<i>Aspidoscelis tigris</i>
Desert iguana	<i>Dipsosaurus dorsalis</i>
Zebra-tailed lizard	<i>Callisaurus draconoides</i>
Long-tailed brush lizard	<i>Urosuarus graciosus</i>

*These species were not observed; however, tracks and/or scat were observed within the project corridor.

The survey identified seven ephemeral washes bisecting the project corridor that might be regulated as waters of the United States (Figure 1). The total impact on the seven potential waters of the United States would be less than 0.1 acre. Dominant plants found along the drainages include velvet mesquite, catclaw acacia, and skeleton weed.

Although no Federally listed or state-listed species were observed during the surveys, tracks and scat of the flat-tail horned lizard (*Phrynosoma mcallii*) (FTHL) were recorded at one location. FTHL, a conservation agreement species, is not a Federally protected species. However, five Federal agencies signed a Memorandum of Agreement to protect the FTHL and its habitat on Federal lands. Habitat for the FTHL exists within the project corridor in the Yuma Desert Management Area (YDMA). Established by the 1997 Flat-Tailed Horned Lizard Rangeland Management Strategy, the YDMA serves as a tool to facilitate FTHL conservation. The project area is located within the YDMA. One burrow complex, presumably inhabited by desert kangaroo rats (*Dipodomys deserti*) and which could provide habitat for the BLM listed western burrowing owl (*Athene cunicularia*) and kit fox (*Vulpes macrotis*), was also observed and recorded during the survey efforts (Figure 1).

References

Brown, D. E. (ed.). 1994. *Biotic Communities: Southwestern United States and Northwestern Mexico*. Salt Lake City, UT: University of Utah Press.

ATTACHMENT 1



Photograph Point 1. Facing West



Photograph Point 1. Facing North



Photograph Point 1. Facing East



Photograph Point 2. Facing West



Photograph Point 2. Facing North



Photograph Point 3. Facing East



Photograph Point 3. Facing Southeast



Photograph Point 3. Facing East



Photograph Point 4. Facing West



Photograph Point 4. Facing Southeast



Photograph Point 5. Facing Southwest



Photograph Point 5. Facing Northeast



Photograph Point 6. Facing North



Photograph Point 6. Facing West



Photograph Point 6. Facing East



Photograph Point 6. Facing South



Photograph Point 7. Facing North



Photograph Point 8. Facing South



Photograph Point 8. Facing North



Photograph Point 9. Facing South



Photograph Point 9. Facing North



Photograph Point 10. Facing North



Photograph Point 10. Facing West



Photograph Point 11. Facing Southwest



Photograph Point 12. Facing Northeast



Photograph Point 12. Facing North



Photograph Point 13. Facing South

APPENDIX C
PROTECTED SPECIES: FEDERAL, STATE, AND BLM SENSITIVE

Scientific Name	Common Name	Taxon Abbrev.	Lead Office	State Status	Fed. Status	LISTING		RECOVERY			FEDERAL REGISTER	DISTRIBUTION [2]				
						Date Listed	Critical Habitat [3]	Plan	5-Year Review	RPN [4]	Most Recent Publication	LA	O	SB	Riv	SD
PLANTS																
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i> (<i>Oxytheca</i> p. var. g.) [1]	Cushenbury oxytheca	ACPAGO	CFWO		FE	24-Aug-94	f-02	D 97	2009	9C				X		
<i>Acanthomintha ilicifolia</i>	San Diego thormint	ACIL	CFWO		FT	13-Oct-98	f-08		2009	8					X	
<i>Acemison dendroideus</i> var. <i>traskiae</i> (<i>Lotus</i> d. subsp. <i>traskiae</i>) [1]	San Clemente Island lotus	LODETR	CFWO	SE	FE	11-Aug-77		F 84	2007	15	16-May-12	X				
<i>Allium manzi</i>	Manz's onion	ALMU	CFWO	ST	FE	13-Oct-98	n-12		2009	2C	11-Sep-12			X		
<i>Ambrosia pumila</i>	San Diego ambrosia	AMPU	CFWO		FE	2-Jul-02	f-10		2010	11C				X	X	
<i>Arctostaphylos glandulosa</i> subsp. <i>crassifolia</i>	Del Mar manzanita	ARGLCR	CFWO		FE	7-Oct-96			2010	6C					X	
<i>Arenaria pululicula</i>	marsh sandwort	ARPA	VFWO	SE	FE	3-Aug-93		F 98	2008	2		X	X			
<i>Astragalus albens</i>	Cushenbury milk-veich	ASAL	CFWO		FE	24-Aug-94	f-02	D 97	2009	8C				X		
<i>Astragalus brauntonii</i>	Braunton's milk-veich	ASBR	VFWO		FE	29-Jan-97	f-06	F 99	2009	2		X	X	X		
<i>Astragalus lentiginosus</i> var. <i>cochellae</i>	Coachella Valley milk-veich	ASLECO	CFWO		FE	6-Oct-98	f-05		2009	6C	16-May-12			X		
<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	Peirson's milk-veich	ASMAPE	CFWO	SE	FT	6-Oct-98	fr-08		2008	9	17-Jul-08				X	
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Ventura marsh milk-veich	ASPYLA	VFWO	SE	FE	21-May-01	f-04		2010	6C		X	X			
<i>Astragalus tener</i> var. <i>tini</i>	coastal dunes milk-veich	ASTEti	VFWO	SE	FE	12-Aug-98		F 05	2009	6C		X			X	
<i>Astragalus tricarinatus</i>	triple-ribbed milk-veich	ASTR	CFWO		FE	6-Oct-98			2009	14				X	X	
<i>Atriplex coronata</i> var. <i>notator</i>	San Jacinto Valley crowscale	ATCONO	CFWO		FE	13-Oct-98	n-12		2008	3	11-Sep-12			X		
<i>Baccharis vaucesae</i>	Encinitas baccharis	BAVA	CFWO	SE	FT	7-Oct-96			2011	5C					X	
<i>Berberis nevadensis</i>	Nevin's barberry	BENE	CFWO	SE	FE	13-Oct-98	f-08		2009	2		X	X	X	X	
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	BRFI	CFWO	SE	FT	13-Oct-98	f-11		2009	8C		X	X	X	X	
<i>Casilleja cinerea</i>	ash-gray paintbrush	CACI	CFWO		FT	14-Sep-98	f-07		2008	8				X		
<i>Casilleja grisea</i>	San Clemente Island paintbrush	CAGR	CFWO	SE	FE	11-Aug-77		F 84	2007	14	16-May-12	X				
<i>Ceanothus ophiocilius</i>	Vail Lake ceanothus	CEOP	CFWO	SE	FT	13-Oct-98	f-07		2008	2				X		
<i>Cercocarpus traskiae</i>	Catalina Island mountain-mahogany	CETR	CFWO	SE	FE	8-Aug-97			2007	8		X				
<i>Chloropyron maritimum</i> subsp. <i>maritimum</i> (<i>Cordylanthus maritimus</i> subsp. <i>maritimus</i>) [1]	salt marsh bird's-beak	CHMAMA	CFWO	SE	FE	28-Sep-78		F 85	2009	9		X	X		X	
<i>Chorizanthe arcuata</i>	Orcutt's spineflower	CHOR	CFWO	SE	FE	7-Oct-96			2008	5					X	
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	CHPAFE	VFWO	SE	C	25-Oct-99			na			X	X	X		
<i>Deinandra conjugens</i> (<i>Hemizonia</i> c.) [1]	Otay tarplant	DECO	CFWO	SE	FT	13-Oct-98	f-02	F 04	2009	8C					X	
<i>Delphinium variegatum</i> subsp. <i>kimense</i>	San Clemente Island larkspur	DEVAKI	CFWO	SE	FE	11-Aug-77		F 84	2008	15	19-Jan-11	X				
<i>Dodecathema leptoceras</i> [1]	slender-horned spineflower	DOLJ	CFWO	SE	FE	28-Sep-87			2010	7C		X	X	X		
<i>Dudleya cymosa</i> subsp. <i>ovatifolia</i>	Santa Monica Mountains dudleya	DUCYOV	VFWO		FT	29-Jan-97		F 99	2009	6		X	X			
<i>Dudleya stolonifera</i>	Laguna Beach live-forever	DUST	CFWO	ST	FT	13-Oct-98			2010	8			X			
<i>Eremogone ursina</i> (<i>Arenaria ursina</i>) [1]	Bear Valley sandwort	ERUR	CFWO		FT	14-Sep-98	f-07		2008	8				X		
<i>Eriastrum densifolium</i> subsp. <i>sanctorum</i>	Santa Ana River woolly-star	ERDESA	CFWO	SE	FE	28-Sep-87			2010	6C		X	X	X		
<i>Erigeron parishii</i>	Parish's daisy	ERPA	CFWO		FT	24-Aug-94	f-02	D 97	2009	8C				X	X	
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	southern mountain wild buckwheat	ERKEAU	CFWO		FT	14-Sep-98	f-07		2008	9				X		
<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Cushenbury buckwheat	EROVVI	CFWO		FE	24-Aug-94	f-02	D 97	2009	9C				X		
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button celery	ERARPA	CFWO	SE	FE	3-Aug-93		F 98	2010	9C				X	X	
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	FRME	CFWO	SR	FE	13-Oct-98	f-07		2009	8					X	
<i>Hazardia arcuati</i>	Orcutt's hazardia	HAOR	CFWO	ST	C				na		26-Oct-11				X	
<i>Helianthemum greenei</i>	Island rush-rose	HEGR	VFWO		FT	13-Jul-97		F 00	2010	14		X				
<i>Lithophragma maximum</i>	San Clemente Island woodland star	LIMA	CFWO	SE	FE	8-Aug-97		F 84	2007	2		X				
<i>Malacothamnus clementinus</i>	San Clemente Island bush mallow	MACL	CFWO	SE	FE	11-Aug-77		F 84	2007	8	16-May-12	X				
<i>Monardella viminea</i> (<i>M. linoides</i> subsp. v.) [1]	willow monardella	MOVI	CFWO	SE	FE	13-Oct-98	fr-12		2008	2	6-Mar-12				X	
<i>Navarretia fossalis</i>	spreading navarretia	NAFO	CFWO		FT	13-Oct-98	f-10	F 98	2009	8		X	X	X		
<i>Orcuttia californica</i>	California Orcutt grass	ORCA	CFWO	SE	FE	3-Aug-93		F 98	2011	11C		X	X	X		
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	PELY	VFWO	SE	FE	29-Jan-97	f-06	F 99	2008	2C		X				
<i>Phacelia stellaris</i>	Brand's phacelia	PHST	CFWO		C				na		26-Oct-11	X	X	X		
<i>Physaria kingii</i> subsp. <i>bernardina</i> (<i>Lesquerella</i> k. subsp. b.) [1]	San Bernardino Mountains bladderpod	PHKIBE	CFWO		FE	24-Aug-94	f-02	D 97	2009	9C				X		
<i>Poa atropurpurea</i>	San Bernardino bluegrass	POAT	CFWO		FE	14-Sep-98	f-08		2008	2		X		X		
<i>Pogogyne abramsii</i>	San Diego mesa mint	POAH	CFWO	SE	FE	28-Sep-78		F 98	2010	8C					X	
<i>Pogogyne nudiuscula</i>	Otay mesa mint	PONU	CFWO	SE	FE	3-Aug-93		F 98	2010	2C					X	
<i>Nasturtium gambelii</i> (<i>Rorippa gambelii</i>) [1]	Gambel's watercress	ROGA	VFWO	ST	FE	3-Aug-93		F 98	in prep.	5		X	X	X	X	
<i>Sibara filifolia</i>	Santa Cruz Island rock-cress	SIFI	CFWO		FE	8-Aug-97			2006	2		X				
<i>Sidalcea pedata</i>	pedate checker-mallow	SIPE	CFWO	SE	FE	31-Aug-84		F 98	2011	5C				X		
<i>Taraxacum californicum</i>	California taraxacum	TACA	CFWO		FE	14-Sep-98	f-08		2008	5				X		
<i>Thelypodium stenopetalum</i>	slender-petaled mustard	THST	CFWO	SE	FE	31-Aug-84		F 98	2011	5C				X		

INDEX
Federal Status: FE = endangered; FT = threatened; C = candidate for listing; P = proposed; W = proposal withdrawn; PDM = post delisting monitoring plan; X* = experimental population; N = 90-day finding; M = 12-month finding.
State Status: SE = state endangered; ST = state threatened; SCE = state candidate endangered; SCT = state candidate threatened; sde = state delisted; SR = state listed rare; FP = fully protected; SSC = species of special concern (does not apply to plants or invertebrates).
Critical Habitat: p = Proposed; f = Designated; pf=Prudent Finding; npf=Not Prudent Finding; pr = Proposed Revised; fr = Final Revised; fde = Final delisting; W* = proposal withdrawn; fnd = final not designated.
Recovery Plan: F = Final-year published, D = Draft-year published
Distribution (historical county occurrences): LA = Los Angeles; O = Orange; SB = San Bernardino; Riv = Riverside; SD = San Diego; Imp = Imperial
Note: Santa Catalina Island and San Clemente Island are considered to be located within L.A. County
* Plant names format: scientific name including synonym, if any, followed by common name in parentheses [e.g. <i>Allium munzii</i> (Munz's onion); <i>Eremogone ursina</i> (<i>Arenaria ursina</i>) (Bear Valley sandwort)] Animal names format: common name including name of DPS, if any, followed by scientific name (including synonyms, if any) in parentheses [e.g. Santa Ana sucker (<i>Catostomus santaanae</i>); western snowy plover (Pacific Coast population DPS) (<i>Charadrius nivosus nivosus</i> (<i>Charadrius alexandrinus nivosus</i>))]
[1] Current name, followed by name under which the taxon was listed, or otherwise recognized, in parentheses. Cite "current name (older name)" form at least once in the beginning of a document, otherwise use the current name throughout.
[2] For species' range refer to the 5-Year Review or utilize the "Distribution" link to access the ECOS Mapper.
[3] For species' Critical Habitat refer to the final critical habitat rule or utilize the "Critical Habitat" link to access the ECOS critical habitat Mapper.
[4] Recovery Priority Number (RPN) for listed taxa; definitions relate to Degree of Threat, Recovery Potential, Taxonomic Status, and Conflict (na = not applicable).
PLEASE SEND CHANGES OR CORRECTIONS CONCERNING: SPECIES NAMES TO GARY WALLACE (Gary_Wallace@fws.gov, 760-431-9440); CRITICAL HABITAT MAPPING TO TONY MCKINNEY (Tony_McKinney@fws.gov, 760-431-9440); HYPERLINKS OR ASSOCIATED DOCUMENTS TO JASON STAYER (Jason_Stayer@fws.gov, 760-431-9440).
LIST REVISED September 12, 2012

BLM Special Status Plants under the jurisdiction of the El Centro Field Office as of September 18, 2012.

SCIENTIFIC NAME	COMMON NAME	TYPE OF PLANT	FAMILY	STATUS	KNOWN OR SUSPECTED ON BLM LANDS?
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	Vascular Plant	Nyctaginaceae	BLM Sensitive	Suspected on BLM lands
<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	Peirson's milk-vetch	Vascular Plant	Fabaceae	Federally Threatened	Known on BLM lands
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	Vascular Plant	Asteraceae	BLM Sensitive	Suspected on BLM lands
<i>Chamaesyce platysperma</i>	flat-seeded spurge	Vascular Plant	Euphorbiaceae	BLM Sensitive	Suspected on BLM lands
<i>Charizantha polygonoides</i> var. <i>longispina</i>	long-spined spiny cholla	Vascular Plant	Polygonaceae	BLM Sensitive	Suspected on BLM lands
<i>Croton wigginsii</i>	Wiggins croton	Vascular Plant	Euphorbiaceae	BLM Sensitive	Known on BLM lands
<i>Cylindropuntia fosbergii</i>	pink teddy-bear cholla	Vascular Plant	Cactaceae	BLM Sensitive	Known on BLM lands
<i>Cylindropuntia munzii</i>	Munz cholla	Vascular Plant	Cactaceae	BLM Sensitive	Known on BLM lands
<i>Dieteria asteroides</i> var. <i>lagunensis</i>	Mount Laguna aster	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands
<i>Fremontodendron mexicanum</i>	Mexican fan-bush	Vascular Plant	Mimosaceae	Federally Endangered	Known on BLM lands
<i>Grindelia hallii</i>	San Diego gump ant	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands
<i>Helianthus niveus</i> subsp. <i>tephrodes</i>	Agadones Dunes sunflower	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands
<i>Hulsea californica</i>	San Diego sunflower	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands
<i>Lupinus excubitus</i> var. <i>medius</i>	Mountain Springs bush lupine	Vascular Plant	Fabaceae	BLM Sensitive	Known on BLM lands
<i>Monardella nana</i> subsp. <i>leptosiphon</i>	San Felipe monardella	Vascular Plant	Lamiaceae	BLM Sensitive	Suspected on BLM lands
<i>Palafoxia arida</i> var. <i>gigantea</i>	giant Spanish needle	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands
<i>Pholisma sonora</i>	sand food	Vascular Plant	Borraginaceae	BLM Sensitive	Known on BLM lands
<i>Streptanthus campestris</i>	southern jewelflower	Vascular Plant	Brassicaceae	BLM Sensitive	Suspected on BLM lands
<i>Symphotrichum defoliatum</i>	San Bernard no-aster	Vascular Plant	Asteraceae	BLM Sensitive	Suspected on BLM lands
<i>Thermopsis californica</i> var. <i>semota</i>	vevety false lupine	Vascular Plant	Fabaceae	BLM Sensitive	Suspected on BLM lands
<i>Thysanocarpus rigidus</i>	Ridge Fringe-pod	Vascular Plant	Brassicaceae	BLM Sensitive	Suspected on BLM lands
<i>Xylorhiza orcuttii</i>	Orcutt's woody aster	Vascular Plant	Asteraceae	BLM Sensitive	Known on BLM lands

El Centro Faunal Sensitive Species 2011

MAMMALS

California leaf-nosed bat	<i>Macrotus californicus</i>
Cave myotis	<i>Myotis velifer</i>
Desert bighorn sheep	<i>Ovis canadensis nelsoni</i>
Fringed myotis	<i>Myotis thysanodes</i>
Long-eared myotis	<i>Myotis evotis</i>
Pallid bat	<i>Antrozous pallidus</i>
Palm Springs little pocket mouse	<i>Perognathus longimembris bangsi</i>
Small-footed myotis	<i>Myotis ciliolabrum</i>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
Western mastiff-bat	<i>Eumops perotis californicus</i>
Yuma myotis	<i>Myotis yumanensis</i>

BIRDS

Brown pelican	<i>Pelecanus occidentalis</i>
Burrowing owl	<i>Athene cunicularia</i>
California black rail	<i>Laterallus jamaicensis coturniculus</i>
California spotted owl	<i>Strix occidentalis occidentalis</i>
Elf owl	<i>Micrathene whitneyi</i>
Gila woodpecker	<i>Melanerpes uropygialis</i>
Mountain plover	<i>Charadrius montanus</i>
Tricolored blackbird	<i>Agelaius tricolor</i>
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>

REPTILES

Barefoot banded gecko	<i>Coleonyx switaki</i>
Colorado Desert fringe-toed lizard	<i>Uma notata notata</i>
Flat-tailed horned lizard	<i>Phrynosoma mcalli</i>
	<i>Actinemys (=Clemmys) marmorata</i>
	<i>Pallid</i>
Southwestern pond turtle	
Two-striped garter snake	<i>Thamnophis hammondi</i>

AMPHIBIANS

Couch's spadefoot toad

Lowland leopard frog

Scaphiopus couchi

Lithobates (=Rana) yavapaiensis

State of California
The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Biogeographic Data Branch
California Natural Diversity Database

STATE & FEDERALLY LISTED ENDANGERED & THREATENED ANIMALS OF CALIFORNIA

January 2011

This is a list of animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish & Game Commission (state list) or by the U.S. Secretary of the Interior or the U.S. Secretary of Commerce (federal list).

The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, Section 670.5. The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11. The California Endangered Species Act of 1970 created the categories of "Endangered" and "Rare". The California Endangered Species Act of 1984 created the categories of "Endangered" and "Threatened". On January 1, 1985, all animal species designated as "Rare" were reclassified as "Threatened".

Animals that are candidates for state listing and animals proposed for federal listing are also included on this list. A state candidate species is one that the Fish and Game commission had formally noticed as being under review by the Department for addition to the State list. A federal proposed species is one for which a proposed regulation has been published in the Federal Register.

Code Designation:	Totals as of January 2011
SE = State-listed as Endangered	46
ST = State listed as Threatened	35
SR = State listed as Rare – old designation, all animals reclassified to Threatened on 1/1/85	0
FE = Federally listed as Endangered (21.2% of all U.S. listed endangered animals as of 1/10/11)	88
FT = Federally listed as Threatened (24.4% of all U.S. listed threatened animals as of 1/10/11)	40
SCE = State candidate (Endangered)	2
SCT = State Candidate (Threatened)	0
SCD = State Candidate (Delisting)	1
FPE = Federally proposed (Endangered)	1
FPT = Federally proposed (Threatened)	1
FPD = Federally proposed (Delisting)	0
Total number of animals listed (includes subspecies & population segments)	157
Total number of candidate/proposed animals for listing	4
Number of animals State listed only	31
Number of animals Federally listed only	71
Number of animals listed under both State & Federal Acts	55

Common and scientific names are shown as they appear on the state or federal lists. If the nomenclature differs for a species that is included on both lists, the state nomenclature is given and the federal nomenclature is shown in a footnote. Synonyms, name changes, and other clarifying points are also footnoted.

Critical Habitat is defined in Section 3 of the federal Endangered Species Act as specific areas, both occupied and unoccupied, that is essential to the conservation of a listed species and that may require special management considerations or protection.

Recovery Plans are discussed in Section 4 of the federal Endangered Species Act. Each plan incorporates site-specific management actions necessary for the conservation and survival of the species.

The "List Date" for **final** federal listing and **final** Critical Habitat designation is the date the listing or designation becomes effective, this is usually not the date of publication of the rule in the Federal Register; it is usually about 30 days after publication, but may be longer.

If a taxa that was previously listed or proposed for listing no longer has any listing status the entry has been grayed out.

For taxa that have more than one status entry, the current status is in bold and underlined.

Changes to this update of the list are denoted by *

	<u>LISTING STATUS</u>			<u>CRITICAL</u>	<u>RECOVERY</u>			
	State	List Date	Federal	HABITAT	Effective List Date	Effective Date	Version	Date
<u>GASTROPODS</u>								
Trinity bristle snail <i>Monadenia setosa</i> ¹	ST ²	10-02-80						
Morro shoulderband (=banded dune) snail <i>Helminthoglypta walkeriana</i>			FE		1-17-95	Final	3-09-01	Final 1998
White abalone <i>Haliotis sorenseni</i>			FE		6-28-01	Not prudent	6-28-01	Final 2008
Black abalone <i>Haliotis cracherodii</i>			FE		2-13-09	*Proposed	9-28-10	
<u>CRUSTACEANS</u>								
Riverside fairy shrimp <i>Streptocephalus woottoni</i>			FE		8-03-93	Final ³ Proposed	5-12-05 4-27-04	Final 1998
Conservancy fairy shrimp <i>Branchinecta conservatio</i>			FE		9-19-94	Final ⁴ Proposed	2-10-06 12-28-04	Final 2005
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>			FE		9-19-94	Final 4 Proposed	2-10-06 12-28-04	Final 2005
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>			FT		9-19-94	Final 4 Proposed	2-10-06 12-28-04	Final 2005
San Diego fairy shrimp <i>Branchinecta sandiegoensis</i>			FE		2-03-97	Final Proposed ⁵	1-11-08 4-22-03	Final 1998
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>			FE		9-19-94	Final 4 Proposed	2-10-06 12-28-04	Final 2005
Shasta crayfish <i>Pacifastacus fortis</i>	<u>SE</u> ST	2-26-88 10-02-80	FE		9-30-88			Final 1998
California freshwater shrimp <i>Syncaris pacifica</i>	SE	10-02-80	FE		10-31-88			Final 1998
<u>INSECTS</u>								
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>			FE		2-24-97	Final	3-09-01	Final 1998

¹ Current taxonomy is *Monadenia infumata setosa*.

² On January 1, 1985, all species designated as "rare" were reclassified as "threatened", as stipulated by the California Endangered Species Act.

³ The Federal Circuit Court vacated critical habitat for the Riverside fairy shrimp on 10 30 02. The judge instructed the USFWS to begin the process of re designating critical habitat for this species. New critical habitat was proposed 4 27 04 and finalized effective 5 12 05.

⁴ On October 28, 2004 the courts ordered the USFWS to reconsider the areas excluded from the final critical habitat designation made August 6, 2003. The December 28 2004 proposed rule is only for lands previously excluded and does not affect the areas included in the August 6, 2003 final rule. The non economic exclusions made to the August 6, 2003 final rule were confirmed effective March 8, 2005

⁵ Due to court order the previously designated critical habitat was vacated and the USFWS was directed to re proposed critical habitat.

	<u>LISTING STATUS</u>		<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>			
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Mount Hermon June beetle <i>Polyphylla barbata</i>			FE	2-24-97			Final	1998
Casey's June beetle <i>Dinacoma caseyi</i>			FPE	7-09-09	Proposed	7-09-09		
Delta green ground beetle <i>Elaphrus viridis</i>			FT	8-08-80	Final	8-08-80	Final	2006
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>			FT	8-08-80	Final	8-08-80	Final	1985
Ohlone tiger beetle <i>Cicindela ohlone</i>			FE	10-03-01			Final	1984
Kern primrose sphinx moth <i>Euproserpinus euterpe</i>			FT	4-08-80	Proposed	7-03-78	Final	1998
Mission blue butterfly <i>Icaricia icarioides missionensis</i> ⁶			FE	6-01-76	Proposed	2-08-77	Final	1984
Lotis blue butterfly <i>Lycaeides argyrognomon lotis</i> ⁷			FE	6-01-76	Proposed	2-08-77	Final	1985
Palos Verdes blue butterfly <i>Glaucopsyche lygdamus palosverdesensis</i>			FE	7-02-80	Final	7-02-80	Final	1984
El Segundo blue butterfly <i>Euphilotes battoides allyni</i>			FE	6-01-76	Proposed	2-08-77	Final	1998
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>			FE	6-01-76	Proposed	2-08-77	Final	1984
San Bruno elfin butterfly <i>Callophrys mossii bayensis</i>			FE	6-01-76	Proposed	2-08-77	Final	1984
Lange's metalmark butterfly <i>Apodemia mormo langei</i>			FE	6-01-76	Proposed	2-08-77	Revised	1984
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>			FT	10-18-87	Final	9-25-08	Final	1998
Quino checkerspot <i>Euphydras editha quino (=E.e.wrighti)</i>			FE	1-16-97	Proposed ⁸	1-17-08	Final	2003
Carson wandering skipper <i>Pseudocopaedes enus obscurus</i>			FE	8-07-02			Final	2007
Laguna Mountains skipper <i>Pyrgus ruralis lagunae</i>			FE	1-16-97	Final	1-11-07	Draft	2005
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>			FE	12-05-97	Proposed	3-28-80		
Behren's silverspot butterfly <i>Speyeria zerene behrensii</i>			FE	12-05-97			Draft	2004
Oregon silverspot butterfly ⁹ <i>Speyeria zerene hippolyta</i>			FT	7-02-80	Final	7-02-80	Revised	2001
Myrtle's silverspot butterfly <i>Speyeria zerene myrtilae</i>			FE	6-22-92			Final	1998
Delhi Sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>			FE	9-23-93			Final	1997

⁶ Current taxonomy is *Plebejus icarioides missionensis*⁷ Current taxonomy is *Plebejus idas lotis*⁸ Proposed rule is to revise designated Critical Habitat⁹ Current common name is *Hippolyta fritillary*

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
<u>FISHES</u>								
Green sturgeon – southern DPS <i>Acipenser medirostris</i>			FT ¹⁰	6-06-06	Final Proposed	11-09-09 9-08-08		
Chinook salmon-Winter-run ¹¹ <i>Oncorhynchus tshawytscha</i>	SE	9-22-89	<u>FE</u> ¹² FE	8-29-05 2-03-94	Final	3-23-99	Draft	2009 1997
Chinook salmon-California coastal ESU ¹³ <i>Oncorhynchus tshawytscha</i>			<u>FT</u> ¹⁴ <u>FT</u> ¹⁵	8-29-05 11-15-99	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 2-16-00		
Chinook salmon-Spring-run <i>Oncorhynchus tshawytscha</i>	ST ¹⁶	2-05-99	<u>FT</u> ¹⁷ <u>FT</u> ¹⁸	8-29-05 11-15-99	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 2-16-00	Draft	2009
Coho salmon-Central California Coast ESU <i>Oncorhynchus kisutch</i>	SE ¹⁹	3-30-05	<u>FE</u> ²⁰ <u>FT</u> ²¹	8-29-05 12-02-96	Final	6-04-99	Final (state)	2004
Coho salmon-So. Oregon/No. Calif ESU <i>Oncorhynchus kisutch</i>	ST ²²	3-30-05	<u>FT</u> ²³ <u>FT</u> ²⁴	8-29-05 6-05-97	Final	3-17-00	Final (state)	2004
Little Kern golden trout <i>Oncorhynchus mykiss whitei</i>			FT	4-13-78	Final	4-13-78	Exempt	
Lahontan cutthroat trout <i>Oncorhynchus clarki henshawi</i>			<u>FT</u> FE	7-16-75 10-13-70			Final	1995
Paiute cutthroat trout <i>Oncorhynchus clarki seleniris</i>			<u>FT</u> FE	7-16-75 3-11-67 ²⁵			Revised Final	2004 1985
Steelhead-Northern California DPS ^{26 27} <i>Oncorhynchus mykiss</i>			<u>FT</u> ²⁸ FT	2-06-06 8-07-00	Final Proposed	1-02-06 12-10-04		

¹⁰ Includes all spawning populations south of the Eel River

¹¹ Federal: Sacramento River winter run Chinook salmon

¹² The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

¹³ ESU Evolutionarily Significant Unit

¹⁴ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

¹⁵ Naturally spawned coastal spring & fall Chinook salmon between Redwood Creek in Humboldt County & the Russian River in Sonoma County.

¹⁶ State listing is for the Sacramento River drainage.

¹⁷ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

¹⁸ Federal: Central Valley Spring Run ESU. Includes populations spawning in the Sacramento River & its tributaries.

¹⁹ The Coho south of San Francisco Bay were state listed in 1995; in February 2004 the Fish and Game Commission determined that the Coho from San Francisco to Punta Gorda should also be listed as Endangered. This changed was finalized by of Office of Administrative Law on March 30, 2005.

²⁰ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

²¹ The Federal listing is limited to naturally spawning populations in streams between Punta Gorda, Humboldt County & the San Lorenzo River, Santa Cruz County.

²² The Fish and Game Commission determined that the Coho from Punta Gorda to the Oregon border should be listed as Threatened on February 25, 2004. This determination was finalized by the Office of Administrative Law on March 30, 2005.

²³ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs, 10 of these in California. The 29 Aug 2005 list date refers to the final designations made as a result of those status reviews.

²⁴ The Federal listing is for populations between Cape Blanco, Oregon & Punta Gorda, California.

²⁵ All species with a list date of 03 11 67 were listed under the Endangered Species Preservation Act of Oct 15, 1966.

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Steelhead-Central California Coast DPS ²⁹ <i>Oncorhynchus mykiss</i>			<u>FT</u> ³⁰ FT	2-06-06 10-17-97	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 3-17-00		
Steelhead-South/Central Calif Coast DPS ³¹ <i>Oncorhynchus mykiss</i>			<u>FT</u> ³² FT	2-06-06 10-17-97	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 3-17-00		
Steelhead-Southern California DPS ³³ <i>Oncorhynchus mykiss</i>			<u>FE</u> ³⁴ FE	2-06-06 10-17-97	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 3-17-00	Draft	2009
Steelhead-Central Valley DPS ³⁵ <i>Oncorhynchus mykiss</i>			<u>FT</u> ³⁶ FT	2-06-06 5-18-98	Final Proposed Rescinded Final	1-02-06 12-10-04 4-30-02 3-17-00	Draft	2009
Bull trout <i>Salvelinus confluentus</i>	SE	10-02-80	FT	12-01-99	*Proposed (revised) ³⁷ Final	1-14-10 10-26-05		
Delta smelt <i>Hypomesus transpacificus</i>	<u>SE</u>	1-20-10	FT	3-05-93	Final	12-19-94	Final	1996
Longfin smelt <i>Spirinchus thaleichthys</i>	<u>ST</u>	4-09-10						
Eulachon – southern DPS <i>Thaleichthys pacificus</i>	SCE	2-02-08	FT	5-17-10	*Proposed	1-05-11		
Mohave tui chub <i>Gila bicolor mohavensis</i> ³⁸	SE	6-27-71	FE	10-13-70			Final	1984
Owens tui chub <i>Gila bicolor snyderi</i> ³⁹	SE	1-10-74	FE	8-05-85	Final	8-05-85	Final	1998
Cowhead Lake tui chub <i>Gila bicolor vaccaceps</i>			withdrawn FPE	10-11-06 3-30-98				

²⁶ Naturally spawned populations residing below impassable barriers in coastal basins from Redwood Creek in Humboldt County to, and including, the Gualala River in Mendocino County.

²⁷ DPS Distinct Population Segment

²⁸ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

²⁹ Coastal basins from the Russian River, south to Soquel Creek, inclusive. Includes the San Francisco & San Pablo Bay basins, but excludes the Sacramento San Joaquin River basins.

³⁰ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

³¹ Coastal basins from the Pajaro River south to, but not including, the Santa Maria River.

³² The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

³³ Coastal basins from the Santa Maria River (inclusive), south to the U.S. Mexico Border.

³⁴ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

³⁵ The Sacramento and San Joaquin Rivers and their tributaries.

³⁶ The NMFS has completed comprehensive status reviews for 27 west coast salmon & steelhead ESUs. The 6 Feb 2006 list date refers to the final designations made as a result of those status reviews. There was no change in listing status for the steelhead ESUs in California.

³⁷ There is no designated or proposed Critical Habitat for bull trout in California.

³⁸ Current taxonomy: *Siphateles bicolor mohavensis*

³⁹ Current taxonomy: *Siphateles bicolor snyderi*

Endangered and Threatened Animals of California

LISTING STATUS

**CRITICAL
HABITAT**

**RECOVERY
PLAN**

	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Tecopa pupfish (Extinct)	delisted	1987	delisted	1-15-82				
<i>Cyprinodon nevadensis calidae</i>	SE	6-27-71	FE	10-13-70				
Bonytail ⁴⁰	<u>SE</u>	1-10-74	FE	4-23-80	Final	3-21-94	Revised	2002
<i>Gila elegans</i>	SR	6-27-71					Revised	1990
Sacramento splittail			deleted ⁴¹	9-22-03				
<i>Pogonichthys macrolepidotus</i>			FT	3-10-99				
Colorado squawfish ⁴²	SE	6-27-71	FE	3-11-67	Final	3-21-94	Revised	2002
<i>Ptychocheilus lucius</i>							Revised	1991
Lost River sucker	<u>SE</u>	1-10-74	FE	7-18-88	Proposed	12-01-94	Final	1993
<i>Deltistes luxatus</i>	SR	6-27-67						
Modoc sucker	<u>SE</u>	10-02-80	FE	6-11-85	Final	6-11-85	Exempt	
<i>Catostomus microps</i>	SR	1-10-74						
Santa Ana sucker			FT ⁴³	5-12-00	*Final	1-13-11		
<i>Catostomus santaanae</i>					Proposed (revised)	12-09-09		
Shortnose sucker	<u>SE</u>	1-10-74	FE	7-18-88	Proposed	12-01-94	Final	1993
<i>Chasmistes brevirostris</i>	SR	6-27-71						
Razorback sucker	<u>SE</u>	1-10-74	FE	10-23-91	Final	3-21-94	Revised	2002
<i>Xyrauchen texanus</i>	SR	6-27-71					Final	1998
Desert pupfish	SE	10-02-80	FE	3-31-86	Final	3-31-86	Final	1993
<i>Cyprinodon macularius</i>								
Cottonball Marsh pupfish	ST	1-10-74						
<i>Cyprinodon salinus milleri</i>								
Owens pupfish	SE	6-27-71	FE	3-11-67			Final	1998
<i>Cyprinodon radiosus</i>								
Thicktail chub (Extinct)	delisted	10-02-80						
<i>Gila crassicauda</i>	SE	1-10-74						
Unarmored threespine stickleback	SE	6-27-71	FE	10-13-70	Designation should not be made ⁴⁴	9-17-02	Final	1985
<i>Gasterosteus aculeatus williamsoni</i>					Proposed	11-17-80		
Tidewater goby			With drawn FPD ⁴⁵	12-09-02	Final	3-03-08	Final	2005
<i>Eucyclogobius newberryi</i>			<u>FE</u>	6-24-99	Proposed	11-28-06		
				2-04-94	Final	11-20-00		
Rough sculpin	ST	1-10-74						
<i>Cottus asperrimus</i>								

⁴⁰ Federal: Bonytail chub

⁴¹ On 23 June 2000, the Federal Eastern District Court of Calif. found the final rule to be unlawful and on 22 Sept 2000 remanded the determination back to the USFWS for a reevaluation of the final decision. After a thorough review the USFWS removed the Sacramento splittail from the list of threatened species.

⁴² Current nomenclature and federal listing: Colorado pikeminnow

⁴³ Populations in the Los Angeles, San Gabriel and Santa Ana River basins.

⁴⁴ Full explanation of this situation is given in the Federal Register notice.

⁴⁵ Proposal to delist refers to populations north of Orange County only.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
<u>AMPHIBIANS</u>								
California tiger salamander (central valley DPS) <i>Ambystoma californiense</i>	ST ^{46,47}	5-20-10	FT ⁴⁸	9-03-04	Final ⁴⁹ Proposed ⁵⁰	9-22-05 8-10-04		
California tiger salamander (Santa Barbara County DPS) <i>Ambystoma californiense</i>	(ST)		FE 48	9-15-00	Final ⁵¹	11-24-04		
California tiger salamander (Sonoma County DPS) <i>Ambystoma californiense</i>	(ST)		FE 48	3-19-03	Proposed ⁵²	8-18-09 8-02-05		
Santa Cruz long-toed salamander <i>Ambystoma macrodactylum croceum</i>	SE	6-27-71	FE	3-11-67	Proposed	6-22-78	Draft	1999
Siskiyou Mountains salamander <i>Plethodon stormi</i>	SCD <u>ST</u>	9-30-05 6-27-71						
Scott Bar salamander <i>Plethodon asupak</i>	ST ⁵³	6-27-71						
Techachapi slender salamander <i>Batrachoseps stebbinsi</i>	ST	6-27-71						
Kern Canyon slender salamander <i>Batrachoseps simatus</i>	ST	6-27-71						
Desert slender salamander <i>Batrachoseps aridus</i> ⁵⁴	SE	6-27-71	FE	6-04-73			Final	1982
Shasta salamander <i>Hydromantes shastae</i>	ST	6-27-71						
Limestone salamander <i>Hydromantes brunus</i>	ST	6-27-71						
Black toad <i>Bufo exsul</i> ⁵⁵	ST	6-27-71						
Arroyo toad ⁵⁶ <i>Bufo californicus</i> ⁵⁷			FE	1-17-95	Proposed (Revised) Final Proposed ⁵⁸ Final	10-13-09 5-13-05 2-14-05 4-27-04 3-09-01	Final	1999

⁴⁶ The state listing refers to the entire range of the species.

⁴⁷ The Office of Administrative Law approved the listing on Aug 2, 2010. The regulations become effective on Aug 19, 2010.

⁴⁸ In 2004 the California tiger salamander was listed as “threatened” statewide. The Santa Barbara County and Sonoma County Distinct Vertebrate Population Segments (DPS), formerly listed as “endangered”, were reclassified to “threatened”. On Aug 19 2005 U.S. District court vacated the downlisting of the Sonoma and Santa Barbara populations from “endangered” to “threatened”. Therefore, the Sonoma & Santa Barbara populations are once again listed as “endangered”

⁴⁹ Final rule published Aug 23, 2005 is for the central valley population only.

⁵⁰ Critical Habitat proposal published Aug 10, 2004 is for the central valley population only.

⁵¹ Final rule published Nov 24, 2004 is for the Santa Barbara County population only.

⁵² Proposed rule published Aug 2, 2005 is for the Sonoma County population only. The proposed rule published Aug 18, 2009 encompasses the same geographic area as the Aug 2, 2005 proposal.

⁵³ Since this newly described species was formerly considered to be a subpopulation of *Plethodon stormi*, and since *Plethodon stormi* is listed a Threatened under the California Endangered Species Act (CESA), *Plethodon asupak* retains the designation as a Threatened species under CESA.

⁵⁴ Current taxonomy: *Batrachoseps major aridus*.

⁵⁵ Current taxonomy: *Anaxyrus exsul*

⁵⁶ Former taxonomy: *Bufo microscaphus californicus*.

⁵⁷ Current taxonomy: *Anaxyrus californicus*

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
California red-legged frog ⁵⁹ <i>Rana aurora draytonii</i>			FT	5-20-96	Final Proposed ⁶⁰ Final	4-16-10 9-16-08 4-12-01	Final	2002
Mountain yellow-legged frog – Southern California DPS ^{61,62} <i>Rana muscosa</i>	*SCE or SCT ⁶³	9-21-10	FE	8-01-02	Final Proposed	10-16-06 9-13-05		
Mountain yellow-legged frog <i>Rana sierrae</i>	*SCE or SCT	9-21-10						

REPTILES

Desert tortoise <i>Gopherus agassizii</i>	ST	8-03-89	FT	4-02-90	Final	2-08-94	Draft Revised Final	2008 1994
Green sea turtle <i>Chelonia mydas</i>			<u>FT</u> FE	7-28-78 10-13-70	Final	3-23-99	Revised	1998
Loggerhead sea turtle – North Pacific DPS ⁶⁴ <i>Caretta caretta</i>			FPE <u>FT</u>	3-16-10 7-28-78	Proposed	3-19-80	Revised	1998
Olive (=Pacific) Ridley sea turtle <i>Lepidochelys olivacea</i>			FT	7-28-78	Proposed	3-19-80	Revised	1998
Leatherback sea turtle <i>Dermochelys coriacea</i>			FE	6-02-70	Proposed (Revised) Final	1-05-10 3-23-99	Revised	1998
Barefoot banded gecko ⁶⁵ <i>Coleonyx switaki</i>	ST	10-02-80						
Coachella Valley fringe-toed lizard <i>Uma inornata</i>	SE	10-02-80	FT	9-25-80	Final	9-25-80	Final	1985
Blunt-nosed leopard lizard <i>Gambelia silus</i> ⁶⁶	SE	6-27-71	FE	3-11-67			Final	1998
Flat-tailed horned lizard <i>Phrynosoma mcallii</i>			Withdrawn ⁶⁷ FPT ⁶⁸	6-28-06 11-29-93				
Island night lizard <i>Xantusia riversiana</i>			FT	8-11-77			Final	1984
Southern rubber boa <i>Charina bottae umbratica</i> ⁶⁹	ST	6-27-71						

⁵⁸ The Federal Circuit Court vacated critical habitat for the Arroyo toad on 10 30 02. The judge instructed the USFWS to begin the process of re designating critical habitat for this species. New critical habitat was first proposed on 4 27 04 and proposed with revisions on 2 14 05. A new final rule became effective 5 13 05.

⁵⁹ Current taxonomy: *Rana draytoni*

⁶⁰ Proposed rule is for revised Critical Habitat boundaries

⁶¹ Federal listing refers to the distinct population segment (DPS) in the San Gabriel, San Jacinto & San Bernardino Mountains only.

⁶² The current common name for this species is Sierra Madre yellow legged frog.

⁶³ The Fish and Game Commission notice of finding states that the mountain yellow legged frog, *Rana muscosa* and *Rana sierrae* are candidates for listing as either endangered or threatened species.

⁶⁴ 1978 listing was for the worldwide range of the species. The Mar 16, 2010 proposed rule is for the north pacific DPS (north of the equator & south of 60 degrees north latitude).

⁶⁵ Current nomenclature: Barefoot gecko.

⁶⁶ Current taxonomy: *Gambelia sila*. is the scientific name and bluntnose leopard lizard is the common name

⁶⁷ On June 28, 2006 the USFWS determined that the posposed listing was not warranted and the proposed rule that had been reinstated on Nov 17, 2005 was withdrawn.

⁶⁸ On November 17, 2005, the U. S. District Court for the District of Arizona vacated the January 3, 2003 withdrawal of the proposed rule to list the flat tailed horned lizard and reinstated the 1993 proposed rule.

⁶⁹ Current taxonomy: *Charina umbratica*.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	ST	6-27-71	FT	12-05-97	Final Proposed ⁷⁰ Vacated ⁷¹ Final	11-01-06 10-18-05 5-09-03 10-03-00	Draft	2003
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	SE	6-27-71	FE	3-11-67			Final	1985
Giant garter snake <i>Thamnophis couchi gigas</i> ⁷²	ST	6-27-71	FT	10-20-93			Draft	1999
<u>BIRDS</u>								
Short-tailed albatross <i>Phoebastria albatrus</i>			FE	8-30-00			Final	2009
California brown pelican ⁷³ (Recovered) <i>Pelecanus occidentalis californicus</i>	listed SE	6-03-09 6-27-71	listed FE	12-17-09 2-20-08 10-13-70			Final	1983
Aleutian Canada goose (Recovered) <i>Branta canadensis leucopareia</i> ⁷⁴			listed FT FE	3-20-01 12-12-90 3-11-67			Final	1991
California condor <i>Gymnogyps californianus</i>	SE	6-27-71	FE	3-11-67	Final	9-22-77	Revised	1996
Bald eagle <i>Haliaeetus leucocephalus</i>	SE (rev) SE	10-02-80 6-27-71	listed ⁷⁵ FT FE(rev) FE	8-08-07 7-06-99 8-11-95 2-14-78 3-11-67			Final	1982
Swainson's hawk <i>Buteo swainsoni</i>	ST	4-17-83						
American peregrine falcon (Recovered) <i>Falco peregrinus anatum</i>	listed SE	11-04-09 6-27-71	listed FE	8-25-99 6-02-70	Final	9-22-77	Final	1982
Arctic peregrine falcon (Recovered) <i>Falco peregrinus tundrius</i>			listed FT FE	10-05-94 3-20-84 6-02-70				
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	6-27-71						
California clapper rail <i>Rallus longirostris obsoletus</i>	SE	6-27-71	FE	10-13-70			Final	1984
Light-footed clapper rail <i>Rallus longirostris levipes</i>	SE	6-27-71	FE	10-13-70			Revised Final	1985 1979
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	ST SE	2-22-78 6-27-71	FE	3-11-67			Final	1983

⁷⁰ The proposed rule redesignates Critical Habitat that was vacated in 2003.

⁷¹ Due to legal action on 9 May 2003, the Critical Habitat designation has been completely vacated; there is currently no Critical Habitat for Alameda whipsnake.

⁷² Current taxonomy and Federal listing: *Thamnophis gigas*.

⁷³ Federal: Brown pelican, *Pelecanus occidentalis*.

⁷⁴ Current taxonomy: *Branta hutchinsii leucopareia*, and common name is now cackling goose.

⁷⁵ The Post delisting Monitoring Plan will monitor the status of the bald eagle over a 20 year period with sampling events held once every 5 years.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Greater sandhill crane <i>Grus Canadensis tabida</i>	ST	4-17-83					Draft (state)	
Western snowy plover ⁷⁶ <i>Charadrius alexandrinus nivosus</i>			FT	4-05-93	Final Proposed Final	10-31-05 8-16-05 12-07-99 ⁷⁷	Final Draft	2007 2001
Mountain plover ⁷⁸ <i>Charadrius montanus</i>			FPT	6-29-10				
California least tern <i>Sterna antillarum browni</i> ⁷⁹	SE	6-27-71	FE	10-13-70			Revised Final	1985 1980
Marbled murrelet <i>Brachyramphus marmoratus</i> ⁸⁰	SE	3-12-92	FT	9-30-92	Proposed ⁸¹ Final	7-31-08 5-24-96	Final	1997
Xantus's murrelet <i>Synthliboramphus hypoleucus</i>	ST ⁸²	12-22-04						
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	<u>SE</u> ST	3-26-88 6-27-71						
Elf owl <i>Micrathene whitneyi</i>	SE	10-02-80						
Northern spotted owl <i>Strix occidentalis caurina</i>			FT	6-22-90	Final Proposed Final	9-12-08 6-17-07 1-15-92	Final Draft	2008 2007
Great gray owl <i>Strix nebulosa</i>	SE	10-02-80						
Gila woodpecker <i>Melanerpes uropygialis</i>	SE	3-17-88						
Gilded northern flicker ⁸³ <i>Colaptes auratus chrysoides</i>	SE	3-17-88						
Willow flycatcher <i>Empidonax traillii</i>	SE ⁸⁴	1-02-91						
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	(SE)		FE	3-29-95	Final Proposed Final ⁸⁵	11-18-05 10-12-04 7-22-97	Final	2002
Bank swallow <i>Riparia riparia</i>	ST	6-11-89					Final (state)	1993
Coastal California gnatcatcher <i>Poliptila californica californica</i>			FT	3-30-93	Final Proposed ⁸⁶ Final	1-18-08 4-24-03 10-24-00	Exempt	

⁷⁶ Federal status applies only to the Pacific coastal population.

⁷⁷ The Dec 7, 1999 designation was remanded & partially vacated by the US District Court for the District of Oregon on July 2, 2003.

⁷⁸ The Jun 29, 2010 proposed rule reinstates that portion of the Dec 5, 2002 proposed rule concerning the listing of the plover as threatened. It doesn't reinstate the portion of the rule regarding a special rule under section 4(d) of the ESA.

⁷⁹ Current taxonomy is *Sternula antillarum browni*

⁸⁰ Federal: *Brachyramphus marmoratus marmoratus* with a proposal (7 31 08) to change the name to *Brachyramphus marmoratus*.

⁸¹ Proposed rule to revise the previously designated Critical Habitat.

⁸² The Fish and Game Commission determined that Xantus's murrelet should be listed as a Threatened species February 24, 2004. As part of the normal listing process, this decision was reviewed by the Office of Administrative Law. The listing became effective on Dec 22, 2004.

⁸³ Current taxonomy: Gilded flicker (*Colaptes chrysoides*).

⁸⁴ State listing includes all subspecies.

⁸⁵ On May 11, 2001 the 10th Circuit Court of Appeals vacated the previously designated Critical Habitat

⁸⁶ Due to court order the previously designated critical habitat was vacated and the USFWS was directed to re propose critical habitat.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL</u>	<u>RECOVERY</u>				
	State	List Date	Federal	HABITAT	Effective List Date	Effective Date	Version	Date	
San Clemente loggerhead shrike <i>Lanius ludovicianus mearnsi</i>			FE		8-11-77		Final	1984	
Arizona Bell's vireo <i>Vireo bellii arizonae</i>	SE	3-17-88							
Least Bell's vireo <i>Vireo bellii pusillus</i>	SE	10-02-80	FE		5-02-86	Final	2-02-94	Draft	1998
Inyo California towhee ^{87 88} <i>Pipilo crissalis eremophilus</i>	SE	10-02-80	FT		8-03-87	Final	8-03-87	Final	1998
San Clemente sage sparrow <i>Amphispiza belli clementeae</i>			FT		8-11-77			Final	1984
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	SE	1-10-74							
Santa Barbara song sparrow (Extinct) <i>Melospiza melodia graminea</i>			<u>delisted</u> FE		10-12-83 6-04-73				

MAMMALS

Buena Vista Lake shrew <i>Sorex ornatus relictus</i>			FE ⁸⁹		4-05-02	Final Proposed	2-23-05 8-19-04	Final	1998
Lesser long-nosed bat <i>Leptonycteris yerbabuenae</i>			FE		10-31-88			Final	1997
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	SE	5-29-94	FE		3-24-00			Final	1998
Point Arena mountain beaver <i>Aplodontia rufa nigra</i>			FE		12-12-91			Final	1998
San Joaquin antelope squirrel ⁹⁰ <i>Ammospermophilus nelsoni</i>	ST	10-02-80							
Mohave ground squirrel ⁹¹ <i>Spermophilus mohavensis</i>	ST	6-27-71							
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>			FE		9-26-94			Final	1998
Morro Bay kangaroo rat <i>Dipodomys heermanni morroensis</i>	SE	6-27-71	FE		10-13-70	Final	8-11-77	Draft revision Final	2000 1982
Giant kangaroo rat <i>Dipodomys ingens</i>	SE	10-02-80	FE		1-05-87			Final	1998
Stephens' kangaroo rat <i>Dipodomys stephensi</i> ⁹²	ST	6-27-71	FE		9-30-88				
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>			FE ⁹³		9-24-98	Final ⁹⁴ Final	11-17-08 5-23-02		
Tipton kangaroo rat <i>Dipodomys nitratooides nitratooides</i>	SE	6-11-89	FE		7-08-88			Final	1998
Fresno kangaroo rat <i>Dipodomys nitratooides exilis</i>	<u>SE</u> <u>SR</u>	10-02-80 6-27-71	FE		3-01-85	Final	1-30-85	Final	1998

⁸⁷ Federal: Inyo California (brown) towhee.

⁸⁸ Current taxonomy is *Melospiza crissalis eremophilus*

⁸⁹ Federal: Buena Vista Lake ornate shrew

⁹⁰ Current taxonomy: Nelson's antelope squirrel

⁹¹ Current taxonomy: *Xerospermophilus mohavensis*

⁹² Federal: includes *Dipodomys cactus*.

⁹³ Federal: San Bernardino Merriam's kangaroo rat

⁹⁴ This final revised designation constitutes a reduction of approximately 25,516 acres from the 2002 designation of Critical Habitat.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL HABITAT</u>		<u>RECOVERY PLAN</u>		
	State	List Date	Federal	Effective List Date	Designation	Effective Date	Version	Date
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	SE	6-27-71	FE	10-13-70			Final	1984
Amargosa vole <i>Microtus californicus scirpensis</i>	SE	10-02-80	FE	11-15-84	Final	11-15-84	Final	1997
Riparian woodrat <i>Neotoma fuscipes riparia</i>			FE ⁹⁵	3-24-00			Final	1998
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	ST	10-02-80						
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	ST	6-27-71	FE	3-11-67			Final	1998
Island fox <i>Urocyon littoralis</i>	ST ⁹⁶	6-27-71						
San Miguel Island Fox <i>Urocyon littoralis littoralis</i>	(ST)		FE	4-05-04	Final ⁹⁷ (none) Proposed ⁹⁸	12-09-05 10-07-04		
Santa Rosa Island Fox <i>Urocyon littoralis santarosa</i>	(ST)		FE	4-05-04	Final ⁹⁷ (none) Proposed ⁹⁸	12-09-05 10-07-04		
Santa Cruz Island Fox <i>Urocyon littoralis santacruzae</i>	(ST)		FE	4-05-04	Final ⁹⁷ (none) Proposed ⁹⁸	12-09-05 10-07-04		
Santa Catalina Island Fox <i>Urocyon littoralis catalinae</i>	(ST)		FE	4-05-04	Final ⁹⁷ (none) Proposed ⁹⁸	12-09-05 10-07-04		
Guadalupe fur seal <i>Arctocephalus townsendi</i>	ST	6-27-71	<u>FT</u> FE	1-15-86 3-11-67			Draft (revised)	2007
Stellar (=northern) sea lion <i>Eumetopias jubatus</i>			FT	4-05-90	Final	3-23-99	Revised Final	2008 1992
Wolverine <i>Gulo gulo</i>	ST	6-27-71						
Southern sea otter <i>Enhydra lutris nereis</i>			FT	1-14-77			Revised Final	2003 1981
Pacific fisher <i>Martes pennanti(pacifica)</i> DPS	SCT or SCE ⁹⁹	Listing or Not warranted						
Gray whale (Recovered) <i>Eschrichtius robustus</i>			delisted FE	6-15-94 6-02-70				
Sei whale <i>Balaenoptera borealis</i>			FE	6-02-70				

⁹⁵ Federal: Riparian (San Joaquin Valley) woodrat

⁹⁶ State listing includes all 6 subspecies on all 6 islands. Federal listing is for only 4 subspecies on 4 islands

⁹⁷ The USFWS did not find any habitat on the 4 islands occupied by the foxes that meets the definition of Critical Habitat under the Act. Therefore, the final rule does not designate any Critical Habitat

⁹⁸ The USFWS did not find any habitat on the 4 islands occupied by the foxes that meets the definition of Critical Habitat under the Act. Therefore, the proposal is that zero Critical Habitat be designated.

⁹⁹ The Fish and Game Commission notice of finding states that the Pacific fisher is a candidate for listing as either an endangered or a threatened species. At the June 23, 2010 meeting the Commission determined that the listing was not warranted.

Endangered and Threatened Animals of California

	<u>LISTING STATUS</u>			<u>CRITICAL</u>	<u>RECOVERY</u>		
	State	List Date	Federal	HABITAT	Effective Date	Version	Date
Blue whale <i>Balaenoptera musculus</i>			FE		6-02-70	Final	1998
Fin whale <i>Balaenoptera physalus</i>			FE		6-02-70	Draft	2006
Humpback whale ¹⁰⁰ <i>Megaptera novaeangliae</i>			FE		6-02-70	Final	1991
Right whale ¹⁰¹ <i>Eubalaena japonica</i> ¹⁰²			FE		6-02-70	Final	1991
Sperm whale <i>Physeter macrocephalus</i>			FE		6-02-70	Draft	2006
Killer whale (Southern resident DPS) <i>Orcinus orca</i>			FE ¹⁰³		4-04-07	Final	2008
					2-16-06		
					12-22-04		
California (=Sierra Nevada) bighorn sheep <i>Ovis canadensis californiana</i> ¹⁰⁴	<u>SE</u>	8-27-99	FE		1-03-00	Final	2008
	ST	6-27-71				Proposed	2003
						7-25-07	Draft
Peninsular bighorn sheep DPS ¹⁰⁵ <i>Ovis canadensis cremnobates</i>	ST	6-27-71	FE		3-18-98	Final	2000
						Proposed (Revised)	
						10-10-07	
						Final	
						3-05-01	

¹⁰⁰ Also known as Hump backed whale.

¹⁰¹ Also known as Black right whale.

¹⁰² The scientific name was clarified in the Federal Register Vol. 68, No. 69 April 10, 2003.

¹⁰³ The killer whale was listed as endangered by the NMFS on Feb 16, 2006 and by the USFWS on Apr 4, 2007.

¹⁰⁴ Current & Federal taxonomy: Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)

¹⁰⁵ Current taxonomy: the subspecies *O.c. cremnobates* has been synonymized with *O.c. nelsoni*. Peninsular bighorn sheep are now considered to be a Distinct Vertebrate Population Segment (DPS).

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME
Resource Management and Planning Division
Biogeographic Data Branch
California Natural Diversity Database

STATE AND FEDERALLY LISTED
ENDANGERED, THREATENED, AND RARE PLANTS OF CALIFORNIA

October 2012

Designations and Subtotals for each Designation:

Designations:	Subtotals:
SE State-listed endangered	134
ST State-listed threatened	22
SR State-listed rare	64
SC State candidate for listing	0
FE Federally listed endangered	139
FT Federally listed threatened	47
FPE Federally proposed endangered	0
FPT Federally proposed threatened	0
Both State and Federally listed	125

State listing is pursuant to §1904 (Native Plant Protection Act of 1977) and §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals. Federal listing is pursuant with the Federal Endangered Species Act of 1973, as amended. For information regarding plant conservation, contact the Habitat Conservation Planning Branch, 1416 Ninth Street, Sacramento, CA 95814, phone (916) 653-9767, or the nearest Department of Fish and Game office. For information on this list, contact CNDDDB's Information Services at (916) 324-3812. Scientific and common names for State-listed plants are listed in Title 14, §670.2. Scientific or common names in parentheses are the most scientifically accepted nomenclature but have yet to be officially adopted into the California Code of Regulations, Title 14, Division 1, §670.2.

State Designated Plants

Classification

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Acanthomintha duttonii</i> San Mateo thorn-mint	SE	Jul 1979	FE	Sep 18,1985
<i>Acanthomintha ilicifolia</i> San Diego thorn-mint	SE	Jan 1982	FT	Oct 13,1998
<i>Agrostis blasdalei</i> var. <i>marinensis</i> (<i>Agrostis blasdalei</i>) Marin bent grass		Delisted April 2008.		
<i>Allium munzii</i> Munz's onion	ST	Jan 1990	FE	Oct 13,1998
<i>Allium yosemitense</i> Yosemite onion	SR	Jul 1982		

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> Sonoma alopecurus			FE	Oct 22,1997
<i>Ambrosia pumila</i> San Diego ambrosia			FE	July 2, 2002
<i>Amsinckia grandiflora</i> large-flowered fiddleneck	SE	Apr 1982	FE	May 08,1985
<i>Arabis hoffmannii</i> Hoffmann's rock cress			FE	Jul 31,1997
<i>Arabis macdonaldiana</i> McDonald's rock cress	SE	Jul 1979	FE	Sep 28,1978
<i>Arctostaphylos bakeri</i> (= <i>A. b. ssp. bakeri</i> and <i>A. b. ssp. sublaevis</i>) Baker's manzanita	SR	Sep 1979		
<i>Arctostaphylos confertiflora</i> Santa Rosa Island manzanita			FE	Jul 31,1997
<i>Arctostaphylos densiflora</i> Vine Hill manzanita	SE	Aug 1981		
<i>Arctostaphylos edmundsii</i> var. <i>parvifolia</i> Hanging Gardens manzanita		Delisted April 2008		
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita			FE	Oct 07,1996
<i>Arctostaphylos hookeri</i> ssp. <i>hearstiorum</i> Hearst's manzanita	SE	Sep 1979		
<i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i> Presidio manzanita	SE	Nov 1978	FE	Oct 26,1979
<i>Arctostaphylos imbricata</i> San Bruno Mountain manzanita	SE	Sep 1979		
<i>Arctostaphylos morroensis</i> Morro manzanita			FT	Dec 15,1994
<i>Arctostaphylos myrtifolia</i> Ione manzanita			FT	May 26,1999
<i>Arctostaphylos pacifica</i> Pacific manzanita	SE	Sep 1979		
<i>Arctostaphylos pallida</i> pallid manzanita	SE	Nov 1979	FT	Apr 22,1998
<i>Arenaria paludicola</i> marsh sandwort	SE	Feb 1990	FE	Aug 03,1993
<i>Arenaria ursina</i> Big Bear Valley sandwort			FT	Sep 14,1998
<i>Astragalus agnicidus</i> Humboldt milk-vetch	SE	Apr 1982		
<i>Astragalus albens</i> Cushenbury milk-vetch			FE	Aug 24,1994

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Astragalus brauntonii</i> Braunton's milk-vetch			FE	Jan 29,1997
<i>Astragalus claranus</i> (<i>A. clarianus</i>) Clara Hunt's milk-vetch	ST	Jan 1990	FE	Oct 22,1997
<i>Astragalus jaegerianus</i> Lane Mountain milk-vetch			FE	Oct 06,1998
<i>Astragalus johannis-howellii</i> Long Valley milk-vetch	SR	Jul 1982		
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milk-vetch			FE	Oct 06,1998
<i>Astragalus lentiginosus</i> var. <i>piscinensis</i> Fish Slough milk-vetch			FT	Oct 06,1998
<i>Astragalus lentiginosus</i> var. <i>sesquimetralis</i> Sodaville milk-vetch	SE	Sep 1979		
<i>Astragalus magdalenae</i> var. <i>peirsonii</i> Peirson's milk-vetch	SE	Nov 1979	FT	Oct 06,1998
<i>Astragalus monoensis</i> (<i>A. monoensis</i> var. <i>monoensis</i>) Mono milk-vetch	SR	Jul 1982		
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> Ventura Marsh milk-vetch	SE	Apr 2000	FE	May 21,2001
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milk-vetch	SE	Feb 1982	FE	Aug 12,1998
<i>Astragalus traskiae</i> Trask's milk-vetch	SR	Nov 1979		
<i>Astragalus tricarinatus</i> triple-ribbed milk-vetch			FE	Oct 06,1998
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale			FE	Oct 13,1998
<i>Atriplex tularensis</i> Bakersfield smallscale	SE	Jan 1987		
<i>Baccharis vanessae</i> Encinitas baccharis	SE	Jan 1987	FT	Oct 07,1996
<i>Bensoniella oregona</i> bensoniella	SR	Jul 1982		
<i>Berberis nevinii</i> Nevin's barberry	SE	Jan 1987	FE	Oct 13,1998
<i>Berberis pinnata</i> ssp. <i>insularis</i> island barberry	SE	Nov 1979	FE	Jul 31,1997
<i>Blennosperma bakeri</i> Sonoma sunshine	SE	Feb 1992	FE	Dec 02,1991
<i>Blennosperma nanum</i> var. <i>robustum</i> Point Reyes blennosperma	SR	Nov 1978		
<i>Bloomeria humilis</i> dwarf goldenstar	SR	Nov 1978		
<i>Brodiaea coronaria</i> ssp. <i>rosea</i> Indian Valley brodiaea	SE	Sep 1979		

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Brodiaea filifolia</i> thread-leaved brodiaea	SE	Jan 1982	FT	Oct 13,1998
<i>Brodiaea insignis</i> Kaweah brodiaea	SE	Nov 1979		
<i>Brodiaea pallida</i> Chinese Camp brodiaea	SE	Nov 1978	FT	Sep 14,1998
<i>Calamagrostis foliosa</i> leafy reed grass	SR	Nov 1979		
<i>Calochortus dunnii</i> Dunn's mariposa lily	SR	Nov 1979		
<i>Calochortus persistens</i> Siskiyou mariposa lily	SR	Jul 1982		
<i>Calochortus tiburonensis</i> Tiburon mariposa lily	ST	May 1987	FT	Feb 03,1995
<i>Calyptridium pulchellum</i> Mariposa pussypaws			FT	Sep 14,1998
<i>Calystegia stebbinsii</i> Stebbins's morning-glory	SE	Aug 1981	FE	Oct 18,1996
<i>Camissonia benitensis</i> San Benito evening-primrose			FT	Feb 12,1985
<i>Carex albida</i> white sedge	SE	Nov 1979	FE	Oct 22,1997
<i>Carex tompkinsii</i> Tompkins's sedge	SR	Nov 1979		
<i>Carpenteria californica</i> tree-anemone	ST	Jan 1990		
<i>Castilleja affinis</i> ssp. <i>neglecta</i> Tiburon Indian paintbrush	ST	Jan 1990	FE	Feb 03, 1995
<i>Castilleja campestris</i> ssp. <i>succulenta</i> succulent owl's-clover	SE	Sep 1979	FT	Mar 26,1997
<i>Castilleja cinerea</i> ash-gray Indian paintbrush			FT	Sep 14,1998
<i>Castilleja gleasonii</i> Mt. Gleason Indian paintbrush	SR	Jul 1982		
<i>Castilleja grisea</i> San Clemente Island Indian paintbrush	SE	Apr 1982	FE	Aug 11,1977

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Castilleja mollis</i> soft-leaved Indian paintbrush			FE	Jul 31,1997
<i>Castilleja uliginosa</i> Pitkin Marsh Indian paintbrush	SE	Nov 1978		
<i>Caulanthus californicus</i> California jewel-flower	SE	Jan 1987	FE	Jul 19,1990
<i>Caulanthus stenocarpus</i> slender-pod jewel-flower		Delisted April 2008		
<i>Ceanothus ferrisiae</i> coyote ceanothus			FE	Feb 03,1995
<i>Ceanothus hearstiorum</i> Hearst's ceanothus	SR	Aug 1981		
<i>Ceanothus maritimus</i> maritime ceanothus	SR	Nov 1978		
<i>Ceanothus masonii</i> Mason's ceanothus	SR	Nov 1978		
<i>Ceanothus ophiochilus</i> Vail Lake ceanothus	SE	Jan 1994	FT	Oct 13,1998
<i>Ceanothus roderickii</i> Pine Hill ceanothus	SR	Jul 1982	FE	Oct 18,1996
<i>Cercocarpus traskiae</i> Catalina Island mountain-mahogany	SE	Apr 1982	FE	Aug 08,1997
<i>Chamaesyce hooveri</i> Hoover's spurge			FT	Mar 26,1997
<i>Chlorogalum purpureum</i> var. <i>purpureum</i> ¹ purple amole			FT	Mar 20,2000
<i>Chlorogalum purpureum</i> var. <i>reductum</i> ² Camatta Canyon amole	SR	Nov 1978	FT	Mar 20,2000
<i>Chorizanthe howellii</i> Howell's spineflower	ST	Jan 1987	FE	Jun 22,1992
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	SE	Nov 1979	FE	Oct 07,1996

¹ The U.S. Fish & Wildlife Service listed the entire species, *Chlorogalum purpureum*.

² The U.S. Fish & Wildlife Service listed the entire species, *Chlorogalum purpureum*.

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	SE	Aug 2001		
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i> Ben Lomond spineflower			FE	Feb 04,1994
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower			FT	Feb 04,1994
<i>Chorizanthe robusta</i> (includes vars. <i>hartwegii</i> and <i>robusta</i>) robust spineflower			FE	Feb 04,1994
<i>Chorizanthe valida</i> Sonoma spineflower	SE	Jan 1990	FE	Jun 22,1992
<i>Cirsium ciliolatum</i> Ashland thistle	SE	Sep 1982		
<i>Cirsium fontinale</i> var. <i>fontinale</i> fountain thistle	SE	Jul 1979	FE	Feb 03,1995
<i>Cirsium fontinale</i> var. <i>obispoense</i> Chorro Creek bog thistle	SE	Jun 1993	FE	Dec 15,1994
<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i> Suisun thistle			FE	Nov 20,1997
<i>Cirsium loncholepis</i> La Graciosa thistle	ST	Feb 1990	FE	Mar 20,2000
<i>Cirsium rhotophilum</i> surf thistle	ST	Feb 1990		
<i>Clarkia franciscana</i> Presidio clarkia	SE	Nov 1978	FE	Feb 03,1995
<i>Clarkia imbricata</i> Vine Hill clarkia	SE	Nov 1978	FE	Oct 22,1997
<i>Clarkia lingulata</i> Merced clarkia	SE	Jan 1989		
<i>Clarkia speciosa</i> ssp. <i>immaculata</i> Pismo clarkia	SR	Nov 1978	FE	Dec 15,1994
<i>Clarkia springvillensis</i> Springville clarkia	SE	Sep 1979	FT	Sep 14,1998
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> salt marsh bird's-beak	SE	Jul 1979	FE	Sep 28,1978
<i>Cordylanthus mollis</i> ssp. <i>mollis</i> soft bird's-beak	SR	Jul 1979	FE	Nov 20,1997
<i>Cordylanthus nidularius</i> Mt. Diablo bird's-beak	SR	Nov 1978		
<i>Cordylanthus palmatus</i> palmate-bracted bird's-beak	SE	May 1984	FE	Jul 01, 1986
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> seaside bird's-beak	SE	Jan 1982		

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i> Pennell's bird's-beak	SR	Nov 1978	FE	Feb 03,1995
<i>Croton wigginsii</i> Wiggins' croton	SR	Jan 1982		
<i>Cryptantha roosiorum</i> bristlecone cryptantha	SR	Jul 1982		
<i>Cupressus abramsiana</i> (<i>Callitropsis abramsiana</i>) Santa Cruz cypress	SE	Nov 1979	FE	Jan 08,1987
<i>Cupressus goveniana</i> ssp. <i>goveniana</i> (<i>Callitropsis goveniana</i>) Gowen cypress			FT	Aug 12,1998
<i>Dedeckera eurekaensis</i> July gold	SR	Nov 1978		
<i>Deinandra arida</i> (<i>Hemizonia arida</i>) Red Rock tarplant	SR	Jul 1982		
<i>Deinandra conjugens</i> (<i>Hemizonia conjugens</i>) Otay tarplant	SE	Nov 1979	FT	Oct 13,1998
<i>Deinandra increscens</i> ssp. <i>villosa</i> (<i>Hemizonia increscens</i> ssp. <i>villosa</i>) Gaviota tarplant	SE	Jan 1990	FE	Mar 20,2000
<i>Deinandra minthornii</i> (<i>Hemizonia minthornii</i>) Santa Susana tarplant	SR	Nov 1978		
<i>Deinandra mohavensis</i> (<i>Hemizonia mohavensis</i>) Mojave tarplant	SE	Aug 1981		
<i>Delphinium bakeri</i> Baker's larkspur	SE	April 2007	FE	Jan 26,2000
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i> Cuyamaca larkspur	SR	Jul 1982		
<i>Delphinium luteum</i> yellow larkspur	SR	Sep 1979	FE	Jan 26,2000
<i>Delphinium variegatum</i> ssp. <i>kinkiense</i> San Clemente Island larkspur	SE	Sep 1979	FE	Aug 11,1977
<i>Dichanthelium lanuginosum</i> var. <i>thermale</i> Geysers dichanthelium	SE	Sep 1978		
<i>Dieteria asteroides</i> var. <i>lagunensis</i> Mount Laguna aster (<i>Machaeranthera asteroides</i> var. <i>lagunensis</i>)	SR	Sep 1979		
<i>Dithyrea maritima</i> beach spectaclepod	ST	Feb 1990		
<i>Dodecahema leptoceras</i> slender-horned spineflower	SE	Jan 1982	FE	Sep 28,1987
<i>Downingia concolor</i> var. <i>brevior</i> Cuyamaca Lake downingia	SE	Feb 1982		

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Dudleya abramsii</i> ssp. <i>parva</i> (<i>D. parva</i>) Conejo dudleya			FT	Jan 29,1997
<i>Dudleya brevifolia</i> (<i>D. blochmaniae</i> ssp. <i>brevifolia</i>) short-leaved dudleya	SE	Jan 1982		
<i>Dudleya cymosa</i> ssp. <i>agourensis</i> ³ Santa Monica Mtns. dudleya			FT	Jan 29, 1997
<i>Dudleya cymosa</i> ssp. <i>marcescens</i> marcescent dudleya	SR	Nov 1978	FT	Jan 29,1997
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> Santa Monica Mountains dudleya			FT	Jan 29,1997
<i>Dudleya nesiotica</i> Santa Cruz Island dudleya	SR	Nov 1979	FT	Jul 31,1997
<i>Dudleya setchellii</i> Santa Clara Valley dudleya			FE	Feb 03,1995
<i>Dudleya stolonifera</i> Laguna Beach dudleya	ST	Jan 1987	FT	Oct 13,1998
<i>Dudleya traskiae</i> Santa Barbara Island dudleya	SE	Nov 1979	FE	Apr 26,1978
<i>Dudleya verityi</i> Verity's dudleya			FT	Jan 29,1997
<i>Enceliopsis nudicaulis</i> var. <i>corrugata</i> Ash Meadows daisy			FT	May 20,1985
<i>Eremalche kernensis</i> Kern mallow			FE	Jul 19,1990
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	SE	Jan 1987	FE	Sep 28,1987
<i>Eriastrum hooveri</i> Hoover's woolly-star			Delisted	Oct 7,2003
<i>Eriastrum tracyi</i> Tracy's eriastrum	SR	Jul 1982		
<i>Erigeron parishii</i> Parish's daisy			FT	Aug 24,1994
<i>Eriodictyon altissimum</i> Indian Knob mountainbalm	SE	Jul 1979	FE	Dec 15,1994
<i>Eriodictyon capitatum</i> Lompoc yerba santa	SR	Sep 1979	FE	Mar 20,2000

³ The U.S. Fish & Wildlife Service has listed the more encompassing *Dudleya cymosa* ssp. *ovatifolia* from which ssp. *agourensis* was split.

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Eriogonum alpinum</i> Trinity buckwheat	SE	Jul 1979		
<i>Eriogonum apricum</i> var. <i>apricum</i> ⁴ Ione buckwheat	SE	Aug 1981	FE	May 26,1999
<i>Eriogonum apricum</i> var. <i>prostratum</i> ⁵ Irish Hill buckwheat	SE	Jan 1987	FE	May 26,1999
<i>Eriogonum butterworthianum</i> Butterworth's buckwheat	SR	Nov 1979		
<i>Eriogonum crocatum</i> Conejo buckwheat	SR	Sep 1979		
<i>Eriogonum giganteum</i> var. <i>compactum</i> Santa Barbara Island buckwheat	SR	Nov 1979		
<i>Eriogonum grande</i> ssp. <i>timorum</i> (<i>Eriogonum grande</i> var. <i>timorum</i>) San Nicolas Island buckwheat	SE	Nov 1979		
<i>Eriogonum kelloggii</i> Kellogg's buckwheat	SE	Apr 1982		
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i> southern mountain buckwheat			FT	Sep 14,1978
<i>Eriogonum ovalifolium</i> var. <i>vineum</i> Cushenbury buckwheat			FE	Aug 24,1994
<i>Eriogonum thornei</i> (<i>E. ericifolium</i> var. <i>thornei</i>) Thorne's buckwheat	SE	Nov 1979		
<i>Eriogonum twisselmannii</i> Twisselmann's buckwheat	SR	Jul 1982		
<i>Eriophyllum congdonii</i> Congdon's woolly sunflower	SR	Jul 1982		
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	SE	Jun 1992	FE	Feb 03,1995
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	SE	Jul 1979	FE	Aug 03,1993
<i>Eryngium constancei</i> Loch Lomond button-celery	SE	Jan 1987	FE	Dec 23,1986
<i>Eryngium racemosum</i> Delta button-celery	SE	Aug 1981		
<i>Erysimum capitatum</i> var. <i>angustatum</i> Contra Costa wallflower	SE	Nov 1978	FE	Apr 26,1978

⁴ The U.S. Fish & Wildlife Service has listed *Eriogonum apricum* as the species, which includes both rare varieties.

⁵ The U.S. Fish & Wildlife Service has listed *Eriogonum apricum* as the species, which includes both rare varieties.

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Erysimum menziesii</i> ⁶ Menzies' wallflower	SE	Sep 1984	FE	Jun 22,1992
<i>Erysimum teretifolium</i> Santa Cruz wallflower	SE	Aug 1981	FE	Feb 04,1994
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	SR	Jul 1979	FE	Oct 18,1996
<i>Fremontodendron mexicanum</i> Mexican flannelbush	SR	Jul 1982	FE	Oct 13,1998
<i>Fritillaria gentneri</i> Gentner's fritillary			FE	Dec 10,1999
<i>Fritillaria roderickii</i> Roderick's fritillary	SE	Nov 1979		
<i>Fritillaria striata</i> striped adobe-lily	ST	Jan 1987		
<i>Galium angustifolium</i> ssp. <i>borregoense</i> Borrego bedstraw	SR	Sep 1979		
<i>Galium buxifolium</i> box bedstraw	SR	Nov 1979	FE	Jul 31,1997
<i>Galium californicum</i> ssp. <i>sierrae</i> El Dorado bedstraw	SR	Nov 1979	FE	Oct 18,1996
<i>Galium catalinense</i> ssp. <i>acrispum</i> San Clemente Island bedstraw	SE	Apr 1982		
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> sand gilia	ST	Jan 1987	FE	Jun 22,1992
<i>Gilia tenuiflora</i> ssp. <i>hoffmannii</i> Hoffmann's slender-flowered gilia			FE	Jul 31,1997
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	SE	Nov 1978		
<i>Grindelia fraxino-pratensis</i> Ash Meadows gumplant			FT	May 20,1985
<i>Hazardia orcuttii</i> Orcutt's hazardia	ST	Aug 2002		
<i>Helianthemum greenei</i> island rush-rose			FT	Jul 31,1997
<i>Helianthus niveus</i> ssp. <i>tephrodes</i> Algodones Dunes sunflower	SE	Nov 1979		
<i>Hesperolinon congestum</i> Marin western flax	ST	Jun 1992	FT	Feb 03,1995

⁶ The U.S. Fish & Wildlife Service separately listed all as endangered, *E. menziesii* ssp. *eurekaense*, *E. menziesii* ssp. *menziesii*, and *E. menziesii* ssp. *yadonii*.

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Hesperolinon didymocarpum</i> Lake County western flax	SE	Aug 1981		
<i>Holmgrenanthe petrophila</i> (<i>Maurandya petrophila</i>) rock lady	SR	Jul 1982		
<i>Holocarpha macradenia</i> Santa Cruz tarplant	SE	Sep 1979	FT	Mar 20,2000
<i>Howellia aquatilis</i> water howellia			FT	Jul 14,1994
<i>Ivesia callida</i> Tahquitz ivesia	SR	Jul 1982		
<i>Lasthenia burkei</i> Burke's goldfields	SE	Sep 1979	FE	Dec 02,1991
<i>Lasthenia conjugens</i> Contra Costa goldfields			FE	Jun 18,1997
<i>Layia carnosa</i> beach layia	SE	Jan 1990	FE	Jun 22,1992
<i>Lembertia congdonii</i> (<i>Monolopia congdonii</i>) San Joaquin woollythreads			FE	Jul 19,1990
<i>Lesquerella kingii</i> ssp. <i>bernardina</i> San Bernardino Mountains bladderpod			FE	Aug 24,1994
<i>Lessingia germanorum</i> San Francisco lessingia	SE	Jan 1990	FE	Jun 19,1997
<i>Lewisia congdonii</i> Congdon's lewisia	SR	Jul 1982		
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	SR	Nov 1979		
<i>Lilium occidentale</i> western lily	SE	Jan 1982	FE	Aug 17,1994
<i>Lilium pardalinum</i> ssp. <i>pitkinense</i> Pitkin Marsh lily	SE	Nov 1978	FE	Oct 22,1997
<i>Limnanthes bakeri</i> Baker's meadowfoam	SR	Nov 1978		
<i>Limnanthes douglasii</i> var. <i>sulphurea</i> (<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>) Point Reyes meadowfoam	SE	Apr 1982		
<i>Limnanthes floccosa</i> ssp. <i>californica</i> Butte County meadowfoam	SE	Feb 1982	FE	Jun 08,1992
<i>Limnanthes gracilis</i> var. <i>parishii</i> (<i>Limnanthes gracilis</i> ssp. <i>parishii</i>) Parish's meadowfoam	SE	Jul 1979		
<i>Limnanthes vinculans</i> Sebastopol meadowfoam	SE	Nov 1979	FE	Dec 02,1991

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Lithophragma maximum</i> San Clemente Island woodland star	SE	Feb 1982	FE	Aug 08,1997
<i>Lotus argophyllus</i> var. <i>adsurgens</i> San Clemente Island bird's-foot trefoil	SE	Nov 1979		
<i>Lotus argophyllus</i> var. <i>niveus</i> Santa Cruz Island bird's-foot trefoil	SE	Aug 1981		
<i>Lotus dendroideus</i> var. <i>traskiae</i> San Clemente Island lotus	SE	Apr 1982	FE	Aug 11,1977
<i>Lupinus citrinus</i> var. <i>deflexus</i> Mariposa lupine	ST	Jan 1990		
<i>Lupinus milo-bakeri</i> Milo Baker's lupine	ST	Jan 1987		
<i>Lupinus nipomensis</i> Nipomo Mesa lupine	SE	Jan 1987	FE	Mar 20,2000
<i>Lupinus padre-crowleyi</i> Father Crowley's lupine	SR	Aug 1981		
<i>Lupinus tidestromii</i> var. <i>tidestromii</i> (<i>L. tidestromii</i>) Tidestrom's lupine	SE	Jan 1987	FE	Jun 22,1992
<i>Machaeranthera lagunensis</i> (see <i>Dieteria asteroides</i> var. <i>lagunensis</i>)				
<i>Mahonia sonnei</i> (<i>Berberis sonnei</i>) Truckee barberry		Delisted April 2008	Delisted	Oct 1,2003
<i>Malacothamnus clementinus</i> San Clemente Island bush mallow	SE	Feb 1982	FE	Aug 11,1977
<i>Malacothamnus fasciculatus</i> var. <i>nesioticus</i> Santa Cruz Island bush mallow	SE	Nov 1979	FE	Jul 31,1997
<i>Malacothrix indecora</i> Santa Cruz Island malacothrix			FE	Jul 31,1997
<i>Malacothrix squalida</i> island malacothrix			FE	Jul 31,1997
<i>Monardella linoides</i> ssp. <i>viminea</i> (<i>M. viminea</i>) willowy monardella	SE	Nov 1979	FE	Oct 13,1998
<i>Nasturtium gambellii</i> (<i>Rorippa gambellii</i>) Gambel's water cress	ST	Feb 1990	FE	Aug 03,1993
<i>Navarretia fossalis</i> spreading navarretia			FT	Oct 13,1998
<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i> few-flowered navarretia	ST	Jan 1990	FE	Jun 18,1997

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	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Navarretia leucocephala</i> ssp. <i>pliantha</i> many-flowered navarretia	SE	Nov 1979	FE	Jun 18,1997
<i>Nemacladus twisselmannii</i> Twisselmann's nemacladus	SR	Jul 1982		
<i>Neostapfia colusana</i> Colusa grass	SE	Nov 1979	FT	Mar 26,1997
<i>Nitrophila mohavensis</i> Amargosa nitrophila	SE	Nov 1979	FE	May 20,1985
<i>Nolina interrata</i> Dehesa nolina	SE	Nov 1979		
<i>Oenothera californica</i> ssp. <i>eurekaensis</i> Eureka Dunes evening-primrose	SR	Nov 1978	FE	Apr 26,1978
<i>Oenothera deltoides</i> ssp. <i>howellii</i> Antioch Dunes evening-primrose	SE	Nov 1978	FE	Apr 26,1978
<i>Opuntia basilaris</i> var. <i>treleasei</i> Bakersfield cactus	SE	Jan 1990	FE	Jul 19,1990
<i>Orcuttia californica</i> California Orcutt grass	SE	Sep 1979	FE	Aug 03,1993
<i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	SE	Sep 1979	FT	Mar 26,1997
<i>Orcuttia pilosa</i> hairy Orcutt grass	SE	Sep 1979	FE	Mar 26,1997
<i>Orcuttia tenuis</i> slender Orcutt grass	SE	Sep 1979	FT	Mar 26,1997
<i>Orcuttia viscida</i> Sacramento Orcutt grass	SE	Jul 1979	FE	Mar 26,1997
<i>Ornithostaphylos oppositifolia</i> Baja California birdbush	SE	Apr 2001		
<i>Oxytheca parishii</i> var. <i>goodmaniana</i> (<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>) Cushenbury oxytheca			FE	Aug 24,1994
<i>Packera ganderi</i> (<i>Senecio ganderi</i>) Gander's ragwort	SR	Jul 1982		
<i>Packera layneae</i> (<i>Senecio layneae</i>) Layne's ragwort	SR	Nov 1979	FT	Oct 18,1996
<i>Parvisedum leiocarpum</i> (<i>Sedella leiocarpa</i>) Lake County stonecrop	SE	Jan 1990	FE	Jun 18,1997
<i>Pedicularis dudleyi</i> Dudley's lousewort	SR	Sep 1979		
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	SE	Jun 1992	FE	Feb 03,1995
<i>Pentachaeta lyonii</i> Lyon's pentachaeta	SE	Jan 1990	FE	Jan 29,1997
<i>Phacelia insularis</i> ssp. <i>insularis</i> northern Channel Islands phacelia			FE	Jul 31,1997

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Phlox hirsuta</i> Yreka phlox	SE	Jan 1987	FE	Feb 3,2000
<i>Piperia yadonii</i> Yadon's rein orchid			FE	Aug 12,1998
<i>Plagiobothrys diffusus</i> San Francisco popcorn-flower	SE	Sep 1979		
<i>Plagiobothrys strictus</i> Calistoga popcorn-flower	ST	Jan 1990	FE	Oct 22,1997
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	ST	Dec 2002		
<i>Poa atropurpurea</i> San Bernardino blue grass			FE	Sep 14,1998
<i>Poa napensis</i> Napa blue grass	SE	Jul 1979	FE	Oct 22,1997
<i>Pogogyne abramsii</i> San Diego mesa mint	SE	Jul 1979	FE	Sep 28,1978
<i>Pogogyne clareana</i> Santa Lucia mint	SE	Nov 1979		
<i>Pogogyne nudiuscula</i> Otay Mesa mint	SE	Jan 1987	FE	Aug 03,1993
<i>Polygonum hickmanii</i> Scott's Valley polygonum	SE	May 2005	FE	Apr 8,2003
<i>Potentilla hickmanii</i> Hickman's cinquefoil	SE	Sep 1979	FE	Aug 12,1998
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	SE	Aug 1981	FE	Feb 06,1997
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	SE	Jan 1987	FT	Feb 06,1997
<i>Rorippa subumbellata</i> Tahoe yellow cress	SE	Apr 1982		
<i>Rosa minutifolia</i> small-leaved rose	SE	Oct 1989		
<i>Sanicula maritima</i> adobe sanicle	SR	Aug 1981		
<i>Sanicula saxatilis</i> rock sanicle	SR	Jul 1982		
<i>Sedella leiocarpa</i> (<i>Parvisedum leiocarpum</i>) Lake County stonecrop	SE	Jan 1990	FE	Jun 18,1997
<i>Senecio ganderi</i> (see <i>Packera ganderi</i>)				
<i>Senecio layneae</i> (<i>Packera layneae</i>)				
<i>Sibara filifolia</i> Santa Cruz Island rock cress			FE	Aug 08,1997
<i>Sidalcea covillei</i> Owens Valley checkerbloom	SE	Jul 1979		

State Designated Plants**Classification**

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
<i>Sidalcea hickmanii</i> ssp. <i>anomala</i> Cuesta Pass checkerbloom	SR	Nov 1979		
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	SR	Nov 1979	Removed as FC, 2006 Fed. Register	
<i>Sidalcea keckii</i> Keck's checker-mallow			FE	Feb 16,2000
<i>Sidalcea oregana</i> ssp. <i>valida</i> Kenwood Marsh checkerbloom	SE	Jan 1982	FE	Oct 22,1997
<i>Sidalcea pedata</i> bird-foot checkerbloom	SE	Jan 1982	FE	Aug 31,1984
<i>Sidalcea stipularis</i> Scadden Flat checkerbloom	SE	Jan 1982		
<i>Silene campanulata</i> ssp. <i>campanulata</i> Red Mountain catchfly	SE	Apr 1982		
<i>Streptanthus albidus</i> ssp. <i>albidus</i> Metcalf Canyon jewel-flower			FE	Feb 03,1995
<i>Streptanthus niger</i> Tiburon jewel-flower	SE	Feb 1990	FE	Feb 03,1995
<i>Suaeda californica</i> California seablite			FE	Dec 15,1994
<i>Swallenia alexandrae</i> Eureka Valley dune grass	SR	Aug 1981	FE	Apr 26,1978
<i>Taraxacum californicum</i> California dandelion			FE	Sep 14,1998
<i>Thelypodium stenopetalum</i> slender-petaled thelypodium	SE	Feb 1982	FE	Aug 31,1984
<i>Thermopsis macrophylla</i> var. <i>angina</i> (<i>T. macrophylla</i>) Santa Ynez false lupine	SR	Aug 1981		
<i>Thlaspi californicum</i> Kneeland Prairie penny-cress			FE	Feb 9,2000
<i>Thysanocarpus conchuliferus</i> Santa Cruz Island fringe-pod			FE	Jul 31,1997
<i>Trichostema austromontanum</i> ssp. <i>compactum</i> Hidden Lake bluecurls			FT	Sep 14,1998
<i>Trifolium amoenum</i> showy Indian clover			FE	Oct 22,1997
<i>Trifolium polyodon</i> Pacific Grove clover	SR	Sep 1979		
<i>Trifolium trichocalyx</i> Monterey clover	SE	Nov 1979	FE	Aug 12,1998
<i>Tuctoria greenei</i> Greene's tuctoria	SR	Sep 1979	FE	Mar 26,1997
<i>Tuctoria mucronata</i> Crampton's tuctoria	SE	Jul 1979	FE	Sep 28,1978
<i>Verbena californica</i> California vervain	ST	Aug 1994	FT	Sep 14,1998

State Designated Plants

Classification

	<u>State</u>	<u>List Date</u>	<u>Federal</u>	<u>List Date</u>
	<i>Verbesina dissita</i> Big-leaved crownbeard	ST	Jan 1990	FT

APPENDIX D
AIR QUALITY CALCULATIONS



CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

Assumptions for Combustion Emissions						
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs	
Water Truck	2	300	8	130	624000	
Diesel Road Compactors	1	100	8	15	12000	
Diesel Dump Truck	2	300	8	130	624000	
Diesel Excavator	2	300	8	60	288000	
Diesel Hole Trenchers	1	175	8	15	21000	
Diesel Bore/Drill Rigs	0	300	8	60	0	
Diesel Cement & Mortar Mixers	1	300	8	60	144000	
Diesel Cranes	0	175	8	130	0	
Diesel Graders	3	300	8	15	108000	
Diesel Tractors/Loaders/Backhoes	1	100	8	90	72000	
Diesel Bull Dozers	2	300	8	15	72000	
Diesel Front End Loaders	2	300	8	30	144000	
Diesel Fork Lifts	1	100	8	130	104000	
Diesel Generator Set	2	40	8	130	83200	

Type of Construction Equipment	Emission Factors ¹						
	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

1. Emissions factors (EF) were generated using USEPA's preferred mode for nonroad sources, the NONROAD2008 mode. Emissions were modeled for the 2007 calendar year. The VOC EFs include exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2008 mode are diesel, hotsoak, running loss, tank permeation, hose permeation, displacement, and storage. The construction equipment age distribution in the NONROAD2008 mode is based on the population in U.S. for the 2007 calendar year.

Emission Calculations									
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr		
Water Truck	0.303	1.423	3.775	0.282	0.275	0.509	368.579		
Diesel Road Paver	0.005	0.020	0.065	0.004	0.004	0.010	7.091		
Diesel Dump Truck	0.303	1.423	3.775	0.282	0.275	0.509	368.579		
Diesel Excavator	0.108	0.413	1.460	0.102	0.098	0.235	170.209		
Diesel Hole Cleaners/Trenchers	0.012	0.056	0.134	0.011	0.010	0.017	12.399		
Diesel Bore/Drill Rigs	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Cement & Mortar Mixers	0.097	0.368	1.155	0.076	0.075	0.116	84.057		
Diesel Cranes	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Graders	0.042	0.162	0.563	0.039	0.038	0.088	63.828		
Diesel Tractors/Loaders/Backhoes	0.147	0.651	0.573	0.109	0.106	0.075	54.835		
Diesel Bull Dozers	0.029	0.109	0.378	0.026	0.025	0.059	42.552		
Diesel Front End Loaders	0.060	0.246	0.793	0.056	0.054	0.117	85.089		
Diesel Aerial Lifts	0.227	0.889	0.981	0.159	0.155	0.109	79.171		
Diesel Generator Set	0.111	0.345	0.547	0.067	0.065	0.074	53.847		
Total Emissions	1.442	6.106	14.200	1.213	1.180	1.918	1390.237		

Conversion factors	
Grams to tons	1.102E-06

MOVES2010a MODEL ON-ROAD TRANSPORTATION AIR EMISSIONS-
DELIVERY MATERIALS AND COMMUTING DURING CONSTRUCTION ACTIVITIES

MOVES 2010a						
Source	Fuel type	Number of vehicles	Miles traveled per day	Days of travel per year	Miles traveled per year	
Passenger cars	Gasoline	20	60	260	312,000	
Passenger truck	Gasoline	20	60	260	312,000	
Light commercial truck	Diesel	2	60	260	31,200	
Short-haul truck	Diesel	4	130	260	135,200	
Long-haul truck	Diesel	1	130	260	33,800	

Emission Factors (MOVES 2010a Emission Rates) ¹							
Source	VOC (g/mile)	CO (g/mile)	NOx (g/mile)	PM-10 (g/mile)	PM-2.5 (g/mile)	SO ₂ (g/mile)	CO ₂ and CO ₂ Equivalents (g/mile)
Passenger cars	8.497	2.892	0.576	0.019	0.018	0.005	320
Passenger truck	3.645	5.449	1.168	0.027	0.025	0.007	439
Light commercial truck	4.460	2.158	2.986	0.164	0.190	0.005	609
Short-haul truck	2.438	2.273	6.095	0.270	0.313	0.007	929
Long-haul truck	2.519	3.610	14.776	0.625	0.726	0.016	2,020

Total Emission for On-Road Construction Activities (tons/year)							
Source	VOC	CO	NOx	PM-10	PM-2.5	SO ₂	CO ₂ and CO ₂ Equivalents
Passenger cars	2.921	0.994	0.198	0.007	0.006	0.002	110
Passenger truck	1.253	1.873	0.402	0.009	0.009	0.002	151
Light commercial truck	0.153	0.074	0.103	0.006	0.007	0.000	21
Short-haul truck	0.363	0.339	0.908	0.040	0.047	0.001	138
Long-haul truck	0.094	0.134	0.550	0.023	0.027	0.001	75
Total	4.785	3.415	2.161	0.085	0.095	0.006	496

Key:

Short-haul trucks category includes trucks such as dump trucks and cement trucks.
Long-haul trucks category includes trucks such as semi-trailer (18 wheeler).

1. Emission factors were generated by USEPA preferred mode MOVES2010a. MOVES simulates daily motor vehicle operations and produces emission rates. MOVES emission rates include sources from engine combustion, tire wear, brake wear, evaporative fuel permeation, vapor venting and leaking (running and parking), and crankcase loss. Emission rates are daily averages for each of the criteria pollutants. The averages from a combination of vehicle operations such as: stop and go, highway travel, acceleration at on-ramps, parking, start-up, extended idling, etc.

MOVES2010a MODEL ON-ROAD TRANSPORTATION AIR EMISSIONS-ONGOING OPERATIONS

MOVES 2010a					
Source	Fuel type	Number of vehicles	Miles traveled per day	Days of travel per year	Miles traveled per year
Passenger cars	Gasoline	-	0	365	-
Passenger truck	Gasoline	-	0	365	-
Light commercial truck	Diesel	-	0	365	-
Short-haul truck	Diesel	-	0	365	-
Long-haul truck	Diesel	-	0	365	-

Emission Factors (MOVES 2010a Emission Rates) ¹							
Source	VOC (g/mile)	CO (g/mile)	NOx (g/mile)	PM-10 (g/mile)	PM-2.5 (g/mile)	SO ₂ (g/mile)	CO ₂ and CO ₂ Equivalents (g/mile)
Passenger cars	8.497	2.892	0.576	0.019	0.018	0.005	320
Passenger truck	3.645	5.449	1.168	0.027	0.025	0.007	439
Light commercial truck	4.460	2.158	2.986	0.164	0.190	0.005	609
Short-haul truck	2.438	2.273	6.095	0.270	0.313	0.007	929
Long-haul truck	2.519	3.610	14.776	0.625	0.726	0.016	2,020

Total Emission for On-Road Commuter Activities (tons/year)							
Source	VOC	CO	NOx	PM-10	PM-2.5	SO ₂	CO ₂ and CO ₂ Equivalents
Passenger cars	0.00	0.00	0.00	0.00	0.00	0.00	-
Passenger truck	0.00	0.00	0.00	0.00	0.00	0.00	-
Light commercial truck	0.00	0.00	0.00	0.00	0.00	0.00	-
Short-haul truck	0.00	0.00	0.00	0.00	0.00	0.00	-
Long-haul truck	0.00	0.00	0.00	0.00	0.00	0.00	-
Total	0.00	0.00	0.00	0.00	0.00	0.00	-

Key:

Short-haul trucks category includes trucks such as dump trucks and cement trucks.
 Long-haul trucks category includes trucks such as semi-trailer (18 wheeler).

1. Emissions factors were generated by USEPA preferred mode MOVES2010a. MOVES estimates daily motor vehicle operations and produces emissions rates. MOVES emissions rates include sources from engine combustion, tire wear, brake wear, evaporative fuel, permeation, vapor venting and leaking (running and parking), and crankcase losses. Emissions rates are daily averages for each of the criteria pollutants. The averages from a combination of vehicle operations such as: stop and go, highway travel, acceleration on on-ramps, parking, start-up, extended idling, etc.

CALCULATION SHEET-FUGITIVE DUST-CONSTRUCTION

Assumptions for Combustion Emissions

Construction Fugitive Dust Emission Factors

General Construction Activities	Emission Factor	Units	Source
New Road Construction	0.19 ton PM10/acre-month	ton PM10/acre-month	MRI 1996; EPA 2001; EPA 2006
	0.42 ton PM10/acre-month	ton PM10/acre-month	MRI 1996; EPA 2001; EPA 2006

PM2.5 Emissions

PM2.5 Multiplier: 0.10 (10% of PM10 emissions assumed to be PM2.5) EPA 2001; EPA 2006

Control Efficiency

0.50 (assume 50% control efficiency for PM10 and PM2.5 emissions) EPA 2001; EPA 2006

Project Assumptions

Construction Area (0.19 ton PM10/acre-month)	Conversion Factors
Duration of Soil Disturbance in Project: 8 months	0.000022957 acres per feet
Length: 2 miles	5280 feet per mile
Length (converted): 10560 feet	
Width: 24 feet	
Area: 5.82 acres	

Staging Areas

Duration of Construction on Project: 8 months
Length: 8 miles
Length (converted): 4224 feet
Width: 24 feet
Area: 2.00 acres

	Project Emissions (tons/year)	
	PM10 uncontrolled	PM2.5 controlled
Construction Area (0.19 ton PM10/acre)	8.84	0.88
Staging Areas	0.38	0.04
Total	9.22	0.92

References:

- USEPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.
- USEPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division, Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.
- MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

Assumptions for Fugitive Emissions

General Construction Activities Emission Factor

0.19 ton PM10/acre-month Source MR 1996 EPA 2001 EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MR) improvement of Specific Emission Factors (BACM Project No. 1) March 29, 1996. The MR study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM10/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM10/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MR 1996). A subsequent MR Report in 1999 Estimating Particulate Matter Emissions from Construction Operations calculated the 0.19 ton PM10/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM10/acre-month) and 75% of the average emission factor (0.11 ton PM10/acre-month).

The 0.19 ton PM10/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001, EPA 2006). The 0.19 ton PM10/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP), which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas.

New Road Construction Emission Factor

0.42 ton PM10/acre-month Source MR 1996 EPA 2001 EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MR 1996 study described above (0.42 tons PM10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001, EPA 2006).

PM2.5 Multiplier 0.10

PM2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM10 and PM2.5 0.50

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (EPA 2006).

References:

- EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency, March 2001.
- EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, July 2006.
- MR 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MR). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

CALCULATION SHEET-SUMMARY OF EMISSIONS

Assumptions for Combustion Emissions										
Emissions Source	VOC	CO	NOx	PM-10	PM-2.5	SO2	CO2	CO2 Equivalents	Total CO2	
Combustion Emissions	1.44	6.11	14.20	1.21	1.18	1.92	1390.24	4,452	5,843	
Construction Site-Fugitive PM-10	NA	NA	NA	4.61	0.46	NA	NA	NA	NA	
Construction Workers Commuter & Trucking	4.78	3.42	2.16	0.08	0.09	0.01	NA	496	496	
Total emissions- CONSTRUCTION	6.23	9.52	16.36	5.91	1.74	1.92	1390	4,948	6,338	
De minimis Threshold (1)	100	100	100	70	100	100	NA	NA	25,000	

1 Note that Imperial County is non-attainment for Ozone PM-10 (serious) and PM 2.5 (USEPA 2010b and CARB 2012)

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: EPA 2010 Reference Tables and Conversion Inventory of U.S. Greenhouse Gas Emissions and Sinks
<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>



Final

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING
AND A BORDER INFRASTRUCTURE SYSTEM
OFFICE OF BORDER PATROL
YUMA SECTOR, ARIZONA**

**U.S. Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol**



January 2010

BW1 FOIA CBF 004901

**FINDING OF NO SIGNIFICANT IMPACT
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING
AND A BORDER INFRASTRUCTURE SYSTEM
OFFICE OF BORDER PATROL
YUMA SECTOR, ARIZONA**

PROJECT HISTORY: United States (U.S.) Border Patrol (USBP) is an organizational element of U.S. Customs and Border Protection (CBP) which is a component of Department of Homeland Security (DHS). The mission of CBP is to prevent terrorists and terrorist weapons from entering the U.S., while also facilitating the flow of legitimate trade and travel. In supporting CBP's mission, USBP is charged with establishing and maintaining effective control of the Nation's international border between the Ports of Entry (POEs). In December 2004, CBP completed the *Final Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona*. Then, in March 2007, CBP completed the *Final Supplemental Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona*. The infrastructure proposed in the original Environmental Assessment (EA) involved the construction of a border infrastructure system (BIS), which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence, and extension of the primary border fence along the U.S.-Mexico border. The 2007 Supplemental Environmental Assessment (SEA) proposed the installation of three pre-manufactured bridges, the trimming and maintenance of brush for three camera lanes, the relocation of the security lighting originally planned for the area north of the waste water treatment plant near San Luis, Arizona to the area along the Bypass Drain, the establishment of a BIS to parallel the lights, and the re-clearing and maintenance of an approximately 199-acre enforcement zone between the San Luis Port of Entry and the Colorado River.

Since the completion of these two documents and the commencement of construction of much of the BIS, CBP has determined that an additional connection to the existing commercial electrical grid is necessary at the junction of Avenue D and the BIS. This SEA will discuss the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road along a 15-foot wide power line right of way (ROW) west of Avenue D. This SEA updates the 2004 Final EA and 2007 SEA, and was prepared in accordance with the National Environmental Policy Act (NEPA), and analyzes the project alternatives and potential impacts on the human and natural environment from these alternatives.

PROJECT LOCATION: The proposed project is located near the U.S./Mexico border in Yuma County, Arizona. Specifically, the proposed project generally parallels Avenue D from County 25th Street south to the existing BIS east of the town of San Luis, Arizona. The Proposed Action would occur within the USBP Yuma Station Area of Operation.

PURPOSE AND NEED: The purpose of this Proposed Action is to supply reliable electrical power to the lights within the BIS. The need for the Proposed Action is to

enhance the safety of USBP agents, BLM, U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need of this SEA is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights now are susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences. Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and eliminate air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

PROPOSED ACTION: The Proposed Action includes the installation of power poles and service lines from the existing power lines along County 25th Street south to the BIS. The proposed power line would be installed west of Avenue D within a 15-foot wide right of way (ROW) starting at County 25th Street, running southward for approximately 2,302 feet. The power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS. A 12-foot wide construction access road would be established within the ROW. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing system via subsurface conduit. Arizona Public Service would install the proposed power line.

ALTERNATIVES: Two alternatives are addressed in this SEA, the No Action Alternative and the Proposed Action described above. Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations.

ENVIRONMENTAL CONSEQUENCES: The Proposed Action would result in disturbance to a total of 1.32 acres. The power line ROW and construction access road

would not significantly impact vegetation, wildlife, soils, water resources, land use, or air quality. No significant impacts to protected species would occur as a result of the Proposed Action. No cultural resources sites would be adversely impacted by the proposed activities.

MITIGATION MEASURES: Although no significant impacts have been identified, CBP would implement mitigation measures, many of which are standard operating procedures, to further reduce potentially adverse effects. The mitigation measures are presented for each resource category that could be affected. The proposed measures would be coordinated through the appropriate agencies and land managers/administrators prior to initiation of construction.

SOILS: Vehicular traffic associated with the construction activities and operational support activities will remain on established roads to the maximum extent practicable. Erosion control techniques, such as, straw bales, aggregate materials, and wetting compounds will be incorporated with the design of the Proposed Action. In addition, other erosion control measures, as required and promulgated through the SWPPP, will be implemented before and after construction activities.

WILDLIFE: Construction of the access road and installation of the power line would occur outside of the neotropical migratory bird nesting season (early May to early to mid September). If this is not possible, CBP would follow the requirements of the Migratory Bird Treaty Act. CBP will coordinate with the U.S. Fish and Wildlife Service (USFWS) if a construction activity will result in the take of a migratory bird. Surveys of suitable habitat will be performed prior to construction to identify active nests. If construction activities will result in the take of a migratory bird, then consultation with the USFWS and Arizona Game and Fish Department will be conducted prior to construction or clearing activities. Bird surveys will not be required if construction/installation activities occur outside of the nesting season.

PROTECTED SPECIES: If western burrowing owls (*Athene cunicularia*) are observed within the project ROW, on-site mitigation will consist of passive relocation. This entails encouraging owls to move from occupied burrows within the project area to alternative locations in suitable habitat beyond 150 feet from the project disturbance. The use of one-way doors on burrows should keep owls from returning to the burrows within the project area. Relocation will only be attempted during the non-breeding season (September 1 through March 1).

Pre-construction surveys and construction monitoring would occur for mitigation for potential impacts to the flat-tailed horned lizard (*Phrynosoma mcallii*). All surveys and monitoring would be conducted according to the protocols identified in the *Flat-tailed Horned Lizard Rangewide Management Strategy: An Arizona-California Conservation Strategy*.

CULTURAL RESOURCES: If any cultural material is discovered during the construction efforts, then all activities will halt until a qualified archeologist can be brought in to assess the cultural remains.

WATER RESOURCES: Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material. A Storm Water Pollution Prevention Plan will be prepared and implemented prior to the start of any construction activities.

AIR QUALITY: Mitigation measures will be incorporated to assure that Particulate Matter of 10 micrometers or less emission levels do not rise above the minimum threshold of 100 tons per year as required per 40 CFR 51.853(b)(1). Measures will include dust suppression methods to minimize airborne particulate matter that will be created during construction activities. Standard construction practices such as routine watering of the construction site will be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

FINDING: Based upon the results of the analysis presented in this SEA, the Proposed Action Alternative (*i.e.*, Preferred Alternative) would not have a significant effect on the environment. Therefore, no additional National Environmental Policy Act documentation (*i.e.*, Environmental Impact Statement) is warranted.



Stephen S. Martin
Acting Chief
Strategic Planning, Policy, and Analysis Division
Office of Border Patrol

1/26/10
Date



Gregory L. Giddens
Executive Director
Facilities Management and Engineering
U.S. Customs and Border Protection

17 Feb 10
Date

Final

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING
AND A BORDER INFRASTRUCTURE SYSTEM
OFFICE OF BORDER PATROL
YUMA SECTOR, ARIZONA**

January 2010

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EXECUTIVE SUMMARY

BACKGROUND:

The U.S. Customs and Border Protection (CBP) released a Final Environmental Assessment (EA) in December 2004 for the construction of tactical infrastructure near San Luis, Arizona. A Supplemental EA (SEA) was completed in March 2007 for additional tactical infrastructure and to document changes to the designs from the original 2004 EA. The infrastructure proposed in the original EA involved the construction of a border infrastructure system (BIS), which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence, and extension of the primary border fence along the U.S./Mexico border. The 2007 SEA proposed the installation of three pre-manufactured bridges, the trimming and maintenance of brush for three camera lanes, the relocation of the security lighting originally planned for the area north of the wastewater treatment plant near San Luis, Arizona to the area along the Bypass Drain, the establishment of a BIS to parallel the lights, and the re-clearing and maintenance of an approximately 199-acre enforcement zone between the San Luis Port-of-Entry and the Colorado River.

Since the completion of these two documents and the commencement of construction of much of the BIS, CBP has determined that an additional connection to the existing commercial electrical grid is necessary at the junction of Avenue D and the BIS. This SEA will discuss the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road along a 15-foot wide power line right-of-way (ROW) west of Avenue D.

PURPOSE AND NEED FOR THE PROPOSED PROJECT:

The purpose of the Proposed Action is to provide reliable electrical power to the lights within the BIS. The need for the Proposed Action is to enhance the safety of USBP agents, Bureau of Land Management (BLM), U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by

portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need of this Proposed Action is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights are now susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences. Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and eliminate air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

PROPOSED ACTION: The Proposed Action for this SEA includes the installation of power poles and service lines from the existing power lines along County 25th Street south to the BIS. The proposed power line would be installed west of Avenue D within a 15-foot wide ROW starting at County 25th Street, running southward for approximately 2,302 feet. The power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS. A 12-foot wide construction access road would be established within the ROW. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing system via subsurface conduit. Arizona Public Service would install the proposed power line.

**ALTERNATIVES TO
THE PROPOSED
ACTION:**

Two alternatives are addressed in this SEA, the No Action Alternative and the Proposed Action. Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations. Of the alternatives considered, the Proposed Action would be the most efficient and strategically effective approach to control cross border violations and terrorist activities, and to satisfy the stated purpose and need.

**ENVIRONMENTAL
IMPACTS OF THE
PROPOSED ACTION:**

The Proposed Action would result in disturbance to a total of 1.32 acres. The power line ROW and construction access road would not significantly impact vegetation, wildlife, soils, water resources, land use, or air quality. No significant impacts to protected species would occur as a result of the Proposed Action. No cultural resources sites would be adversely impacted by the proposed activities. There would also be no impacts to the region's socioeconomics nor would the project cause issues relating to Environmental Justice.

CONCLUSIONS:

Based upon the results of this SEA, it has been concluded that the Proposed Action would not have a significant adverse effect on the environment, and no additional National Environmental Policy Act (NEPA) documentation is warranted.

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SECTION 1.0
INTRODUCTION AND PURPOSE AND NEED

1.0 INTRODUCTION AND PURPOSE AND NEED

1.1 INTRODUCTION

This Supplemental Environmental Assessment (SEA) addresses the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road within a 15-foot wide power line right-of-way (ROW) west of Avenue D near San Luis, Arizona (Figure 1-1) as additions to the previously approved United States (U.S.) Border Patrol (USBP) Border Infrastructure System (BIS). The BIS and other components were described in both the December 2004 *Final Environmental Assessment (EA) for the Installation of Permanent Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona* (U.S. Customs and Border Protection [CBP] 2004) and the March 2007 *Final Supplemental Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona* (CBP 2007). The December 2004 EA was tiered from the *Supplemental Programmatic Environmental Impact Statement for Immigration Naturalization Service (INS) and Joint Task Force Six (JTF-6) Activities along the U.S./Mexico Border* (U.S. Army Corps of Engineers 2001). JTF-6 (now called Joint Task Force North [JTF-N]) also prepared two Final EAs in 1998 and 1999, which addressed the potential impacts of extending the primary border fence approximately 3.3 miles to the east, beginning at the terminus of the existing primary border fence, and the installation of permanent security lights (JTF-6 1998 and JTF-6 1999). These documents were also used as reference during the preparation of this SEA.

1.2 BACKGROUND AND HISTORY

The background and history of CBP, USBP, Yuma Sector and Yuma Station, and regulatory authority of the CBP were described in detail in the December 2004 Final EA (CBP 2004) and are incorporated herein by reference.

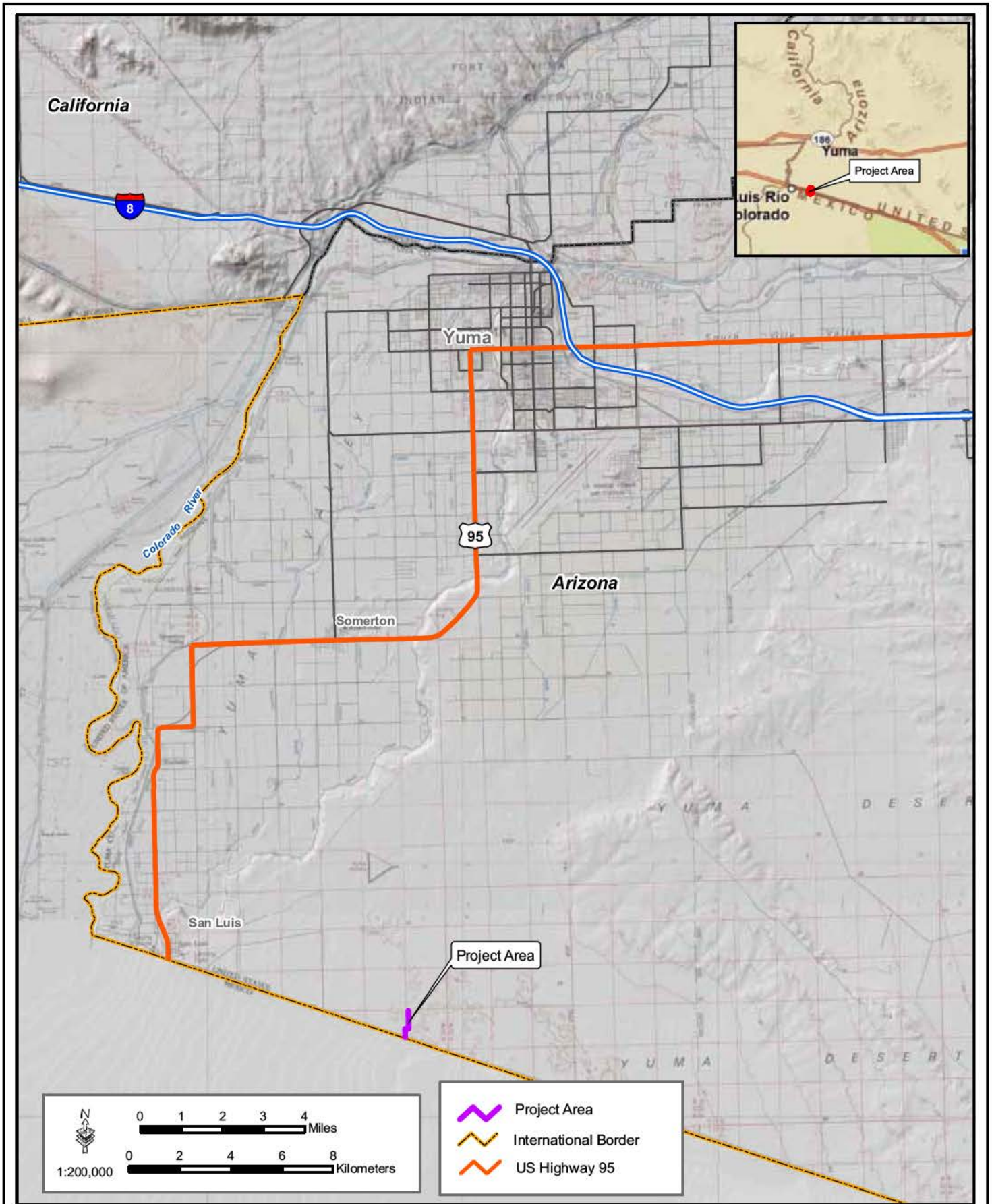


Figure 1-1: Vicinity Map



The Proposed Action described in the December 2004 Final EA involved the construction of a BIS, which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence and extension of the primary border fence. The BIS would create a 150-foot enforcement zone north of the U.S./Mexico border, except where the enforcement zone deviates to the north to avoid existing canals west of Friendship Park in San Luis, Arizona (Figures 1-2, 1-3, and 1-4). The Proposed Action was divided into three phases that encompassed approximately 13 miles. Phases I and II included the installation of permanent security lights, all-weather patrol road, secondary fence, maintenance road and security fence near San Luis, Arizona. Phase I also included the construction of approximately 1 mile of permanent lights north of the San Luis wastewater treatment plant. Phase II included extending the primary border fence approximately 3.5 miles east to Avenue C. Phase III only included the installation of permanent security lights near the town of Gadsden, Arizona. Each phase was expected to be constructed independently of the others as funding became available.

The 2007 SEA proposed the installation of three pre-manufactured bridges within the original BIS along the southern border, the creation and maintenance of three camera lanes by trimming limbs and brush, the relocation of 1.0 mile of permanent security lights from north of the San Luis wastewater treatment plant to along the Bypass Drain, the extension of the BIS 1.5 miles north along the Bypass Drain near the Colorado River, and the selective clearing of the 199 acres, which was previously cleared by Bureau of Land Management (BLM), between the Bypass Drain and the Colorado River (Figure 1-5). Construction of these components is in various stages of completion.

This current SEA discusses the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road within a 15-foot wide power line ROW west of Avenue D. The proposed power line would be installed along the west side of Avenue D starting at County 25th Street, where there is an existing commercial power line, and extending southward for approximately 2,302 feet. The

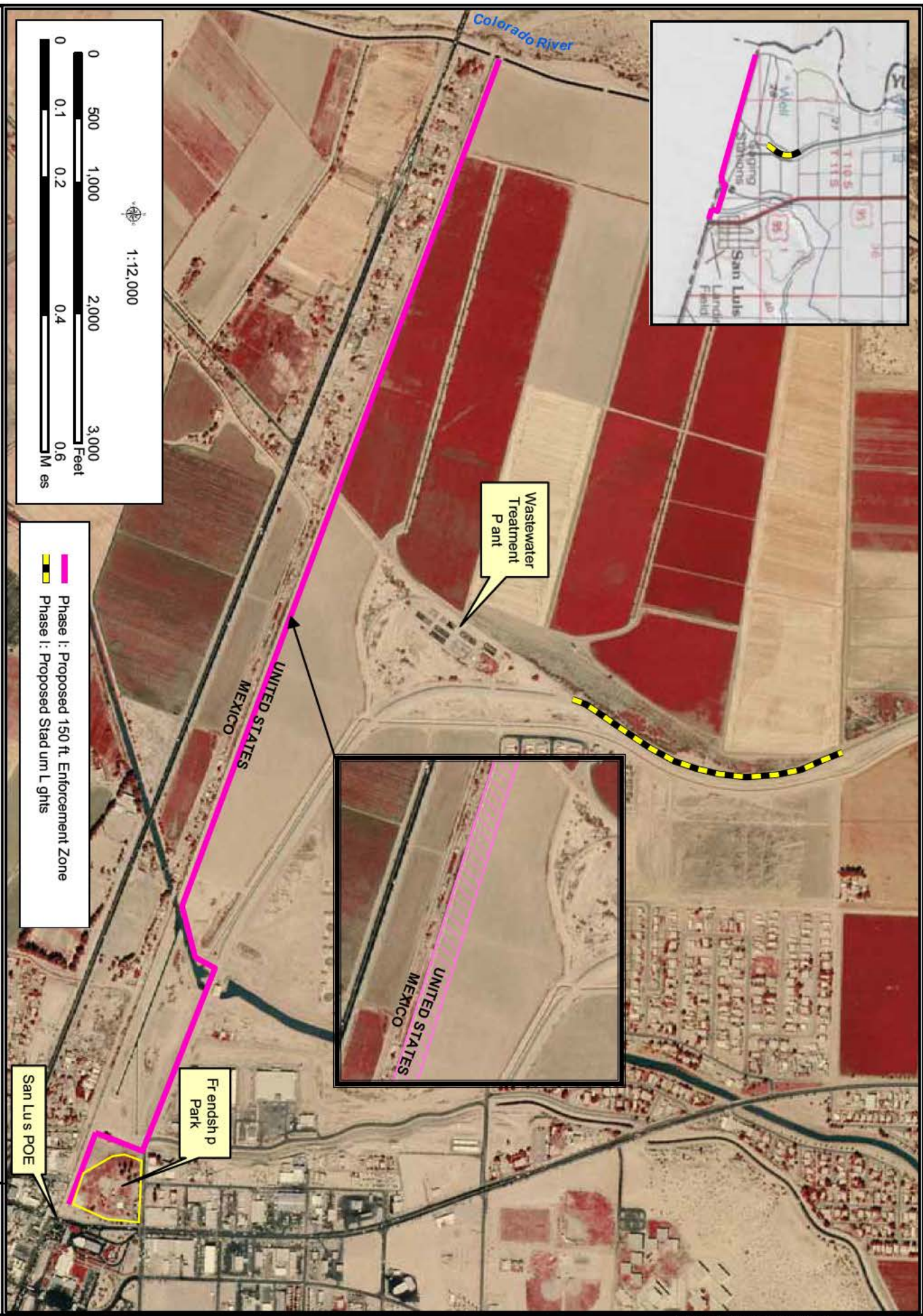


Figure 1-2: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 1

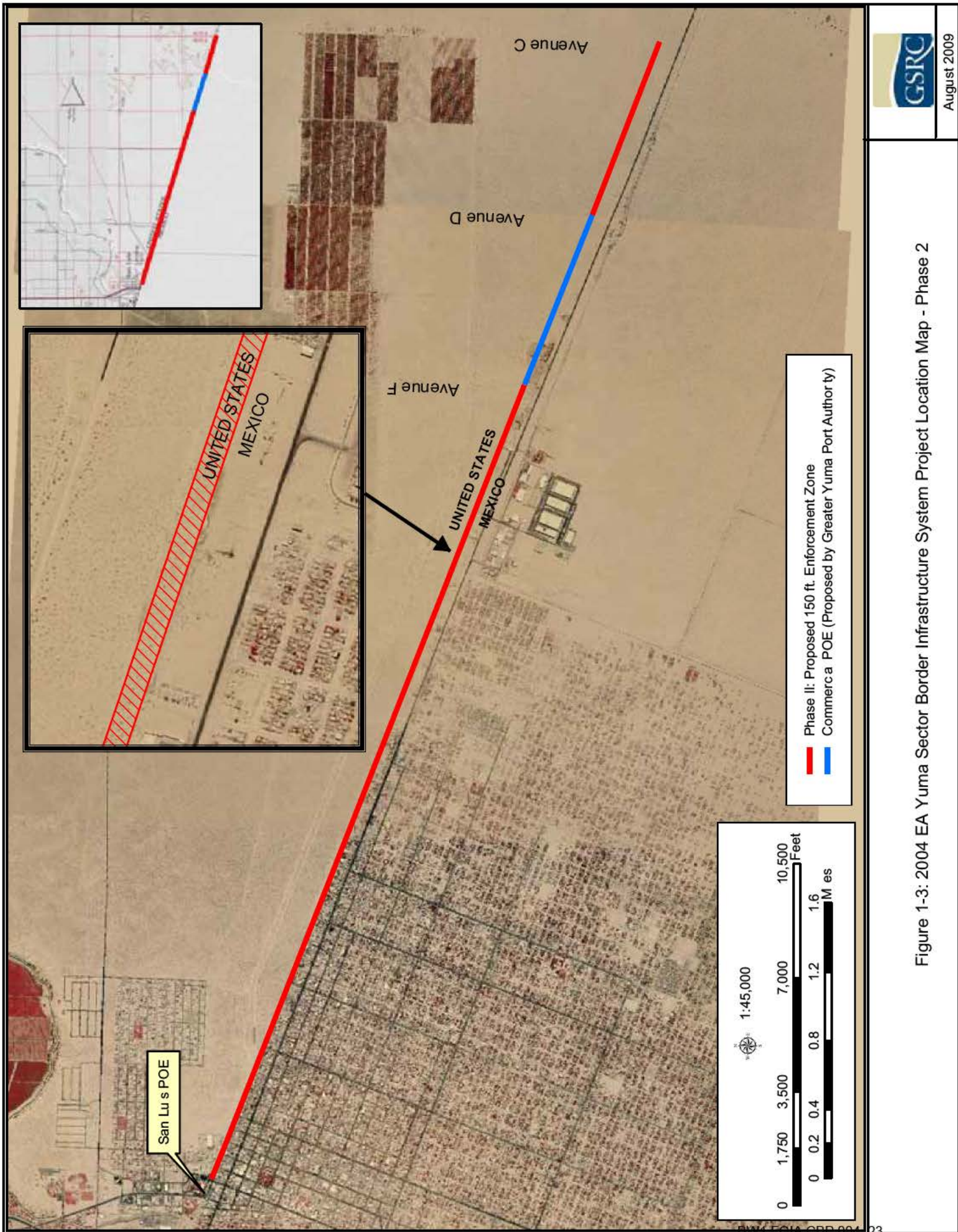


Figure 1-3: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 2

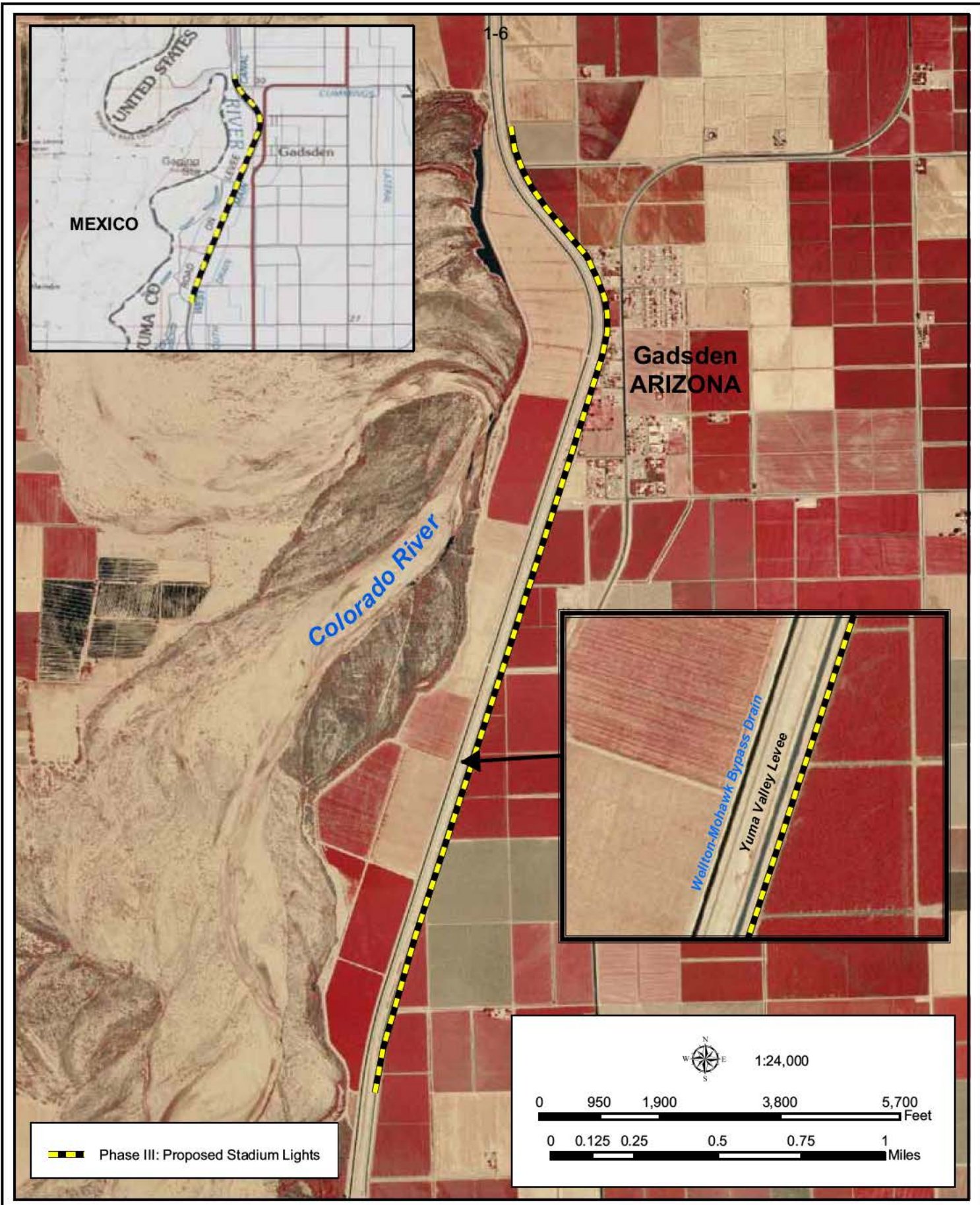


Figure 1-4: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 3



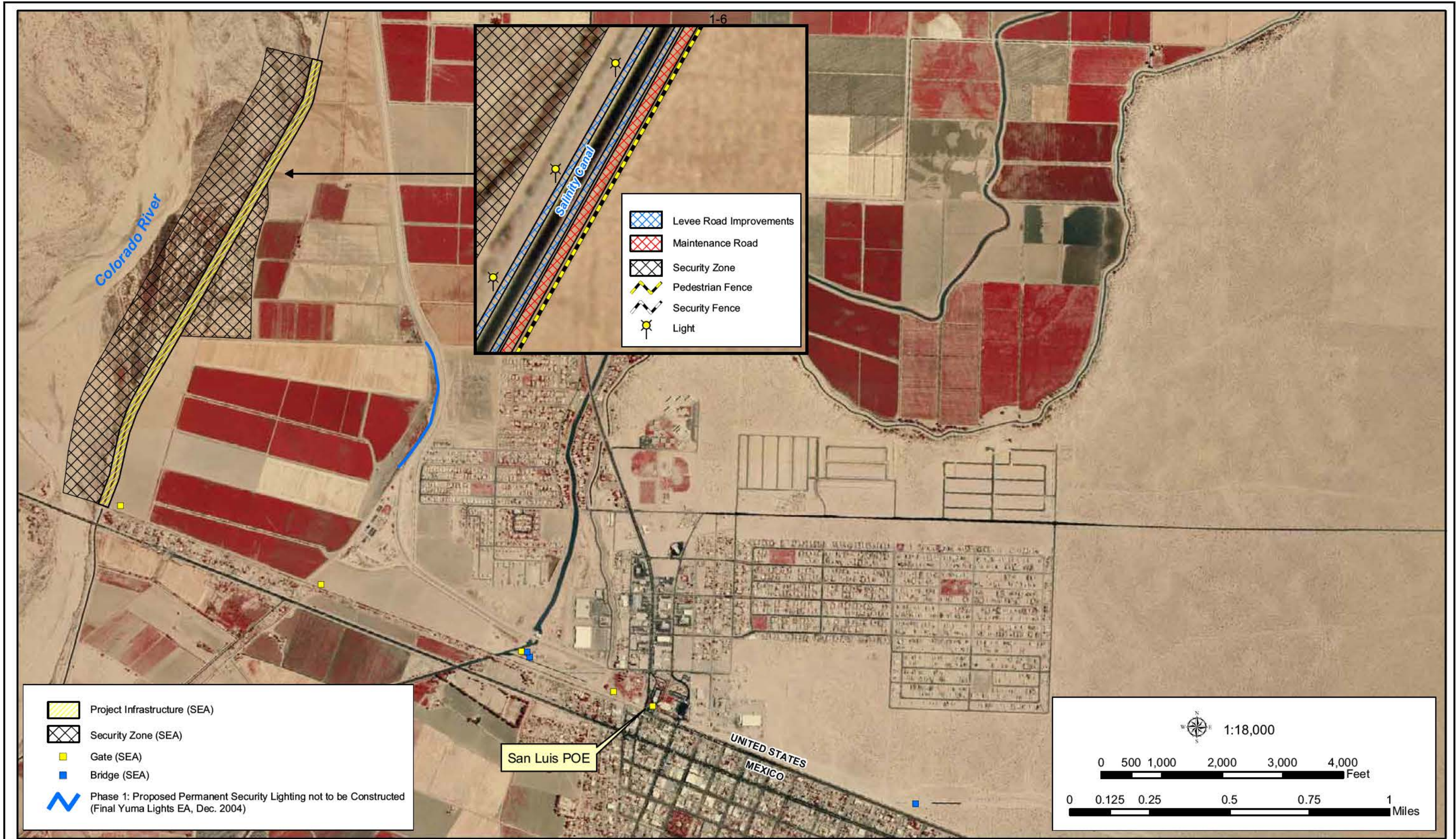


Figure 1-5: 2007 SEA Yuma Sector Border Infrastructure System Project Location Map

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power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS.

1.3 LOCATION OF THE PROPOSED PROJECT

The general location of the proposed project was previously discussed in the December 2004 Final EA (CBP 2004) and is incorporated herein by reference. The proposed project corridor generally parallels Avenue D from County 25th Street south to the existing BIS at the U.S./Mexico border. The project corridor includes approximately 1.32 acres of land owned by the Greater Yuma Port Authority (GYPA) (Figure 1-6).

1.4 PURPOSE AND NEED

The purpose of this Proposed Action is to provide reliable electrical power to the lights within the BIS. The need for the Proposed Action is to enhance the safety of USBP agents, BLM, U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need for this Proposed Action is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights now are susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences.

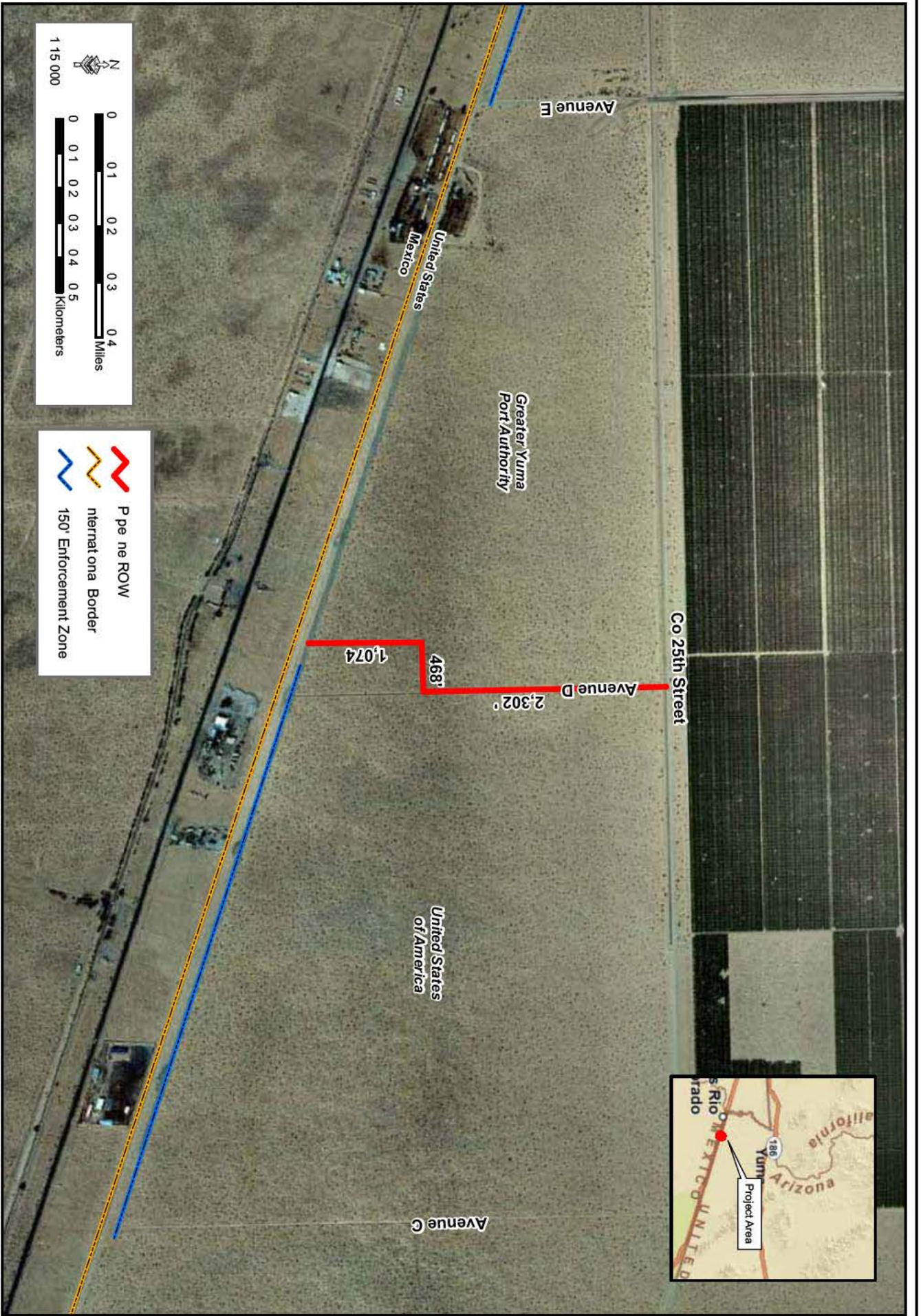


Figure 1-6: 2009 SEA Yuma Sector Border Infrastructure System Project Location Map



Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and reduce air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

1.5 PUBLIC INVOLVEMENT

1.5.1 Agency Coordination

This section discusses consultation and coordination that will and has occurred during preparation of this document (Appendix C). This includes contacts that are made during the development of the Proposed Action and writing of the SEA. Agency correspondence/consultation letters are included in Appendix C. Formal and informal coordination has been conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (EPA)
- U.S. Army Corps of Engineers (USACE)
- Natural Resource Conservation Service (NRCS)
- Arizona State Historic Preservation Office (SHPO)
- Arizona Department of Transportation (ADOT)
- Arizona Game and Fish Department (AGFD)
- Arizona Department of Environmental Quality (ADEQ)
- Arizona Department of Agriculture
- Arizona State Lands
- BLM
- GYPA
- Reclamation
- Bureau of Indian Affairs
- National Park Service
- Federally Recognized Tribes

1.5.2 Public Review

The draft SEA was made available for public review for a period of 30 days, beginning on October 9, 2009, which was the day the Notice of Availability (NOA) was published in the *Yuma Sun* newspaper. Proof of publication of the NOA is included in Appendix C. One letter comment was received from the USACE Los Angeles District, Arizona-Nevada Area Office which requested clarification regarding the presence or absence of potentially jurisdictional Waters of the U.S. (WUS) or wetlands within the proposed project footprint. The absence of WUS and wetlands was clarified in Sections 3.1 and 3.4 of this Final SEA. A copy of the USACE letter is included in Appendix C.

A NOA will be published in the *Yuma Sun* newspaper to announce the availability of the Final SEA. The Final SEA and signed FONSI will be made available to the public at the Yuma County Library (Main Branch, 2951 South 21st Drive, Yuma, Arizona) and the Yuma County Library (San Luis Library, 1075 North 6th Avenue, San Luis, Arizona) and via the Internet at the following address: <http://ecso.swf.usace.army.mil>.

1.6 APPLICABLE ENVIRONMENTAL STATUTES AND REGULATIONS

The applicable environmental statutes and regulations for this SEA are similar to those of the December 2004 Final EA (CBP 2004) and are hereby incorporated by reference. In addition, this SEA is in accordance with the National Environmental Policy Act of 1969 (NEPA) as amended (42 U.S. Code [U.S.C.]. 4321 *et seq.*), the Council on Environmental Quality's (CEQ) NEPA implementing regulations at 40 Code of Federal Regulations (CFR) Part 1500, and the Department of Homeland Security's (DHS) *Management Directive 023-01, Environmental Planning Program* (71 *Federal Register* [FR] 16790).

1.7 REPORT ORGANIZATION

This report is organized into nine major sections including this introduction. Section 2.0 describes all alternatives considered for the project. Section 3.0 discusses the environmental features potentially affected by the project, while Section 4.0 discusses the

environmental consequences for each of the viable alternatives. Environmental design measures are discussed in Section 5.0, and public comments and the Notice of Availability (NOA) are presented in Section 6.0. Sections 7.0, 8.0, and 9.0 present a list of the references cited in the document, a list of the persons involved in the preparation of this document, and a list of acronyms and abbreviations. Appendix A is a list of the species considered threatened, endangered or candidates for listing by USFWS and AGFD. Appendix B includes the air quality model quantifications for determining impacts from this project. Appendix C includes the correspondence generated during the planning and preparation of this SEA.

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SECTION 2.0
ALTERNATIVES



2.0 ALTERNATIVES

Two alternatives were identified and considered during the planning stages of the proposed project: No Action Alternative and Proposed Action. The following paragraphs describe the alternatives considered.

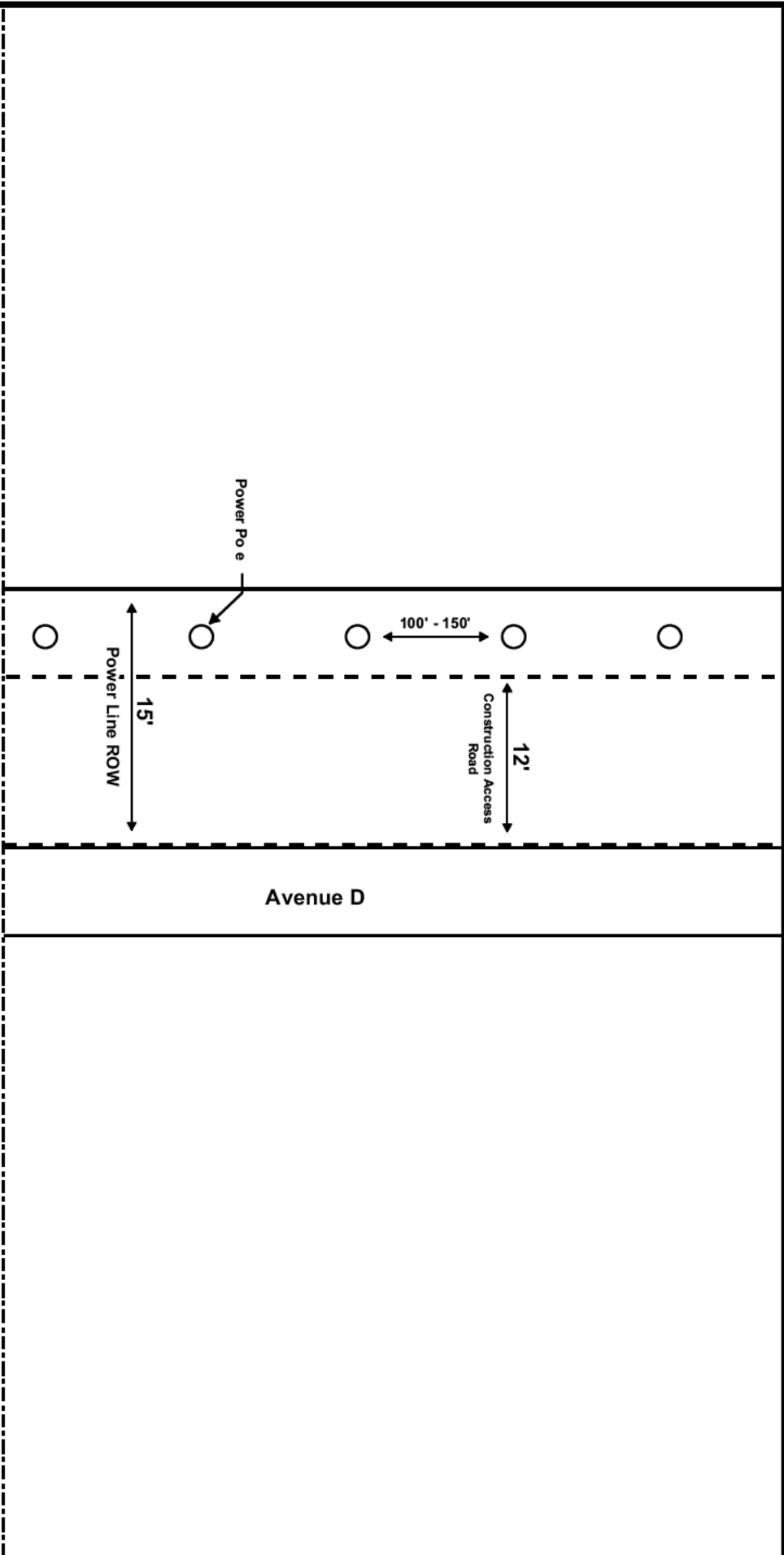
2.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations.

2.2 PROPOSED ACTION

The Proposed Action consists of the installation of approximately 3,844 feet of power line and a construction access road within the 15-foot wide power line ROW (Figure 2-1). The power poles and service line would run from the existing power lines along County 25th Street south to the BIS (see Figure 1-6).

The proposed power line would be installed immediately west of the Avenue D ROW starting at County 25th Street (Photograph 2-1) running southward for approximately 2,302 feet. The ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS (Photograph 2-2). The westward deviation of the ROW from adjacent to Avenue D is necessary for the entire ROW to remain within GYPA property lines. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing lighting system via subsurface conduit.



Border Infrastructure System

United States
Mexico

NOT TO SCALE



Figure 2-1: Schematic Drawing of Power Line ROW



Photograph 2-1. Junction of Avenue D and Yuma County 25th Street, facing west.



Photograph 2-2. Junction of Avenue D and USBP BIS, facing east.

A 12-foot wide construction access road would be established within the 15-foot wide ROW by blading and compacting the *in situ* material. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. The construction access road would extend the entire length of the power line installation.

2.3 CONSTRUCTION PERSONNEL AND EQUIPMENT

Arizona Public Service (APS) would complete the proposed installation of the power line and construction access road. Equipment staging would be located within previously disturbed areas to minimize potential effects to the environment. The equipment anticipated to be used during the construction includes a road grader, backhoe, trencher, auger, crane, bulldozer, front-end loader, flatbed truck, water truck and roller/compactor.

2.4 SUMMARY

The two viable alternatives carried forward for analysis are the No Action Alternative and Proposed Action. An alternative matrix (Table 2-1) shows how each of the two alternatives carried forward for analysis and the one alternative eliminated satisfies or

does not satisfy the purpose and need. Table 2-2 presents a summary matrix of the impacts from the two alternatives analyzed and how they affect the environmental resources in the Region of Influence (ROI). The ROI for this project is Yuma County.

Table 2-1. Matrix of Purpose and Need and Project Alternatives

Requirements	No Action Alternative	Proposed Action
Decrease the current OBP enforcement footprint	PARTIALLY	YES
Detect, deter, and apprehend cross-border violators (CBV) as close to the international border as possible	PARTIALLY	YES
Enhance the safety of OBP agents as well as the general public	PARTIALLY	YES

Table 2-2. Summary Matrix

Affected Environment	Proposed Action	No Action Alternative
Land Use	The impacts to land use as a result of the Proposed Action would be negligible as the GYPA has agreed to the use of 1.32 acres for a power line ROW. No significant impacts would occur to land use regionally or locally if this alternative was implemented.	No additional impacts to land use would be expected as the power line and construction access road would not be installed.
Soils	The Proposed Action would directly impact approximately 1.32 acres of Rositas Sand soils. These soils are common both locally and regionally, and the disturbance to 1.32 acres of Rositas Sands would not result in significant impacts to soils.	No additional impacts are expected.
Water Resources	Direct impacts to surface water resources under the Proposed Action would be insignificant. BMPs would be used during construction to minimize adverse impacts to the water quality of the Colorado River, its riparian areas, and the irrigation canals within the project area. Approximately 0.36 acre-feet (118,615 gallons) of water would be required for the proposed project. These withdrawals would occur over the entire construction period, which is expected to be 1 to 2 months.	No additional impacts are expected.
Vegetation	This alternative would permanently alter approximately 1.32 acres of Lower Colorado – Sonoran Desertscrub vegetation communities. This plant community is both locally and regionally common, and the permanent loss of 1.32 acres would not adversely affect the population viability or fecundity of any floral species.	No additional impacts are expected.

Table 2-2, continued

Affected Environment	Proposed Action	No Action Alternative
Wildlife	The Proposed Action would permanently alter approximately 1.32 acres of wildlife habitat. Noise and construction activity would have a temporary impact on some wildlife, resulting in avoidance of the area. Impacts on common wildlife would be minimal due to the limited habitat loss, limited construction duration (APS estimates a 1 to 2-month construction schedule), and the ability of most wildlife to temporarily avoid the area by using the abundance of adjacent habitat.	No additional impacts are expected.
Protected Species	Potential habitat for the blue sand lily, sand food, flat-tailed horned lizard and western burrowing owls would be impacted; these species were not observed during recent biological surveys and the habitat for these species is both locally and regionally common. None of these species are Federally protected species and no Federally protected species would be potentially impacted by the Proposed Action. Therefore, the expected impacts would not constitute a significant impact.	No additional impacts are expected.
Cultural Resources	No impacts on cultural resources would occur, since none are present within the project area. Section 106 compliance would be completed prior to construction activities. As a result of this compliance and lack of sites, the Proposed Action would have no effect on cultural resources.	No additional impacts are expected.

Table 2-2, continued

Affected Environment	Proposed Action	No Action Alternative
Air Quality	<p>The Proposed Action would not generate emissions that exceed Federal <i>de minimis</i> thresholds and, therefore, do not require a Conformity Determination. Although operating the portable generators results in no violations of air quality standards and no conflicts with the state implementation plans, replacing them with a permanent electrical power connection would have a beneficial impact on air quality from implementation of the Proposed Action.</p>	No additional impacts are expected.
Hazardous Materials	<p>During the biological surveys no visible evidence of potential contamination was observed. Petroleums, oils, and lubricants would be stored properly and within designated containers, which would include primary and secondary containment measures. Over the long-term, implementation of the Proposed Action would have a beneficial impact by reducing the use of diesel fuels to operate the existing portable generators and the potential for fuel spills within the project area.</p> <p>Sanitary facilities would be provided during construction activities, and waste products would be collected and disposed of by licensed contractors. Because the proper permits would be obtained by the licensed contractor tasked to handle any unregulated solid waste, and because all of the unregulated solid waste would be handled in the proper manner, no hazards for the public are expected through the transport, use, or disposal of unregulated solid waste.</p>	No additional impacts are expected.
Utilities	No significant increases in electrical power demand are expected. Utilities in the ROI would not be impacted.	No impacts are expected.

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SECTION 3.0
ENVIRONMENTAL FEATURES AND CONSEQUENCES

3.0 ENVIRONMENTAL FEATURES AND CONSEQUENCES

3.1 PRELIMINARY IMPACT SCOPING

This section of the SEA describes the natural and human environment that exists within the project corridor and ROI and the potential impacts of the Proposed Action and No Action Alternative outlined in Section 2.0 of this document. Only those resources that have the potential to be affected by any of the alternatives considered are described, as per CEQ guidance (40 CFR 1501.7 [3]). Some topics are limited in scope due to the lack of direct effect from the proposed project on the resource or because that particular resource is not located within the project corridor. Some resources within the ROI are not addressed in this SEA because they are not relevant to the analyses. Resources that are not addressed and the reasons for their elimination are:

- Communications: The Proposed Action would not affect communications systems in the area.
- Geology: The Proposed Action would not affect geological features.
- Climate: The Proposed Action would not affect nor be affected by the climate.
- Wild and Scenic Rivers: The Proposed Action would not affect any designated Wild and Scenic Rivers, because no rivers designated as such are located within or near the project corridor.
- Aquatic Resources: There are no aquatic ecosystems that occur within or near the project corridor.
- Transportation: The project corridor is located in a remote region of Arizona, and no activities would take place on public roadways, other than normal transport of goods and personnel on an intermittent basis during construction activities. Therefore, impacts on roadways and traffic will not be discussed further.
- Prime Farmlands: No impact would occur on soils protected by the Farmland Protection Policy Act (7 U.S.C. 4201), since none are located within the project corridor.
- Human Health and Safety: Occupational Safety and Health Administration and EPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors. Contractors would be required to establish and maintain safety programs at the

construction site, consistent with these standards. The Proposed Action would not expose members of the general public to increased safety risks.

- Environmental Justice and Protection of Children: The project corridor is located in a remote region of Arizona. No residences or businesses are located near or within the project corridor. No children would be impacted as a result of the Proposed Action.
- Noise: Due to the remote location of the project site, the type of construction planned, and the lack of sensitive noise receptors in the area, a noise impacts analysis is not warranted for this project. Noise impacts on wildlife will be discussed in the biological resources section.
- Flood Zones, Waters of the U.S, and Wetlands: No Federal Emergency Management Agency (FEMA) flood hazard maps exist within the project corridor; therefore, no impacts would occur to any 100-year flood zones (FEMA 2009). There are no WUS or wetlands associated with the project corridor. No Clean Water Act, Section 404 permits would be required. Therefore, the Proposed Action would not expose natural or human resources to flooding or affect WUS or wetlands.
- Unique and Sensitive Areas: The nearest unique or sensitive areas are associated with the Colorado River and the Cabeza Prieta National Wildlife Refuge. These areas are, respectively, 8 miles west and 45 miles east of the project corridor. Therefore, there is no potential for unique or sensitive areas to be affected.
- Socioeconomics: APS would install the power line using its existing crews. Therefore, the Proposed Action would have no effect on local or regional socioeconomics and these resources will not be discussed further.
- Aesthetics: The installation of a power line would not detract from the aesthetic values of the project corridor due to its proximity to the proposed GYPA commercial port-of-entry (POE), existing BIS, and County 25th Street. Therefore, aesthetics will not be carried forward for analysis.

In accordance with both NEPA (42 U.S.C. § 4321 *et seq.*) and the CEQ regulations implementing NEPA (40 CFR Parts 1500 -1508), this SEA will examine the potential impacts to those resources that could be affected by the Proposed Action or No Action Alternative. More specifically, for the Proposed Action and No Action Alternative, the SEA will examine the potential for direct, indirect, adverse, or beneficial impacts. The SEA will also assess whether such impacts are likely to be long term, short term, or permanent.

Impacts for the No Action Alternative for this SEA includes the actions proposed in both the 2004 EA and the 2007 SEA. Impact analyses from the Proposed Action include only the additional actions and impacts caused by the implementation of the Proposed Action of this current SEA (*i.e.*, installing a power line and the construction access road). The Proposed Action assumes that the actions proposed in the 2004 EA and 2007 SEA will be fully implemented. Table 3-1 provides a summary of impacts (in acres) for each project component.

Table 3-1. Summary of Impacts (Acres) of Project Components by Alternative

Project Components	No Action Alternative (acres)¹	Proposed Action (acres)
Bridges	0.03	NA
Road Improvements	40.3	NA
Construction Access Road	NA	1.06
Permanent Security Lighting (41 square feet per pole)	0.72	NA
Power Line	NA	0.26
Enforcement Zone*	132.5	NA
Security Zone**	199	NA
Total Area Disturbed (Acres)	209	1.32

¹ The No Action Alternative impacts were addressed in previous NEPA documents (CBP 2004, 2007) and are in various stages of completion.

*Enforcement Zone = Maintenance Road and Pedestrian Fence.

**Security Zone = Area cleared of brush, which includes 164 acres west of Bypass Drain and 35 acres east of the Bypass Drain.

NA – Not Applicable

Source: CBP 2007

3.2 LAND USE

3.2.1 Affected Environment

This section was discussed in the December 2004 Final EA and is incorporated herein by reference (CBP 2004). Land use immediately adjacent to the project area is irrigated agriculture, undeveloped desertscrub land, BIS, and planned commercial POE. The proposed project would be completed entirely within GYPA property. The GYPA has granted CBP a ROW in order to install the power supply.

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action

Land use within the project area would change from GYPA property consisting of undeveloped desertscrub land to construction access road and power line ROW. The impacts to land use as a result of the Proposed Action would be negligible as the GYPA has agreed to the use of 1.32 acres for a power line ROW. No significant impacts would occur to land use regionally or locally if this alternative was implemented.

3.2.2.2 No Action Alternative

No additional impacts are expected to land use from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to land use as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

3.3 SOILS

3.3.1 Affected Environment

According to the U.S. Department of Agriculture, NRCS, there is one soil type identified in the project area; Rositas Sands (NRCS 2009). This soil type is classified as being deep, somewhat excessively drained, and found on terraces, alluvial fans, or sand dunes. The water erosion hazard for Rositas Sand is low, and the wind erosion hazard is high for this soil type.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

Short term impacts on soils, such as increased erosion, can be expected from the construction of the access road; however, these impacts would be alleviated once construction is finished. Long term effects on soils would result from the compaction of the soils due to construction of the construction access road. A stormwater pollution prevention plan (SWPPP) and Notice of Intent under the Clean Water Act (33 U.S.C. §

1251 *et seq.*) National Pollutant Discharge Elimination System would be completed (33 U.S.C. §1342). Environmental design measures and pre- and post-construction best management practices (BMPs) will be developed and implemented to reduce or eliminate erosion.

The Proposed Action would directly impact approximately 1.32 acres of Rositas Sand soils. These soils are common both locally and regionally, and the disturbance to 1.32 acres of Rositas Sands soils would not result in significant impacts to soils.

3.3.2.2 No Action Alternative

No additional impacts are expected to soils from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to soils as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

3.4 WATER RESOURCES

3.4.1 Affected Environment

3.4.1.1 Surface Water

In the December 2004 Final EA, this section was discussed in detail and is incorporated herein by reference (CBP 2004). The project area is completely within the Colorado River/Lower Gila River watershed. No WUS or other water resources that could be considered jurisdictional under the Clean Water Act are located within the proposed project footprint. Water quality in the Lower Colorado River from the main canal south to the U.S./Mexico border is classified as Category 5, which means that the surface water is impaired and a Total Maximum Daily Load (TMDL) analysis is required (ADEQ 2008). ADEQ lists the causes for impairment of the Colorado River/Lower Gila River watershed as low dissolved oxygen levels and high selenium concentrates. Selenium salts are considered toxic in high levels. Selenium reaches water systems through agricultural runoff, causing gastrointestinal diseases, hair and fingernail loss, and

neurological damage (EPA 2009a). TMDL analyses are scheduled for the watershed in 2010 (ADEQ 2008).

3.4.1.2 Groundwater

The project corridor is within the Yuma Groundwater basin. The water budget comprises inflows and outflows to the ground-water system. Yuma Basin experiences an inflow deficit. Inflows to Yuma Basin consist mainly of excess water applied for irrigation and canal leakage. No significant recharge occurs from direct infiltration from precipitation because the minimal precipitation in the Yuma area evaporates (Arizona Department of Water Resources 2007). Before western development, the Colorado and Gila Rivers were the sources of nearly all of the groundwater in the Yuma Basin through direct infiltration of water from river channels and annual overbank flooding. After construction of upstream reservoirs and clearing and irrigation of the floodplains, the rivers now act as drains for the groundwater. Groundwater levels in most of the Yuma area are higher now than they were in predevelopment time (Lacroix 2008). A groundwater mound has formed under Yuma Mesa from long-term surface-water irrigation; about 600,000 to 800,000 acre-feet of water are stored in the mound. Groundwater withdrawals adjacent to the southerly international boundary have resulted in water-level declines in that area (Dickenson *et al.* 2006). The cultural demand (agriculture, industry and municipal) for groundwater in the Yuma Basin is approximately 263 acre-feet annually and recharge is 213 acre-feet (Arizona Department of Water Resources 2007). The Yuma Basin aquifer experiences a groundwater deficit.

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Surface Water

Direct impacts to surface water resources under the Proposed Action would be insignificant. BMPs would be used during construction to minimize adverse impacts to the water quality of the Colorado River, its riparian areas, and the irrigation canals within the project area. During construction activities, water quality within the project area would be protected through the use of BMPs that would be developed in a SWPPP.

Groundwater

Water would be required for watering the construction access road surface to compact the road bed and minimize fugitive dust during construction activities. The volume of water necessary is estimated to be 0.5 acre-feet per mile (162,926 gallons per mile) (Miranda 2006). Therefore, approximately 0.36 acre-feet (118,615 gallons) of water would be required for the proposed project. These withdrawals would occur over the entire construction period, which is expected to be 1 to 2 months.

The Yuma Basin experiences an overdraft of groundwater resources; although the water needs are approximately 0.36 acre-feet, CBP would consider methods to avoid increasing this deficit such as trucking water in from other sources. If water is shipped in from other sources, no impacts on groundwater within the Yuma Basin are expected. However, if water is withdrawn from the Yuma Basin for construction of the project, impacts to the basin would be moderate. Inflow from canal seepage, agriculture return, and other sources would help offset this one time withdrawal.

3.4.2.2 No Action Alternative

Surface Water

No additional impacts are expected to surface waters from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to surface waters as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

Groundwater

No additional impacts are expected to groundwater from the No Action Alternative as the power line and its associated construction access road would not be installed and water use would not be necessary. However, the impacts to groundwater as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

3.5 BIOLOGICAL RESOURCES

3.5.1 Affected Environment

3.5.1.1 Vegetation

Existing vegetation communities adjacent to the project corridor were described in the 2004 EA and this information is incorporated herein by reference (CBP 2004). The vegetation community in the project corridor is the Lower Colorado subdivision within Sonoran Desertscrub community (Brown 1994) (Photograph 3-1).



Photograph 3-1. Typical vegetation of the Sonoran Desertscrub community found within the project corridor.

This vegetation community is characterized by creosotebush (*Larrea tridentata*) and its major associate, white bursage (*Ambrosia dumosa*), in the lowest elevations (Brown 1994). During August 2009 biological surveys of the proposed power line ROW, Gulf South Research Corporation (GSRC) biologists observed a creosote/bursage community comprised primarily of creosotebush, fanleaf crinklemat (*Tiquilia plicata*), white bursage, threeawn grass (*Aristida* sp.), Spanish needles (*Palafoxia arida*), plantain (*Plantago* sp.), cryptantha (*Cryptantha* sp.), spiderling (*Boerhavia* sp.), and dyebush (*Psoralea emoryi*).

3.5.1.2 Wildlife

Wildlife resources potentially found within the project corridor were discussed in the 2004 EA, and this information is incorporated herein by reference (CBP 2004). During biological surveys of the power line ROW, GSRC biologists observed the following species within the project corridor: greater roadrunner (*Geococcyx californianus*), common raven (*Corvus corax*), and western whiptail lizard (*Aspidocelis tigris*).

3.5.1.3 Protected Species

Federal

This section was discussed in the 2004 Final EA and is incorporated herein by reference (CBP 2004). Within Yuma County, six species are listed as Federally endangered and one species is considered a candidate for listing (Table 3-2). Although six species are Federally listed, none of these species have the potential to occur within the project area due to the lack of suitable habitat. Additionally, no critical habitat for any of the species within Yuma County is located near or within the project corridor.

Table 3-2. Federally Endangered or Threatened Species, Yuma County

Common/Scientific Name	Federal Status	Habitat	Potential to Occur within Project Corridor
BIRDS			
Yellow-billed cuckoo <i>Coccyzus americanus</i>	Candidate	Large blocks of riparian woods.	No – No suitable habitat occurs within the project corridor.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Endangered	Cottonwood/willow and tamarisk vegetation communities along river and streams.	No – No suitable habitat occurs within the project corridor.
California brown pelican <i>Pelecanus occidentalis californicus</i>	Endangered	Coastal lands and islands, also found around lakes and rivers inland.	No – No suitable habitat occurs within the project corridor.
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	Endangered	Freshwater and brackish marshes.	No – No suitable habitat occurs within the project corridor.
MAMMALS			
Sonoran pronghorn <i>Antilocapra americana sonoriensis</i>	Endangered	Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations. Current distribution known to occur on the Cabeza Prieta National Wildlife Refuge.	No- Sonoran pronghorn do not occur near the project corridor.
Lesser long-nosed bat <i>Leptonycteris curasoae yerbabuena</i>	Endangered	Desertscrub habitat with agave and columnar cacti present as food plants.	No – No suitable habitat occurs within the project corridor.
FISHES			
Razorback sucker <i>Xyrauchen texanus</i>	Endangered	Shallow springs, small streams, and marshes. Tolerant of saline and warm water.	No – No suitable habitat occurs within the project corridor.

Source: USFWS 2009

The flat-tailed horned lizard (*Phrynosoma mcallii*) (FTHL), a conservation agreement species, is not a Federally protected species. However, five Federal agencies signed a Memorandum of Agreement to protect the FTHL and its habitat on Federal lands. Habitat for the FTHL exists within the project corridor in the Yuma Desert Management Area (YDMA). Established by the 1997 Flat-Tailed Horned Lizard Rangeland Management Strategy, the YDMA serves as a tool to facilitate FTHL conservation. The project area is located within the YDMA. On December 7, 2005 the courts issued a ruling reinstating (70 FR 72776) the proposed rule to list the FTHL as threatened. However, on June 28, 2006 the U.S. Fish and Wildlife Service (USFWS) withdrew its proposed rule to list the FTHL. Further information regarding the FTHL can be found in the 2004 EA (CBP 2004) as well as the 2005 *Final Environmental Assessment for the Installation of Permanent Vehicle Barriers and Patrol Roads, Office of Border Patrol, Yuma Sector, Arizona* (CBP 2005) and is incorporated herein by reference.

State

The AGFD Natural Heritage Program maintains lists of Wildlife of Special Concern (WSC) in Arizona. This list includes flora and fauna whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines (AGFD 2009). These species are not necessarily the same as those protected by the Federal government under the Endangered Species Act (35 U.S.C. §1531). A list of state protected species for Yuma County is included in Appendix A. WSC species known to occur within a 5-mile radius of the project area include the western burrowing owl (*Athene cunicularia hypugaea*), blue sand lily (*Triteleiopsis palmeri*), Yuman desert fringed-toed lizard (*Uma rufopunctata*), sand food (*Pholisma sonora*), and FTHL (AGFD 2009). Although these species have the greatest potential to exist within the project area and have been observed in the immediate vicinity of the project area, none were observed during recent biological surveys of the power line ROW.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

Vegetation

This alternative would permanently alter approximately 1.32 acres of Lower Colorado – Sonoran Desertscrub vegetation communities. This plant community is both locally and regionally common, and the permanent loss of 1.32 acres would not adversely affect the population viability or fecundity of any floral species. Therefore, impacts are expected to be negligible.

This alternative would also have temporary indirect impacts on vegetation. Fugitive dust emissions resulting from construction would affect photosynthesis and respiration of plants adjacent to the proposed ROW. The magnitude of these effects would depend upon several biotic and abiotic factors, including the speed and type of vehicles, climatic conditions, success of wetting measures during construction, and the general health and density of nearby vegetation.

Wildlife

The Proposed Action would permanently alter approximately 1.32 acres of wildlife habitat. Noise and construction activity would have a temporary impact on some wildlife, resulting in avoidance of the area. Impacts on common wildlife would be minimal due to the limited habitat loss, limited construction duration (APS estimates a 1 to 2-month construction schedule), and the ability of most wildlife to temporarily avoid the area by using the abundance of adjacent habitat.

Mobile animals (e.g., birds) would escape to areas of similar habitat, while other slow or sedentary species of reptiles, amphibians, and small mammals could potentially be lost. As a result, direct minor adverse impacts on wildlife species in the vicinity of the project corridor are expected. Although some animals may be lost, this alternative would not result in any substantial reduction of the breeding opportunities for birds and other animals on a regional scale due to the abundance of suitable, similar habitat adjacent to the project corridor. The construction activities are slated to occur outside of the

migratory bird nesting season; therefore, no impacts on nesting birds are expected. If construction does occur within the migratory bird season, appropriate mitigation measures such as migratory bird surveys would be conducted and reported accordingly.

Increased noise during construction activities could have short-term impacts on wildlife species (e.g., red-tailed hawk [*Buteo jamaicensis*], desert cottontail [*Sylvilagus audubonii*]). Physiological responses from noise range from minor responses, such as an increase in heart rate, to more damaging effects on metabolism and hormone balance. Long-term exposure to noise can cause excessive stimulation of the nervous system and chronic stress that is harmful to the health of wildlife species and their reproductive fitness (Fletcher 1990). Behavioral responses vary among species of animals and even among individuals of a particular species. Variations in response may be due to temperament, sex, age, or prior experience. Minor responses include head-raising and body-shifting, and usually, more disturbed mammals would travel short distances. Panic and escape behavior results from more severe disturbances, causing the animal to leave the area (Busnel and Fletcher 1978). Since the highest period of movement for most wildlife species occurs during nighttime or low daylight hours, and construction activities would be conducted during daylight hours and only for 1 to 2 months, short-term impacts of noise on wildlife species are expected to be minimal.

Protected Species

The Proposed Action would potentially impact the habitat of five state WSCs: the western burrowing owl, FTHL, sand food, Yuman desert fringe-toed lizard, and the blue sand lily. Although potential habitat for the blue sand lily, sand food, and western burrowing owls would be impacted, these species were not observed during recent biological surveys and the habitat for these species is both locally and regionally common. Therefore, the expected impacts would not constitute a significant impact.

FTHL habitat would be impacted by the construction activities and there is the potential for taking individuals. Design measures discussed in Section 5.0 of this document such as preconstruction surveys and monitoring for the presence of the FTHL during

construction activities would minimize the impacts to FTHL. Therefore, due to the BMPs to be implemented in addition to the abundance of habitat for the FTHL existing both locally and regionally no significant impacts would occur as a result of the Proposed Action.

3.5.2.2 No Action Alternative

Vegetation

No additional impacts are expected to vegetation from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to vegetation as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

Wildlife

No additional impacts are expected to wildlife from the No Action Alternative. Impacts to wildlife as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

Protected Species

No additional impacts are expected to protected species (*i.e.*, southwestern willow flycatcher, FTHL, western burrowing owl, blue sand lily, sand food) from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to protected species as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

3.6 CULTURAL RESOURCES

3.6.1 Affected Environment

This section was discussed in the December 2004 Final EA and is incorporated herein by reference (CBP 2004). The power line ROW lies within the Lower Colorado River Valley which has a long history of human occupation and settlement. Cultural Remains have been documented in the region from about 10,000 B.C. to the present (Stone 1991). The ROI has been the subject of numerous surveys including those for this project, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona* (Hart 2009). A brief summary of the major trends in each of the main periods of occupation (*i.e.*, Archaic, Ceramic, Protohistoric, Historical) are detailed in Hart (2009) and are incorporated herein by reference.

3.6.1.1 Previous Investigations

Archaeologists from Northland Research Incorporated (Northland), as part of the cultural resources survey in August 2009, conducted a records search and literature review of the project area and the surrounding area up to 1 mile away. Personnel consulted the AZSITE database, Arizona State Museum, Arizona SHPO, and Northland's archive for this information. Northland does not take responsibility for discrepancies in the available records from the various institutions. However, every effort was made to rectify differences where possible. The records search revealed that three known cultural resources surveys have been conducted within 1 mile of the proposed power line ROW and construction access road (Table 3-3). The previous investigations resulted in the identification of one site within 1 mile of the proposed power line.

Table 3-3. Previous Investigations Within An Approximate 1-Mile Radius

Survey No.	AZSITE No.	Location (1-mile radius)	Results (1-mile radius)	Reference
F04-05.NRI	1455NP	Sec. 23 and 24, T11S, R24W	No sites	Hart 2004
1995-357	1808	Sec. 24, T11S, R24W	No sites	Darrington and Bruder 1995
14-234.SHPO*	N/A	Not listed	No sites	JTF-6, Corps of Engineers Project

*No additional information is available.
Source: Hart 2009

The previously recorded site, AZ-050-1421, consists of a single pot break. It was recorded by Darrell Sanders of BLM, Yuma Field Office, in 1987 and consists of a half dozen gray ware sherds. No other artifacts or features were found in association with the pot break. Site AZ-050-1421 is not within the current power line ROW and will not be impacted by the project.

The 1909 and 1922 General Land Office Plat maps for Township 11 South, Range 24 West were consulted for the power line ROW. A search of land patents for sections 23 and 24 of Township 11 South, Range 24 West yielded no results. No historical features of significance were depicted in the vicinity of the project area. However, the 1909 Plat depicts an area as the "International Boundary Reservation 60 feet wide" along the border, which corresponds with the Roosevelt Reservation.

The Roosevelt Reservation is a 60-foot corridor adjacent to the U.S./Mexico border that was set aside for law enforcement and border protection or public highway by Presidential Proclamation in 1907 by Theodore Roosevelt. The Roosevelt Reservation includes all Federally owned lands at the time of the Proclamation in California, Arizona, and New Mexico, creating a formal border zone between the U.S. and Mexico. Privately owned lands along the border are not included in the Roosevelt Reservation; therefore, the Roosevelt Reservation is not continuous for the length of its 675 miles along the U.S./Mexico border. However, the Roosevelt Reservation is continuous along the U.S./Mexico border within the project corridor.

3.6.1.2 Current Investigations

Northland completed a Class III cultural resources survey and Class I records search of approximately 1.32 acres in Yuma County, Arizona. The purpose of the survey was to identify, record, and assess any cultural resources that might be present in the ROW prior to the proposed construction of a power line. The pedestrian survey consisted of an archaeologist walking transects parallel to the proposed ROW. The area along and between transects was inspected for cultural remains. Ground visibility within the project areas ranged from good to excellent (80 to 95 percent) due to the absence of thick vegetation. The records search yielded no previously known sites within or adjacent to the project area. No archaeological sites or isolated occurrences were observed during the pedestrian survey and no additional archaeological investigation is considered necessary.

Northland's inspection of the property examined the ground surface only. It is important to note that if previously unidentified cultural resources are encountered during power line installation, the contractor should stop all ground disturbing activities in the vicinity of the discovery until officials from CBP and the Arizona SHPO are notified and the nature and significance of the find can be evaluated. If human remains are encountered during construction activity, the Arizona State Museum, SHPO, and CBP must be also be notified per the Native American Graves Protection and Repatriation Act (NAGPRA), A.R.S. §41-844, A.R.S. §41-865, and appropriate Tribal organizations must be consulted.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

No impacts on cultural resources would occur, since none are present within the project area. Additionally, all Federally recognized tribes with affiliation to the project corridor have been coordinated with regarding the proposed project. Copies of the draft cultural resources investigations report were sent to the SHPO and tribes for review and comment on August 21, 2009. Section 106 compliance would be completed prior to construction activities. A copy of the draft cultural resources report was sent to the SHPO

and Federally recognized tribes with affiliation to the project corridor for review on August 21, 2009. As a result of this compliance and lack of sites, the Proposed Action would have no effect on cultural resources.

3.6.2.2 No Action Alternative

No additional impacts are expected to cultural resources from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to cultural resources as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

3.7 AIR QUALITY

3.7.1 Affected Environment

This section has been previously discussed in the 2004 Final EA and is incorporated herein by reference (CBP 2004). EPA established National Ambient Air Quality Standards (NAAQS) for specific pollutants. The NAAQS standards are classified as either "primary" or "secondary" standards. The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), particulate matter of 10 microns or less (PM-10), and lead (Pb). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 3-4.

Table 3-4. National Ambient Air Quality Standards

Pollutant	Standard Value	Standard Type
Carbon Monoxide (CO)		
8-hour average	9ppm (10mg/m ³)	P
1-hour average	35ppm (40mg/m ³)	P
Nitrogen Dioxide (NO₂)		
Annual arithmetic mean	0.053ppm (100µ/m ³)	P and S
Ozone (O₃)		
8-hour average*	0.08ppm (157µg/m ³)	P and S
1-hour average*	0.12ppm (235µg/m ³)	P and S
Lead (Pb)		
Quarterly average	1.5µg/m ³	P and S
Particulate<10 microns (PM-10)		
Annual arithmetic mean	50µg/m ³	P and S
24-hour average	150µg/m ³	P and S
Particulate<2.5 microns (PM-2.5)		
Annual arithmetic mean	15µg/m ³	P and S
24-hour average	35µg/m ³	P and S
Sulfur Dioxide (SO₂)		
Annual average mean	0.03ppm (80µg/m ³)	P
24-hour average	0.14ppm (365µg/m ³)	P
3-hour average	0.50ppm (1300µg/m ³)	S

Legend: P= Primary
 S= Secondary
 mg/m³ = milligrams per cubic meter of air
 * Parenthetical value is an approximate equivalent concentration

Source: EPA 2009b
 ppm = parts per million
 µg/m³ = micrograms per cubic meter of air

Areas that do not meet these NAAQS standards are called non-attainment areas or maintenance areas; areas that meet both primary and secondary standards are known as attainment areas. The Federal Conformity Final Rule (40 CFR 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. The Federal Conformity Rule was first promulgated in 1993 by EPA, following the passage of Amendments to the Clean Air Act in 1990 (Public Law 101-549). The rule mandates that a conformity analysis must be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS.

A conformity analysis is the process used to determine whether a Federal action meets the requirements of general conformity rule. It requires the responsible Federal agency

to evaluate the nature of the Proposed Action and associated air pollutant emissions, calculate emissions as a result of the Proposed Action, and mitigate emissions if *de minimis* thresholds are exceeded.

Since 2004, Yuma County has been classified as being in non-attainment and attainment for Particulate Matter less than 10 microns (PM-10). Currently Yuma County is listed as being in non-attainment for PM-10 (EPA 2009b). Identified emission sources are agricultural tilling and burning, paved and unpaved road dust, and disturbed areas. Lack of vegetation, high winds, existing illegal vehicular traffic, traffic on unpaved roads, legal off-road traffic, and agricultural practices contribute to the PM-10 emissions in Yuma County. Furthermore, transboundary air flows from Mexico as a result of seasonal crop burning, as well as farm vehicle activity south of the U.S./Mexico border, also contribute to increased emission levels within Yuma County.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

Temporary and minor increases in air pollution would occur from the use of construction equipment (combustible emissions) and the disturbance of soils (fugitive dust) during installation of the proposed power lines. The following paragraphs describe the air calculation methodologies utilized to estimate air emissions produced by the Proposed Action.

Fugitive dust emissions were calculated using the emission factor of 0.19 ton per acre per month (Midwest Research Institute [MRI] 1996), which is a more current standard than the 1985 PM-10 emission factor of 1.2 tons per acre-month presented in AP-42 Section 13 Miscellaneous Sources 13.2.3.3 (EPA 2001).

EPA's NONROAD Model (EPA 2005a) was used, as recommended by EPA's *Procedures Document for National Emission Inventory, Criteria Air Pollutants, 1985-1999* (EPA 2001), to calculate emissions from construction equipment. Combustible emission calculations were made for standard construction equipment, such as front-

end loaders, backhoes, bulldozers, and cement trucks. Assumptions were made regarding the total number of days each piece of equipment would be used, and the number of hours per day each type of equipment would be used.

Construction workers would temporarily increase the combustible emissions in the county air shed during their commute to and from the project area. Emissions from delivery trucks contribute to the overall air emission budget. Emissions from delivery trucks, construction worker commuters traveling to the job site were calculated using the EPA MOBILE6.2 Model (EPA 2005b, 2005c and 2005d).

The total air quality emissions were calculated for the construction activities to compare to the General Conformity Rule. Summaries of the total emissions for the Proposed Action are presented in Table 3-5. Details of the analyses are presented in Appendix B.

Table 3-5. Total Air Emissions (tons/year) from the Proposed Action Construction versus the *De minimis* Threshold Levels

Pollutant	Total (tons/year)	<i>De minimis</i> Thresholds (tons/year)¹
CO	8.78	100
Volatile Organic Compounds	1.21	100
NOx	5.97	100
PM-10	3.95	100
PM-2.5	0.76	100
Sulfur Dioxide (SO ₂)	0.63	100

Source: 40 CFR 51.853 and GSRC model projections.
 1. Note that Yuma County is in non-attainment for PM-10.

Several sources of air pollutants contribute to the over-all air impacts of the construction project. The air results in Table 3-5 included emissions from:

1. Combustible engines of construction equipment
2. Construction workers commute to and from work
3. Supply trucks delivering materials to construction site
4. Fugitive dust from job site ground disturbances

As can be seen from the tables above, the proposed construction activities would not generate emissions that exceed Federal *de minimis* thresholds and, therefore, do not require a Conformity Determination. As there are no violations of air quality standards and no conflicts with the state implementation plans, there would be no significant impacts on air quality from the implementation of the Proposed Action.

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods should be implemented to minimize fugitive dust. In particular, wetting solutions would be applied to construction area to minimize the emissions of fugitive dust. By using these environmental design measures, air emissions from the Proposed Action would be temporary and would not have a significant affect on air quality in the region.

Beneficial impacts to air quality would occur. Diesel generators which are currently being used to power the security lights within the BIS would no longer be necessary. The emissions from running diesel generators from dusk until dawn would be eliminated in the area of the BIS that the proposed power line would serve. Approximately 0.21 tons of VOC, 0.66 tons of CO, 1.05 tons of NO_x, 0.13 tons of PM-10, 0.13 tons of PM-2.5, and 0.14 tons of SO₂ emissions would be eliminated annually.

3.7.2.2 No Action Alternative

No additional impacts are expected to air quality from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to air quality as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

3.8 HAZARDOUS MATERIALS

3.8.1 Affected Environment

EPA maintains a list of hazardous waste sites, particularly waste storage/treatment facilities or former industrial manufacturing sites in the EPA databases, Environmental and Compliance History Online and Envirofacts Data Warehouse, were reviewed for the locations of hazardous waste sites within or near the project corridor (EPA 2009c, 2009d). According to both of these databases, no hazardous waste sites are located near or within the project corridor. In addition, during biological surveys, no visual evidence of hazardous materials was observed within the project corridor.

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action

No evidence of hazardous materials or wastes have been observed and no such materials or work are expected to occur within the project corridor. Petroleums, oils, and lubricants (POL) would be stored properly and within designated containers, which would include primary and secondary containment measures. Clean-up materials (e.g., oil mops), in accordance with the project's Spill Prevention, Control, and Countermeasures Plan (SPCCP), would also be maintained at the site to allow immediate action in case an accidental spill occurs. Drip pans would be provided for any stationary equipment to capture any POL that is accidentally spilled during maintenance activities or leaks from the equipment.

Sanitary facilities would be provided during construction activities, and waste products would be collected and disposed of by licensed contractors. No gray water would be discharged to the ground. Disposal contractors would use only established roads to transport equipment and supplies, and all waste would be disposed of in strict compliance in accordance with the contractor's permits. Because the proper permits would be obtained by the licensed contractor tasked to handle any unregulated solid waste, and because all of the unregulated solid waste would be handled in the proper manner, no hazards for the public are expected through the transport, use, or disposal of unregulated

solid waste. Additionally, the Proposed Action would eliminate the potential for diesel fuel spills during the refueling of portable generators.

3.8.2.2 No Action Alternative

No additional impacts are expected from hazardous materials as the power line and its associated construction access road would not be installed. Impacts from hazardous materials as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

3.9 UTILITIES

3.9.1 Affected Environment

APS is the main energy service provider in the ROI (Greater Yuma Economic Development Corporation 2009). All of the construction and installation work necessary for the proposed power line and construction access road would be completed by APS. The amount of energy utilized by the security lights would be metered and billed to USBP Yuma Sector.

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action

The Proposed Action would not have a significant impact on the local electrical power supply. It is not anticipated that the security lights would require a significant increase in electrical power production at the regional level.

3.9.2.2 No Action Alternative

No additional impacts are expected from hazardous materials as the power line and its associated construction access road would not be installed. In previous project documentation, there was no connection to the commercial power grid, so this resource was not discussed in the 2004 EA or the 2007 SEA.

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SECTION 4.0
CUMULATIVE IMPACTS

4.0 CUMULATIVE IMPACTS

This section of the SEA addresses the potential cumulative impacts associated with implementation of the Proposed Action and other projects/programs that are planned for the region. The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). This section continues, “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

USBP has been conducting law enforcement actions along the border since its inception in 1924, and has continually transformed its methods as new missions, CBV modes of operation, agent needs, and National enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have affected thousands of acres, with synergistic and cumulative impacts to soil, wildlife habitats, water quality, and noise. Beneficial effects have resulted from the construction and use of these roads and fences, including, but not limited to: increased employment and income for border regions and surrounding communities; protection and enhancement of sensitive resources north of the border; reduction in crime within urban areas near the border; increased land value in areas where border security has increased; and increased knowledge of the biological communities and pre-history of the region through numerous biological and cultural resources surveys and studies.

With continued implementation of CBP’s environmental conservation measures, use of biological and archaeological monitors, and restoration activities, adverse impacts of future and ongoing projects can be prevented or minimized. However, recent, ongoing, and reasonably foreseeable proposed projects could result in cumulative impacts. General descriptions of these types of activities are discussed in the following paragraphs.

Cumulative Fencing along Southwestern Border. In fiscal years (FY) 2008 and 2009, CBP completed construction of up to approximately 338 miles of primary fence and 298 miles of vehicle fence in Texas, Arizona, and California (CBP 2009).

Past Actions. Past actions are those within the cumulative effects analysis areas that have occurred prior to the development of this SEA. The effects of these past actions are generally described throughout the previous sections. For example, BLM cleared approximately 552 acres of Colorado River Riparian area for fire safety/fuel reduction, border security, and law enforcement purposes in 2006, 2007 and 2008.

Present Actions. Present actions include current or funded construction projects, USBP or other agency actions in close proximity to the proposed power line ROW, and current resource management programs and land use activities within the cumulative effects analysis areas. Ongoing actions considered in the cumulative effects analysis include the following:

- Secure Border Initiative (SBI) TI Projects – SBI is a comprehensive program focused on transforming border control through technology and infrastructure. The goal of the program is to field the ideal combination of technology, infrastructure, and staffing, and integrate them into a single comprehensive border security suite for DHS. SBI constructed 30 miles of primary pedestrian fence along the U.S./Mexico border within the Barry M. Goldwater Range (BMGR) and 6 miles west of the BMGR (122 acres). This project was recently completed in FY 2008.
- JTF-N Border Road Construction – JTF-N has been working to extend an all-weather driving surface along the border road east of San Luis, Arizona. As National Guard or full-time military units become available, JTF-N assigns short term missions to resurface the existing border road with an all-weather aggregate. The present mission extended the border road from Avenue A eastward to Avenue 3E.

Reasonably Foreseeable Future Actions. Reasonably foreseeable future actions consist of activities that have been approved and can be evaluated with respect to their effects. The following activities are reasonably foreseeable future actions:

- SBI^{net} Projects - Potential future SBI^{net} projects include deployment of sensor technology, communications equipment, command and control equipment, fencing, barriers capable of stopping a vehicle, and any required road or components such as lighting and all-weather access roads. SBI^{net} is planning to construct approximately 16 towers in Yuma and Imperial counties in FY 2010.

Other CBP Projects:

- USBP Facilities – CBP is also planning to construct a new USBP station in Wellton, Arizona (43 acres).
- Vegetation Clearing along the Colorado River – USBP is cooperating with BLM, the Cocopah Tribe, State of Arizona, and private landowners to remove exotic plants and trees along the Colorado River. The entire area to be cleared is approximately 1,327 acres and current plans are to replant native vegetation at selected mitigation sites.
- Lighting Projects – USBP plans to install permanent lights along the international border within Imperial County and other areas within Yuma County where the need for additional security is identified.
- Morelos Dam Fence Relocation – CBP plans to relocate approximately 932 feet of existing Normandy style vehicle fence and purchase and install approximately 320 feet of additional Normandy style vehicle fence adjacent to International Boundary Water Commission's Morelos Dam emergency spillway (Vehicle Fence 300 segment CV-1A). Related work will include the construction of a construction access road along the new fence route and widening of the levee road to maintain the Reclamation's 40-foot maintenance easement.
- Comprehensive TI Maintenance and Repair Program – CBP is developing a comprehensive program to maintain and repair CBP TI along the southwest border. The project is currently in the planning phase.

In addition, USBP might be required to implement other activities and operations that are currently not foreseen or mentioned in this document. These actions could be in response to National emergencies or security events like the terrorist attacks on September 11, 2001, or to changes in the mode of operations of the CBVs.

The following is a list of projects other agencies or organizations are conducting or planning within the ROI:

- BMGR currently has numerous projects that are in the planning stages, including conservation activities, new facilities, and enhanced training opportunities.
- ADOT and the Yuma Metropolitan Planning Organization (YMPO) plan to establish a new point of entry at the U.S./Mexico international border which will be a new "commercial vehicles only" crossing, approximately 5 miles east of the existing POE south of San Luis, Arizona (YMPO 2008a). The new commercial POE is approximately 6 miles east of the current San Luis POE and would be approximately 339 acres in size. This POE would be located on lands owned by the GYPA and would be used by CBP and other agencies, but would be constructed by the GYPA.
- On September 4, 2009, the Area Service Highway (State Route 195), a 23-mile, 4-lane highway linking I-8 at the Araby Road Interchange in Yuma, Arizona to Avenue E at County 23rd Street in San Luis, Arizona was completed and open for traffic (YMPO 2008b, ADOT 2008a, Vaughn 2009). ADOT is currently constructing a segment of the new State Route 195 connecting 40th Street to I-8 along Araby Road (ADOT 2008b).
- The U.S. Air Force and U.S. Marine Corps have released a Final EIS for the implementation of an Integrated Natural Resource Management Plan (INRMP) for the BMGR (U.S. Department of Air Force, Navy, and Interior 2006). The INRMP would be produced following the completion of the environmental analysis. The INRMP, if implemented, could also change the areas available for certain USBP operations/activities.
- The Lower Colorado River Drop 2 Storage Reservoir is proposed by Reclamation and the Imperial Irrigation District (IID) to provide additional water supply storage. This project is approximately 30 miles east of the City of El Centro and includes a 450-acre reservoir located on a 615-acre site. Administrative and office buildings as well as mechanical equipment necessary for operations of the reservoir would be located on the 615-acre site. In addition to the reservoir, this project includes 6.5 miles of new canal to connect the Coachella Valley Canal to the reservoir and from the reservoir to the All American Canal. The total acreage expected to be impacted from this proposed project is 967 acres (CBP 2007).
- Reclamation is planning the Hunter's Hole Restoration Area. Once completed, the project will restore water flow and re-establish riparian woodland habitat and wetland areas within the approximately 435-acre Hunter's Hole area (Reclamation 2009).
- Reclamation and IID is currently conducting a project to line the All American Canal with concrete along a 23-mile reach, beginning at the Pilot Knob and extending to the Drop 3 weir. The project is designed to reduce seepage from the canal and is anticipated to conserve over 67,000 acre-feet of water each year after completion.
- Arizona State Prisons are currently expanding the Arizona State Prison-Yuma Complex at the junction of Avenue B and County 25th Street east of San Luis. The expansion includes the addition of 2,000 beds to the southwestern portion of

the existing facility, nothing will be constructed outside of the existing property boundaries (Schroeder 2009).

A summary of the anticipated cumulative impacts of the project is presented in the following sections. Discussions are presented for each of the resources described previously.

4.1 LAND USE

The project would permanently affect 1.32 acres of GYPA lands located near the proposed commercial POE. The intended use of the land would not significantly be limited, due to the proximity to an existing roadway; thus, only minor direct or cumulative impacts on the region's land use would occur. Many of the past CBP projects have changed land use in the ROI from desertscrub land to BIS or other USBP facilities; however, due to the purpose and tactical use of the BIS and other facilities and infrastructure, proximity to the border is unavoidable. CBP makes every effort to site all infrastructure and facilities on previously disturbed or developed lands to the greatest extent practicable. Much of the infrastructure, the BIS, the BMGR's INRMP, and Reclamation's restoration projects, once completed, would help to protect lands used for natural resource management within the ROI.

4.2 SOILS

Although the project would permanently impact 1.32 acres of Rositas Sands, these soils are currently not in agricultural production. Rositas Sands are common throughout Yuma County and are not considered Prime Farmlands. As is common practice for all CBP projects, all practicable BMPs would be utilized to protect against wind and water erosion during the proposed power line installation and access road construction as well as all of the CBP projects identified above. Much of the infrastructure, the BIS, the BMGR's INRMP, and Reclamation's restoration projects, once completed, would help to protect soils within the ROI from impacts caused by wind and water erosion or compaction from CBV traffic.

4.3 WATER RESOURCES

As a result of the project, when combined with other USBP projects, increased temporary erosion during power line installation and access road construction would occur; however, increased sediment and turbidity would have minimal cumulative impacts on water quality. Limited and short-term withdrawal from the regional groundwater basins would not affect long-term water supplies or groundwater quality. The volume of water withdrawn in the Yuma Basin would have a moderate affect on the public drinking water supplies, but could indirectly contribute to aquifer contamination from surface runoff. The indirect effects of altered surface drainage and potential consequent erosion would have minimal beneficial and adverse cumulative impacts to surface water quality.

4.4 BIOLOGICAL RESOURCES

Since vegetation within the project corridor is sparse, there would be negligible direct or cumulative adverse impact on native vegetation communities if the project were implemented. Other USBP projects, including the proposed additional lighting project, would result in moderate to major cumulative adverse impacts; however, BMPs would be developed, to offset these potential impacts. Additionally, the reduction of illegal traffic would have beneficial cumulative impacts on vegetation communities in the region. The Reclamation projects would also have beneficial impacts on the vegetation and wildlife habitat available within the region.

The planned and proposed projects would have negligible cumulative impacts on fish or other aquatic species because the vegetation treatments and construction activities would not take place in flowing or standing water. Pedestrian fences and vehicle fence that are constructed within arroyos or washes are designed and constructed to allow conveyance of flood flows, which requires small gaps in the fence panels. Thus, there would still be opportunities for transboundary migration. Due to the vast amount of similar habitat contained within and surrounding the project corridor, the juxtaposition of the project corridor with other disturbed and developed areas, and the fact that there

would be gaps in the pedestrian fence, the long-term viability of species and communities in the ROI would not be threatened. The loss, when combined with other ground-disturbing or development projects in the project region, would result in moderate to major cumulative negative impacts on the region's biological resources.

CBP has maintained close coordination with the USFWS and AGFD regarding the special status species, and USFWS has provided valuable guidance to CBP regarding these species. Through the use of BMPs developed in coordination with USFWS, the potential impacts as a result of the project, as well as other past, present, and future actions, would ensure that major cumulative impacts to protected species do not occur.

4.5 CULTURAL RESOURCES

The project would have no adverse effect on any known cultural resources sites within the ROI. Therefore, this action, when combined with other existing and proposed projects in the region, would have no adverse cumulative effects on historic properties. Beneficial effects would occur from the protection afforded to previously discovered and any undiscovered cultural resources.

4.6 AIR QUALITY

The emissions generated during and after the vegetation treatment and maintenance treatments would be short-term and minor, even when combined with the other proposed developments in the border region. BMPs designed to reduce fugitive dust have been and would continue for all CBP construction projects. Deterrence of and improved response time to CBVs due to the construction of the fence and road and improving the line of sight through vegetation treatments would reduce the need for off-road enforcement actions by USBP agents. Minor beneficial impacts to air quality would occur as diesel generators, which are currently being used to power the security lights within the BIS, would no longer be necessary.

4.7 HAZARDOUS MATERIALS

Only minor increases in the use of hazardous substances (e.g., petroleum, oil, lubricants) would occur as a result of the project. No health or safety risks would be created by the project. When combined with other ongoing and proposed projects in the region, the project would have a negligible cumulative impact. The Proposed Action would have a beneficial effect as a result of eliminating the refueling of portable generators currently used to power lighting in the BIS. The elimination of recurring refueling efforts would eliminate the potential for fuel spills.

SECTION 5.0
ENVIRONMENTAL DESIGN MEASURES

5.0 ENVIRONMENTAL DESIGN MEASURES

This chapter describes those measures that will be implemented to reduce or eliminate potential adverse impacts to the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. It is CBP policy to mitigate adverse impacts through the sequence of avoidance, minimization, and finally, compensation. Environmental design measures will be presented below for each resource category that would be potentially affected. It should be noted that if any of the alternatives for this project are implemented, the following measures will be employed:

5.1 GENERAL CONSTRUCTION ACTIVITIES

BMPs will be implemented as standard operating procedures during all construction activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils and solvents will 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 will be completed following accepted industry guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although it will be unlikely for a major spill to occur, any spill of reportable quantities will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock, etc.) will be used to absorb and contain the spill. Furthermore, any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 (included as part of an SPCCP) of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table 302.4 will be included as part of the SPCCP. A SPCCP will be in place prior to the start of construction and all personnel will be briefed on the implementation and responsibilities of this plan.

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

5.2 SOILS

Vehicular traffic associated with the construction activities and operational support activities will remain on established roads to the maximum extent practicable. Erosion control techniques, such as straw bales, aggregate materials, and wetting compounds will be incorporated with the design of the Proposed Action. In addition, other erosion control measures, as required and promulgated through the SWPPP, will be implemented before and after construction activities.

5.3 WILDLIFE

Construction of the access road and installation of the power line would occur outside of the neotropical migratory bird nesting season (early May to early to mid September). If this is not possible, CBP will follow the requirements of the Migratory Bird Treaty Act. CBP will coordinate with the USFWS if a construction activity will result in the take of a migratory bird. Surveys of suitable habitat will be performed prior to construction to identify active nests. If construction activities would result in the take of a migratory bird, then consultation with the USFWS and AGFD would be conducted prior to construction or clearing activities to determine if nests, eggs, and/or chicks would be relocated. Bird surveys will not be required if construction/installation activities occur outside of the nesting season.

5.4 PROTECTED SPECIES

All naturally recruited native vegetation within the ROW, but outside of the construction access road, will be retained in an effort to encourage the re-growth and re-establishment of these native species.

If western burrowing owls are observed within the project ROW, on-site mitigation will consist of passive relocation. This entails encouraging owls to move from occupied burrows within the project area to alternative locations in suitable habitat beyond 150 feet from the project disturbance. The use of one-way doors on burrows should keep owls from returning to the burrows within the project area. Relocation will only be attempted during the non-breeding season (September 1 through March 1) (California Burrowing Owl Consortium 1993).

Pre-construction surveys and construction monitoring would occur for mitigation for potential impacts to the FTHL. All surveys and monitoring would be conducted according to the protocols identified in the *Flat-tailed Horned Lizard Rangewide Management Strategy: An Arizona-California Conservation Strategy* (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

5.5 CULTURAL RESOURCES

If any cultural material is discovered during the construction efforts, then all activities will halt until a qualified archaeologist can be brought in to assess the cultural remains.

5.6 WATER RESOURCES

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All project-related work will cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material. Effective March 10, 2003, in accordance with regulations of the

EPA Phase II of the National Pollutant Discharge Elimination System stormwater program, a SWPPP will be required for stormwater runoff from construction activities greater than 1 acre and less than 5 acres. Therefore, a SWPPP will be prepared and implemented prior to the start of any construction.

5.7 AIR QUALITY

Mitigation measures will be incorporated to insure that PM-10 emission levels do not rise above the minimum threshold of 100 tons per year as required per 40 CFR 51.853(b)(1). Measures will include dust suppression methods to minimize airborne particulate matter that will be created during construction activities. Standard construction practices such as routine watering of the construction site will be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

SECTION 6.0
REFERENCES



6.0 REFERENCES

- Arizona Department of Environmental Quality (ADEQ). 2008. 2006/2008 Status of Ambient Surface Water Quality in Arizona: Arizona's Integrated 305(b) Assessment and 303(d) Listing Report. ADEQ Water Quality Division. Internet URL: <http://www.azdeq.gov/environ/water/assessment/download/2008/binder1.pdf>. Last accessed: August 17, 2009.
- Arizona Department of Transportation (ADOT). 2008a. Design Concept Report and Environmental Study. Internet URL: [http://www.azdot.gov/highways/Projects/SR195 I8 to US95/Index.asp](http://www.azdot.gov/highways/Projects/SR195%20I8%20to%20US95/Index.asp). Accessed August 7, 2008.
- ADOT. 2008b. SR 195: 40th Street to I-8. Internet URL: [http://www.azdot.gov/highways/Projects/SR195 40thStreet to I8/Index.asp](http://www.azdot.gov/highways/Projects/SR195%2040thStreet%20to%20I8/Index.asp). Accessed August 7, 2008.
- Arizona Department of Water Resources. 2007. Arizona Water Atlas Volume 7: Lower Colorado River Planning Area (Draft). Arizona Department of Water Resources, Phoenix, Arizona. 509 p.
- Arizona Game and Fish Department. 2009. Arizona Natural Heritage Program. Internet URL: [http://www.azgfd.gov/water/edits/hdms species lists.shtml](http://www.azgfd.gov/water/edits/hdms/species_lists.shtml). Last Accessed: August 9, 2009.
- Brown, D. E. 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. University of Utah Press. Salt Lake City, Utah. 315 pp. 1994
- Busnel, R. G., and J. Fletcher. 1978. Effect of noise on wildlife. New York: Academic Press.
- California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Technical Report Burrowing Owl Consortium, Alviso, California.
- Congressional Research Service (CRS). 2006. *Border Security: Barriers Along the U.S. International Border*. Report for Congress prepared by Blas Nunez-Neto and Stephen Vina. Updated 12 December 2006.
- Darrington, Glenn P. and Simon J. Bruder. 1995. *Cultural Resource Survey for the San Luis Industrial Park II (Cattle Crossing) Power Line Project*. Dames & Moore, Phoenix.

- Dickinson, J.E., Land, Michael, Faunt, C.C., Leake, S.A., Reichard, E.G., Fleming, J.B., and Pool, D.R. 2006, Hydrogeologic framework refinement, ground-water flow and storage, water-chemistry analyses, and water-budget components of the Yuma area, southwestern Arizona and southeastern California: U.S. Geological Survey Scientific Investigations Report 2006–5135, 90 p.
- Dosh, Steven G. 2006. *Cultural Resources Survey Secondary Fence Alignment along Salinity Canal, Office of Border Patrol, Yuma Sector, Yuma, Arizona*. Report No. 06-33. Northland Research, Inc. Flagstaff, Arizona
- Federal Emergency Management Agency. 2009. FEMA Map Service Center – FEMA Issued Flood Maps. Internet URL:
<http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&storeId=10001&categoryId=12001&langId=-1&userType=G&type=1&dfirmCatId=12009>. Last accessed: August 18, 2009.
- Fletcher, J.L. 1990. Review of noise and terrestrial species: 1983-1988. pp. 181-188 in: B. Berglund and T. Lindvall, eds. *Noise as a Public Health Problem Vol. 5: New Advances in Noise Research Part II*. Swedish Council for Building Research, Stockholm.
- Greater Yuma Economic Development Corporation. 2009. Utilities/Telecommunications. Internet URL:
<http://www.greateryuma.org/utilities.html>. Last accessed: August 25, 2009.
- Hart, David R. 2009. *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*. Technical Report No. 09-33. Northland Research, Inc. Flagstaff, Arizona.
- Hart, David R. 2004. *Archaeological Survey for the Yuma Lighting and Fence Project, U.S. Border Patrol, Yuma Sector, Yuma County, Arizona*. Technical Report 04-68. Northland Research, Incorporated, Tempe.
- Joint Task Force 6 (JTF-6). 1998. Final Environmental Assessment JTF-6 Fence Construction Project Yuma County, Arizona. Joint Task Force Six. Fort Bliss, Texas. May 1998.
- JTF-6. 1999. Final Environmental Assessment Joint Task Force Six Proposed Lighting Project Yuma County, Arizona and Imperial County, California. Prepared by U.S. Army Corps of Engineers, Fort Worth District. Fort Worth, Texas. May 1999.
- Lacroix, K.E.M. 2008. Personal Communication between Steve Kolian of GSRC and Ms. Lacroix regarding annual natural and artificial recharge rates in the Yuma Basin.

- Midwest Research Institute (MRI). 1996. Improvement of Specific Emission Factors (BACM Project No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract 95040, Diamond Bar, CA. March 1996.
- Miranda, Chris. 2006. Personal Communication via electronic mail from Mr. Chris Miranda of Carter Burgess to Mr. Josh McEnany of GSRC. October 11, 2006.
- Natural Resources Conservation Service. 2009. Web Soil Survey. Internet URL: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Last Accessed: August 6, 2009.
- Schroeder, Karen. 2009. Yuma State Prison Expanding. Yuma Sun, Yuma, Arizona. June 06, 2009. Internet URL: <http://www.yumasun.com/news/prison-50555-yuma-lamoreaux.html>. Last accessed August 17, 2009.
- Sikel, Scott. 2005. Personal Communication between Mr. Scott Sikel of Carter Burgess (602) 253-1200 and Mr. Josh McEnany of GSRC. October 26, 2005.
- Stone, Connie L. 1991 *The Linear Oasis: Managing Cultural Resources along the Lower Colorado River*. Cultural Resource Series No. 6. Bureau of Land Management, Phoenix.
- U.S. Army Corps of Engineers. 2001. Final Supplemental Programmatic Environmental Impact Statement for INS and JTF-6 Activities. Fort Worth District. June 2001.
- U.S. Bureau of Reclamation (Reclamation). 2009. Final Environmental Assessment for Hunter's Hole Restoration Project. April 2009. Internet URL: http://www.usbr.gov/lc/yuma/environmental_docs/hunters-hole/finaleadf.pdf. Last accessed: August 17, 2009.
- U.S. Customs and Border Protection (CBP). 2009. Tactical Infrastructure Master Data File. Last accessed October 21, 2009.
- CBP. 2007. Final Supplemental Environmental Assessment for the Installation of Permanent Lighting and a Border Infrastructure System Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. March 2007.
- CBP. 2005. Final Environmental Assessment for the Installation of Permanent Vehicle Barriers and Patrol Roads Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. July 2005.

- CBP. 2004. Final Environmental Assessment for the Installation of Permanent Lighting and a Border Infrastructure System Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. December 2004.
- U.S. Departments of Air Force, Navy, and Interior. 2006. Environmental Impact Statement for the Barry M Goldwater Range, Integrated Natural Resources Management Plan.
- U.S. Environmental Protection Agency (EPA). 2009a. Basic Information about Selenium: Drinking Water Contaminants.
<http://www.epa.gov/safewater/contaminants/basicinformation/selenium.html#three>.
Last Accessed: August 17, 2009.
- EPA. 2009b. Welcome to the Green Book Nonattainment Areas for Criteria Pollutants
www.epa.gov/oar/oaqps/greenbk
- EPA. 2009c. Enforcement & Compliance History Online (ECHO). Internet URL:
<http://www.epa.gov/cgi-bin/ideaotis.cgi>. Last Accessed: August 9, 2009.
- EPA. 2009d. Envirofacts Data Warehouse website. Internet URL:
http://www.epa.gov/enviro/index_java.html. Last Accessed: August 9, 2009
- EPA. 2005a. User's Guide for the Final NONROAD2005 Model. EPA420-R-05-013
December 2005.
- EPA. 2005b. Emission Facts: Average In-Use Emissions from Heavy Duty Trucks. EPA
420-F-05-0yy, May 2005.
- EPA. 2005c. Emission Facts: Average In-Use Emission Factors for Urban Buses and
School Buses. Office of Transportation and Air Quality EPA420-F-05-024 August
2005
- EPA. 2005d. Emission Facts: Average Annual Emissions and Fuel Consumption for
Gasoline-Fueled Passenger Cars and Light Trucks. EPA 420-F-05-022
- EPA. 2001. Procedures Document for National Emission Inventory, Criteria Air
Pollutants 1985-1999. EPA-454/R-01-006. Office of Air Quality Planning and
Standards Research Triangle Park NC 27711.
- U.S. Fish and Wildlife Service (USFWS). 2009. Endangered Species List. Internet URL:
<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm>. Last
Accessed: August 6, 2009.

USFWS. 2005. Memorandum: Request for Concurrence on Hazardous Fuels Reduction Project, Yuma County, Arizona, AESO/SE 02-21-05-I-0349, to Field Manager, Yuma Field Office, Bureau of Land Management, Yuma, Arizona from Steven L. Spangle, USFWS, Arizona Ecological Services Field Office. April 12, 2005.

Vaugh, J. 2009. SR 195, linking border with I-8, to open Friday, *The Yuma Sun*. 9/04/2009. pp A-1 and A-7.

Yuma Metropolitan Planning Organization. 2004. Planning Projects. Robert A. Vaughan Expressway. Internet Address: <http://www.ympo.org/ash.htm>. Last accessed: October 25, 2005.

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SECTION 7.0
LIST OF PREPARERS

7.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this Environmental Assessment.

NAME	AGENCY/ORGANIZATION	DISCIPLINE/EXPERTISE	EXPERIENCE	ROLE IN PREPARING SEA
Suna Adam Knaus	Gulf South Research Corporation	Forestry/Wildlife	20 years, natural resources	SEA review
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	30 years, NEPA studies	SEA review
Howard Nass	Gulf South Research Corporation	Forestry/Wildlife	18 years, natural resources and NEPA studies	Project Manager and SEA review
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Maria Bernard Reid	Gulf South Research Corporation	Environmental Studies	7 years, NEPA and natural resources	SEA preparation
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Carey Lynn Perry	Gulf South Research Corporation	Ecology/Natural Resources	3 years, natural resources studies	SEA preparation
Sharon Newman	Gulf South Research Corporation	GIS/graphics	17 years, GIS/graphics	GIS/graphics

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SECTION 8.0
ACRONYMS



8.0 ACRONYMS

ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
AO	area of operations
APS	Arizona Public Service
ASM	Arizona State Museum
BIS	Border Infrastructure System
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BMP	Best Management Practice
CBP	U.S. Customs and Border Protection
CBV	cross-border violator
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRS	Congressional Research Service
DHS	Department of Homeland Security
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FR	Federal Register
FTHL	flat-tailed horned lizard
FY	Fiscal Year
GSRC	Gulf South Research Corporation
GYPA	Greater Yuma Port Authority
IA	Illegal Alien
IID	Imperial Irrigation District
INRMP	Integrated Natural Resources Management Plan
INS	Immigration and Naturalization Service
JTF-6	Joint Task Force Six
JTF-N	Joint Task Force North
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act of 1969
Northland	Northland Research Incorporated
NRCS	Natural Resource Conservation Service
NOA	Notice of Availability
OBP	Office of Border Patrol
POE	port-of-entry
POL	petroleum, oil and lubricants
Reclamation	Bureau of Reclamation
ROI	Region of Influence
ROW	right-of-way

SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
U.S.	United States
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
WSC	Wildlife of Special Concern
WUS	Waters of the United States
YDMA	Yuma Desert Management Area
YMPO	Yuma Metropolitan Planning Organization

APPENDIX A
ARIZONA PROTECTED SPECIES FOR YUMA COUNTY

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yavapai	PLANT	Talinum validulum	Tusayan Flame Flower	SC						SR	PDPOR080M0	S3	G3
Yavapai	PLANT	Thelypteris puberula var. sonorensis	Aravaipa Wood Fern		S						PPTHE05192	S2	G5T3
Yavapai	PLANT	Trichostema brachiatum	Flux Weed								PDLAM22030	S4	G5
Yavapai	PLANT	Triteleia lemmoniae	Mazatzal Tritoleia							SR	PMLIL210C0	S3	G3
Yavapai	PLANT	Washingtonia filifera	California Fan Palm							SR	PMARE0G010	S1	G4
Yavapai	REPTILE	Charina trivirgata gracia	Desert Rosy Boa	SC	S		S				ARADA01021	S3S4	G4G5T3
Yavapai	REPTILE	Eumeces gilberti arizonensis	Arizona Skink	SC			S		PR	WSC	ARACH01061	S1	G5T1Q
Yavapai	REPTILE	Eumeces gilberti rubricaudatus	Western Red tailed Skink						PR		ARACH01065	S3S4	G5T4Q
Yavapai	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC	S				A	WSC	ARAAF01013	S4	G4T4
Yavapai	REPTILE	Heloderma suspectum	Gila Monster						A		ARACE01010	S4	G4
Yavapai	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	SC					A		ARACE01011	S4	G4T4
Yavapai	REPTILE	Lampropeltis triangulum taylori	Utah Milksnake					4			ARADB19058	S2	G5T4Q
Yavapai	REPTILE	Thamnophis eques megalops	Northern Mexican Gartersnake	C			S		A	WSC	ARADB36061	S1	G5T5
Yavapai	REPTILE	Thamnophis rufipunctatus	Narrow headed Gartersnake	SC	S		S			WSC	ARADB36110	S1	G3G4
Yavapai	REPTILE	Xantusia arizonae	Arizona Night Lizard				S				ARACK01050	S1	G3
Yuma	BIRD	Ardea alba	Great Egret		S					WSC	ABNGA04040	S1B,S4N	G5
Yuma	BIRD	Ardea herodias	Great Blue Heron								ABNGA04010	S5	G5
Yuma	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	SC	S			4	A		ABNSB10012	S3	G4T4
Yuma	BIRD	Bubulcus ibis	Cattle Egret								ABNGA07010	S1B,S4N	G5
Yuma	BIRD	Coccyzus americanus	Yellow billed Cuckoo (Western U.S. C DPS)					2		WSC	ABNRB02020	S3	G5
Yuma	BIRD	Egretta thula	Snowy Egret		S					WSC	ABNGA06030	S1B,S4N	G5
Yuma	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	LE			S	2		WSC	ABPAE33043	S1	G5T1T2
Yuma	BIRD	Glauclidium brasilianum cactorum	Cactus Ferruginous Pygmy owl	SC	S				A	WSC	ABNSB08041	S1	G5T3
Yuma	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle Winter Population	SC	S		S	2	P	WSC	ABNKC10015	S4N	G5TNR
Yuma	BIRD	Himantopus mexicanus	Black necked Stilt								ABNND01010	S2	G5
Yuma	BIRD	Icterus bullockii	Bullock's Oriole								ABPBXB9220	S?	G5
Yuma	BIRD	Ixobrychus exilis	Least Bittern		S				A	WSC	ABNGA02010	S3	G5

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	BIRD	Lanius ludovicianus	Loggerhead Shrike	SC							ABPBR01030	S4	G4
Yuma	BIRD	Laterallus jamaicensis coturniculus	California Black Rail	SC	S		S		PR	WSC	ABNME03041	S1	G4T1
Yuma	BIRD	Rallus longirostris yumanensis	Yuma Clapper Rail	LE					P	WSC	ABNME0501A	S3	G5T3
Yuma	FISH	Xyrauchen texanus	Razorback Sucker	LE			S	2	P	WSC	AFCJC11010	S1	G1
Yuma	MAMMAL	Antilocapra americana sonoriensis	Sonoran Pronghorn	LE			S		P	WSC	AMALD01012	S1	G5T1
Yuma	MAMMAL	Antrozous pallidus	Pallid Bat								AMACC10010	S4	G5
Yuma	MAMMAL	Bat Colony									OBATCOLONY	SU	GNR
Yuma	MAMMAL	Bat Foraging Area	High Netting Concentration								OBATFORAG1	SU	GNR
Yuma	MAMMAL	Corynorhinus townsendii pallescens	Pale Townsend's Big eared Bat	SC	S			4			AMACC08014	S3S4	G4T4
Yuma	MAMMAL	Euderma maculatum	Spotted Bat	SC	S				PR	WSC	AMACC07010	S1S2	G4
Yuma	MAMMAL	Eumops perotis californicus	Greater Western Bonneted Bat	SC	S						AMACD02011	S3	G5T4
Yuma	MAMMAL	Lasiurus xanthinus	Western Yellow Bat		S					WSC	AMACC05070	S2S3	G5
Yuma	MAMMAL	Leptonycteris curasoae yerbabuena	Lesser Long nosed Bat	LE			S			WSC	AMACB03030	S2S3	G4
Yuma	MAMMAL	Macrotus californicus	California Leaf nosed Bat	SC	S					WSC	AMACB01010	S3	G4
Yuma	MAMMAL	Myotis californicus	California Myotis								AMACC01120	S4S5	G5
Yuma	MAMMAL	Myotis yumanensis	Yuma Myotis	SC							AMACC01020	S3S4	G5
Yuma	MAMMAL	Nyctinomops femorosaccus	Pocketed Free tailed Bat								AMACD04010	S3	G4
Yuma	MAMMAL	Peromyscus eremicus	Cactus Mouse								AMAFF03010	S5	G5
Yuma	MAMMAL	Sigmodon hispidus eremicus	Yuma Hispid Cotton Rat	SC							AMAFF07013	S2	G5T2T3
Yuma	MAMMAL	Tadarida brasiliensis	Brazilian Free tailed Bat								AMACD01010	S3S4	G5
Yuma	PLANT	Allium parishii	Parish Onion		S					SR	PMLIL021N0	S1	G3
Yuma	PLANT	Astragalus insularis	Sand Flat Milk vetch								PDFAB0F490	S2	G5
Yuma	PLANT	Berberis harrisoniana	Kofa Mt Barberry		S						PDBER02030	S1S2	G1G2
Yuma	PLANT	Calandrinia ambigua	Rock Purslane								PDPOR09010	S2?	G4
Yuma	PLANT	Colubrina californica	California Snakewood								PDRHA05030	S2S3	G4
Yuma	PLANT	Croton wigginsii	Dune Croton								PDEUP0H140	S1	G2G3
Yuma	PLANT	Cryptantha ganderi	Gander's Cryptantha	SC							PDBOR0A120	S1	G1G2

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	PLANT	Drymaria viscosa									PDCAR09090	S1	G3?
Yuma	PLANT	Echinocactus polycephalus var. polycephalus	Clustered Barrel Cactus							SR	PDCAC05033	S2	G3G4T3T4
Yuma	PLANT	Echinodorus berteroi	Upright Burrhead								PMALI020B0	S1	G5
Yuma	PLANT	Erigeron lobatus	Lobed Fleabane								PDAST3M2C0	S3	G4
Yuma	PLANT	Eriogonum deserticola	Desert Wild buckwheat								PDPGN081Q0	S1	G4?
Yuma	PLANT	Eryngium nasturtiifolium	Hierba del Sapo								PDAPI0Z0L0	S1	G5
Yuma	PLANT	Eucnide rupestris	Flor de la Piedra								PDLOA02020	S1	G3
Yuma	PLANT	Euphorbia platysperma	Dune Spurge	SC							PDEUP0D1X0	S1	G3
Yuma	PLANT	Ferocactus cylindraceus var. cylindraceus	California Barrel Cactus						PR	SR	PDCAC08081	S3	G5T4
Yuma	PLANT	Helianthus niveus ssp. tephrodes	Dune Sunflower	SC							PDAST4N0Z2	S2	G4T2
Yuma	PLANT	Lophocereus schottii	Senita							SR	PDCAC14010	S2	G4
Yuma	PLANT	Nemacaulis denudata	Woolly Heads								PDPGN0G010	S2	G3G4
Yuma	PLANT	Opuntia echinocarpa	Straw top Cholla							SR	PDCAC0D2W0	S5	G5
Yuma	PLANT	Petalonyx linearis	Longleaf Sandpaper Plant								PDLOA04010	S2	G4
Yuma	PLANT	Pholisma sonorae	Sand Food	SC	S					HS	PDLNN02020	S1	G2
Yuma	PLANT	Pilostyles thurberi	Thurber Pilostyles								PDRAF01010	S2	G5
Yuma	PLANT	Polygonum fusiforme	Needles Knotweed								PDPGN0L110	S3?	G3G4Q
Yuma	PLANT	Rhus kearneyi	Kearney Sumac		S					SR	PDANA08050	S2	G4
Yuma	PLANT	Selaginella eremophila	Desert Spike Moss								PPSEL010G0	S3S4	G4
Yuma	PLANT	Stephanomeria schottii	Schott Wire Lettuce		S						PDAST8U0D0	S2	G2
Yuma	PLANT	Stillingia linearifolia	Linearleaf Sand Spurge								PDEUP1B020	S3S4	G4
Yuma	PLANT	Stillingia spinulosa	Spiny Sand Spurge								PDEUP1B040	S3S4	G4
Yuma	PLANT	Tetracoccus fasciculatus var. hallii	Hall Shrub Spurge								PDEUP1C021	S3S4	G4T4
Yuma	PLANT	Teucrium glandulosum	Desert Germander								PDLAM20040	S3?	G4
Yuma	PLANT	Triteleopsis palmeri	Blue Sand Lily		S					SR	PMLIL22010	S1	G3
Yuma	PLANT	Washingtonia filifera	California Fan Palm							SR	PMARE0G010	S1	G4
Yuma	REPTILE	Charina trivirgata gracia	Desert Rosy Boa	SC	S		S				ARADA01021	S3S4	G4G5T3

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	REPTILE	Crotalus mitchellii	Speckled Rattlesnake						PR		ARADE02060	S5	G5
Yuma	REPTILE	Crotaphytus bicinctores	Great Basin Collared Lizard								ARACF04010	S4	G5
Yuma	REPTILE	Crotaphytus nebrius	Sonoran Collared Lizard								ARACF04050	S3S4	G4
Yuma	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC	S				A	WSC	ARAAF01013	S4	G4T4
Yuma	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	SC					A		ARACE01011	S4	G4T4
Yuma	REPTILE	Phrynosoma mcallii	Flat tailed Horned Lizard	SC	S				A	WSC	ARACF12040	S2	G3
Yuma	REPTILE	Sauromalus ater (Arizona Population)	Arizona Chuckwalla	SC	S				A		ARACF13013	S4	G5T4Q
Yuma	REPTILE	Uma rufopunctata	Yuman Desert Fringe toed Lizard	SC	S		S		A	WSC	ARACF15040	S2	G3

APPENDIX B
AIR QUALITY MODEL CALCULATIONS

CALCULATION SHEET-COMBUSTIBLE EMISSIONS

Assumptions for Combustible Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	10	60	180000
Diesel Road Compactors	1	100	10	40	40000
Diesel Dump Truck	1	300	10	20	60000
Diesel Excavator	1	300	10	20	60000
Diesel Hole Trenchers	1	175	10	20	35000
Diesel Bore/Drill Rigs	1	300	10	20	60000
Diesel Cement & Mortar Mixers	1	300	10	30	90000
Diesel Cranes	1	175	10	30	52500
Diesel Graders	1	300	10	0	0
Diesel Tractors/Loaders/Backhoes	1	100	10	30	30000
Diesel Bull Dozers	1	300	10	20	60000
Diesel Front End Loaders	1	300	10	20	60000
Diesel Fork Lifts	1	100	10	20	20000
Diesel Generator Set	2	40	10	20	16000

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTIBLE EMISSIONS

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr
Water Truck	0.087	0.411	1.089	0.081	0.079	0.147	106.321
Diesel Road Paver	0.016	0.065	0.216	0.015	0.015	0.033	23.636
Diesel Dump Truck	0.029	0.137	0.363	0.027	0.026	0.049	35.440
Diesel Excavator	0.022	0.086	0.304	0.021	0.020	0.049	35.460
Diesel Hole Cleaners\Trenchers	0.020	0.094	0.224	0.018	0.017	0.029	20.666
Diesel Bore/Drill Rigs	0.040	0.151	0.473	0.033	0.032	0.048	35.024
Diesel Cement & Mortar Mixers	0.060	0.230	0.722	0.048	0.047	0.072	52.536
Diesel Cranes	0.025	0.075	0.331	0.020	0.019	0.042	30.675
Diesel Graders	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Tractors/Loaders/Backhoes	0.061	0.271	0.239	0.045	0.044	0.031	22.848
Diesel Bull Dozers	0.024	0.091	0.315	0.022	0.021	0.049	35.460
Diesel Front End Loaders	0.025	0.102	0.331	0.023	0.022	0.049	35.454
Diesel Aerial Lifts	0.044	0.171	0.189	0.031	0.030	0.021	15.225
Diesel Generator Set	0.021	0.066	0.105	0.013	0.013	0.014	10.355
Total Emissions	0.476	1.952	4.900	0.396	0.386	0.633	459.099

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-TRANSPORTATION COMBUSTIBLE EMISSIONS

Construction Worker Personal Vehicle Commuting to Construction Site-Passenger and Light Duty Trucks									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	240	15	15	0.32	0.38	0.71
CO	12.4	15.7	60	240	15	15	2.95	3.74	6.69
NOx	0.95	1.22	60	240	15	15	0.23	0.29	0.52
PM-10	0.0052	0.0065	60	240	15	15	0.00	0.00	0.00
PM 2.5	0.0049	0.006	60	240	15	15	0.00	0.00	0.00

Heavy Duty Trucks Delivery Supply Trucks to Construction Site									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	240	2	2	0.01	0.02	0.03
CO	1.32	3.21	60	240	2	2	0.04	0.10	0.14
NOx	4.97	12.6	60	240	2	2	0.16	0.40	0.56
PM-10	0.12	0.33	60	240	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	240	2	2	0.00	0.01	0.02

Daily Commute New Residents									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of Cars	Number of trucks	Total Emissions cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	15	240	0	0	-	0.00	-
CO	12.4	15.7	15	240	0	0	-	0.00	-
NOx	0.95	1.22	15	240	0	0	-	0.00	-
PM-10	0.0052	0.0065	15	240	0	0	-	0.00	-
PM 2.5	0.0049	0.006	15	240	0	0	-	0.00	-

Truck Emission Factor Source: USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway vehicle emission factor model.

CALCULATION SHEET-FUGITIVE DUST

Construction Fugitive Dust Emissions

Construction Fugitive Dust Emission Factors

	Emission Factor	Units	Source
General Construction Activities	0.19 ton PM10/acre-month		MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.42 ton PM10/acre-month		MRI 1996; EPA 2001; EPA 2006

PM2.5 Emissions

PM2.5 Multiplier	0.10	(10% of PM10 emissions assumed to be PM2.5)	EPA 2001; EPA 2006
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Control Efficiency

0.50	(assume 50% control efficiency for PM10 and PM2.5 emissions)	EPA 2001; EPA 2006
------	--	--------------------

Project Assumptions

Road Upgrade and General Construction Area (0.19 ton PM10/acre-month)

Duration of Construction Project	12	months
Length	0	miles
Length (converted)	0	feet
Width	0	feet
Area	2.00	acres

Conversion Factors

0.000022957	acres per feet
5280	feet per mile

New Roads (0.42 ton PM/acre-month)

Duration of Construction Project	3	months
Length		miles
Length (converted)		feet
Width		feet
Area	2.00	acres

	Project Emissions (tons/year)			
	PM10 uncontrolled	PM10 controlled	PM2.5 uncontrolled	PM2.5 controlled
Road Upgrade and General Construction	4.56	2.28	0.46	0.23
New Roads (0.42 ton PM/acre-month)	2.52	1.26	0.25	0.13
Total	7.08	3.54	0.71	0.35

Construction Fugitive Dust Emission Factors

General Construction Activities Emission Factor

0.19 ton PM10/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The area based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM10/acre month for sites without large scale cut/fill operations. A worst case emission factor of 0.42 ton PM10/acre month was calculated for sites with active large scale earth moving operations. The monthly emission factors are based on 168 work hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM10/acre month emission factor by applying 25% of the large scale earthmoving emission factor (0.42 ton PM10/acre month) and 75% of the average emission factor (0.11 ton PM10/acre month).

The 0.19 ton PM10/acre month emission factor is referenced by the EPA for non residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM10/acre month emission factor represents a refinement of EPA's original AP 42 area based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas.

New Road Construction Emission Factor

0.42 ton PM10/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst case conditions emission factor from the MRI 1996 study described above (0.42 tons PM10/acre month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

PM2.5 Multiplier

0.10

PM2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM10 and PM2.5

0.50

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (EPA 2006).

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985 1999*. EPA 454/R 01 006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339 02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

CALCULATION SHEET-SUMMARY OF EMISSIONS

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)						
Emission source	VOC	CO	NOx	PM 10	PM 2.5	SO2
Combustible Emissions	0.48	1.95	4.90	0.40	0.39	0.63
Construction Site-fugitive PM-10	NA	NA	NA	3.54	0.35	NA
Construction Workers Commuter & Trucking	0.73	6.83	1.07	0.02	0.02	NA
Total emissions	1.21	8.78	5.97	3.95	0.76	0.63
De minimis threshold (1)	NA	NA	NA	100.00	NA	NA

1. De-minimis thresholds for Yuma County.

APPENDIX C
CORRESPONDENCE





DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 900
PHOENIX, ARIZONA 85012

October 26, 2009

REPLY TO
ATTENTION OF:

Office of the Chief
Regulatory Division

U.S. Customs and Border Protection
c/o David Guzewich
Environmental Coordinator
1301 Constitution Avenue, NW
EPA West Suite B-155
Washington, DC 20229

File Number: SPL-2009-00827-WHM

Dear Mr. Guzewich:

Reference is made to the October 8, 2009 request by the U.S Customs and Border Protection for a Department of Army review of a Supplemental Environmental Assessment for the installation of permanent security lighting and a border infrastructure system (Section 23, T11S, R24W), Yuma County, Arizona.

The Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the U.S. including wetlands under Section 404 of the Clean Water Act. Examples of activities requiring a permit include but are not limited to placing bank protection, temporary or permanent stockpiling, grading including vegetative clearing operations, road or pad fills, any other activity that involves the filling of low areas or leveling of the land, and discharging dredged or fill material into waters of the U.S. as part of any other activity or any work at all which results in a change to the existing elevation of a water of the U.S.

The proposed activity may require a permit under Section 404; however, there was not enough information for us to make this determination. Please provide more detailed information at your earliest convenience so we may make a determination. Please reference File Number SPL-2009-00827-WHM.

The receipt of your letter is appreciated. If you have questions, please contact William Miller at (602) 640-5385 ext 221.

Sincerely,

A handwritten signature in cursive script that reads "Sallie McGuire".

Sallie McGuire
Chief, Arizona Branch
Regulatory Division

Enclosure

Publisher's Affidavit of Publication

o0o

STATE OF ARIZONA }
COUNTY OF YUMA }

NOTICE OF AVAILABILITY
DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING AND A BORDER INFRASTRUCTURE SYSTEM OFFICE OF BORDER PATROL YUMA SECTOR, ARIZONA

Joni Weerheim or Robert Rivens, having been first duly sworn, deposes and says: that Yuma Sun is a newspaper of general circulation published daily in the City of Yuma, County of Yuma, State of Arizona; that (s)he is the publisher or business manager of said paper; that the

NOTICE OF AVAILABILITY

The public is hereby notified of the availability of the Draft Supplemental Environmental Assessment (SEA) and Draft Finding of No Significant Impact (FONSI) for the Installation of Permanent Security Lighting and a Border Infrastructure System for the Office of Border Patrol (OBP), Yuma Sector, Arizona. This SEA addresses the potential impacts from the installation of power poles and approximately 3,844 feet of power lines from the existing power lines along County 25th Street south to the U.S. Border Patrol's Border Infrastructure System. A 12-foot wide construction access road would be installed within a 15-foot wide Right of Way. Arizona Public Service (APS) would install the proposed power line and road. The objective of the proposed project is to provide deterrence to the influx of illegal aliens into the area and to increase the safety of U.S. Border Patrol agents and other law enforcement personnel. The Draft SEA will be available for review at the following locations:

Yuma County Library (Main Branch)
2951 South 21st Drive
Yuma, Arizona

Yuma County Library (San Luis Library)
1075 North 6th Avenue
San Luis, Arizona

The Draft SEA can also be viewed via the Internet at the following address: <http://ecso.swf.usace.army.mil>

The comment period opens on Friday, October 9, 2009, and closes on Monday, November 9, 2009. To comment or for additional information, contact Dr. Jack Mobley, U.S. Army Corps of Engineers, Fort Worth District, P.O. Box 17300, Fort Worth, Texas 76102 or via facsimile at (817) 886-6499.
Daily October 9, 2009 #L41610

a printed copy of which, as it appeared in said paper, is hereto attached and made a part of this affidavit, was published in Yuma Sun

For ONE issues; that the date of the first publication of said NOTICE OF AVAILABILITY

was OCTOBER 09, 2009 and the date of the last publication being OCTOBER 09, 2009 and that the dates when said

NOTICE OF AVAILABILITY

was printed and published in said paper were OCTOBER 09, 2009

Subscribed and sworn to before me, by the said Joni Weerheim or Robert Rivens

12 day of Oct, 2009



My Commission Expires NOV 1, 2009

Notary Public



United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Field Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to:
AESO/SE
22410-2009-SL-472

September 30, 2009

Mr. Loren Flossman
U.S. Customs and Border Patrol
Tactical Infrastructure Facilities Mgt & Engineering
1301 Constitution Avenue NW
EPA West Suite B-155
Washington, DC 20229

RE: U.S. Border Patrol Proposal to Install an Electrical Service Line Which Connects to an Existing Power Grid Along Avenue D Beginning at County 25th Street Extending Southward to Powerline ROW, Yuma County, Arizona

Dear Mr. Flossman:

Thank you for your recent request for information on 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 occur in your project area. The Arizona Ecological Service Field Office has posted lists of the endangered, threatened, proposed, and candidate species occurring in each of Arizona's 15 counties on the Internet. Please refer to the following web page for species information in the county where your project occurs:

<http://www.fws.gov/southwest/es/arizona>

If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find County Species Lists on the main page. Then click on the county of interest. The arrows on the left will guide you through information on species that are listed, proposed, candidates, or have conservation agreements. Here you will find information on the species' status, a physical description, all counties where the species occurs, habitat, elevation, and some general comments. Additional information can be obtained by going back to the main page. On the left side of the screen, click on Document Library, then click on Documents by Species, then click on the name of the species of interest to obtain General Species Information, or other documents that may be available. Click on the "Cactus" icon to view the desired document.

Mr. Loren Flossman, Program Manager

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. Under the General Species Information, citations for the Federal Register (FR) are included for each listed and proposed species. The FR is available at most Federal depository 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 will need to request formal consultation with us. 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 will need to enter into a section 7 conference. The county list may also contain candidate or conservation agreement species. Candidate species are those for which there is sufficient information to support a proposal for listing; conservation agreement species are those for which we have entered into an agreement to protect the species and its habitat. Although candidate and conservation agreement 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, we recommend 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, 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 and some of the Native American Tribes protect 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, or contact the appropriate Native American Tribe to determine if sensitive species are protected by Tribal governments in your project area. We further recommend that you invite the Arizona Game and Fish Department and any Native American Tribes in or near your project area to participate in your informal or formal Section 7 Consultation process.

For additional communications regarding this project, please refer to consultation number 22410-2009-SL-472. We appreciate 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 Brenda Smith (928) 226-0614 (x101) for projects in Northern Arizona, Debra Bills (602) 242-0210 (x239) for projects in central Arizona and along the Lower Colorado River, and Sherry Barrett (520) 670-6150 (x223) for projects in southern Arizona.

Sincerely,



for Steven L. Spangle
Field Supervisor

Mr. Loren Flossman, Program Manager

cc: Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ (Attn: Erin Fernandez)

W:\Cathy Gordon\administration\species ltrs\complete\US customs and border patrol install electrical servcie line yuma.docx:egg

RECEIVED
7-21-09

No historic properties affected

September 8, 2009

Christopher S. Oh
Director, Environmental Division
U.S. Department of Homeland Security
US Customs and Border Protection
Washington, DC 20229

RE: Cultural Resources Survey Report for Yuma Powerline Right-of-Way; CBP
SHPO-2009-1260 (40869)

Dear Mr. Oh:

Thank you for providing a copy of the survey report ["A Cultural Resources Survey of a Proposed Powerline Right-of-Way near Yuma, Yuma County, Arizona" (August 2009)] in support of the above referenced federal undertaking. I have the following comments:

The survey covered a 15-ft. wide, 0.5-mile long corridor extending north from the U.S.-Mexico International Border in the SE ¼ Section 23 and SW ¼ Section 24, Township 22 South, Range 24 West. No significant cultural resources were recorded within the corridor.

The report (page 1) indicates that the subject right-of-way is located on lands under the jurisdiction of the Yuma Port Authority and the Bureau of Reclamation. Required land jurisdiction is not marked on report maps. Please have the maps revised accordingly.

Your letter should have informed us about the results of your consultation with Indian Tribes and with land managers.

Contingent upon no concerns from Indian Tribes and the Bureau of Reclamation, I concur with your finding of no historic properties affected.

Sincerely,

Jo Anne Medley
Compliance Specialist/Archaeologist
State Historic Preservation Office

Cc: Mark Slaughter, Archaeologist, Bureau of Reclamation, Boulder City, NV



Arizona State Parks

Janice K. Brewer
Governor

State Parks
Board Members

Chair
Reese Woodling
Tucson

Tracey Westerhausen
Phoenix

Larry Landry
Phoenix

Walter D. Armer, Jr.
Vail

Arlan Colton
Tucson

William C. Scalzo
Phoenix

Maria Baier
State Land
Commissioner

Renée E. Bahl
Executive Director

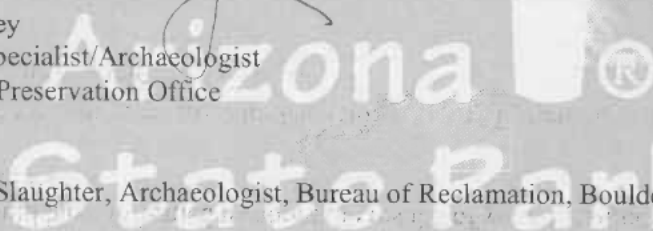
Arizona State Parks
1300 W. Washington
Phoenix, AZ 85007

Tel & TTY: 602.542.4174
AZStateParks.com

800.285.3703 from
(520 & 928) area codes

General Fax:
602.542.4180

Director's Office Fax:
602.542.4188





QUECHAN INDIAN TRIBE
Ft. Yuma Indian Reservation

P.O. Box 1899
Yuma, Arizona 85366-1899
Phone (760) 572-0213
Fax (760) 572-2102

September 1, 2009

U.S. Department of Homeland Security
Mr. Christopher Oh
Washington, DC 20229

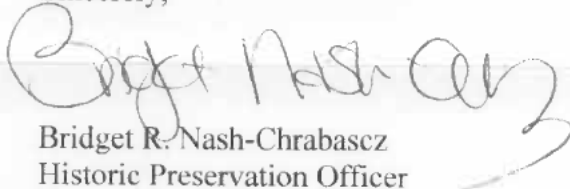
Dear Mr. Oh,

Thank you for notifying us of the proposed Powerline ROW east of San Luis, AZ.

While the Cultural Committee understands there were no cultural resources identified within the survey, they are requesting that contractors be required to take archaeological sensitivity training prior to beginning work on the powerline. They have also requested that my office be notified immediately if any resource, regardless of eligibility, is discovered during the course of construction.

If you need any further information or have any questions, please contact me at (760) 572-2423.

Sincerely,


Bridget R. Nash-Chrabasz
Historic Preservation Officer



U.S. Customs and
Border Protection

Jerry G
8/28/09
AUG 21 2009 *[Signature]*

The Honorable Benjamin H. Nuvamsa
Chairman
Hopi Tribal Council
Attn: Marvin Lalo, Acting Director
Hopi Cultural Preservation Office
1 Main Street
Kykotsmovi, Arizona 86039

RECEIVED
SEP 02 2009

BY: CPO/KS

Dear Chairman Nuvamsa:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

Christopher S. Oh

Christopher S. Oh
Director
Environmental Division

CONCUR
Morgan
for
Kwanawisiwma
9-2-09

Enclosure(s)



P.O. Box 123
Kykotsmovi, Arizona
86039

102 STRA CRTS

Christopher Ok
US Customs & Border Protection
1300 Pennsylvania Ave NW
Suite NP 1220N
Washington DC 20229



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THE COCOPAH INDIAN TRIBE

Cultural Resource Department

County 15th & Avenue G

Somerton, Arizona 85350

Telephone (928) 627-4849

Cell (928) 503-2291

Fax (928) 627-3173

CCR-018-09-006

August 28, 2009

Christopher S. Oh
Environmental Division Director
CBP/MMMP
1331 Pennsylvania Ave, NW
Suite 1220
Washington, DC 20004

RE: Response for the Cultural Resources Survey of a Proposed Powerline Right-of-Way
Near Yuma, Arizona

Dear Mr. Oh:

The Cocopah Indian Tribe appreciates your consultation efforts on this project. We are pleased that you contacted the Cocopah on this cultural resource issue for the purpose of solicitation of our input and to address our concerns on this matter. However, at this time we wish to make no comments on the development of this project, and concur with your determination of no historic properties affected. We would like to continue to be a part of the consultation process in the future and receive all documents, both draft and final, associated with this project.

If you have any questions or need additional information please feel free to contact the cultural resource department. We will be happy to assist you with any and all future concerns or questions.

Sincerely,

A handwritten signature in black ink that reads "H. Jill McCormick".

H. Jill McCormick

Cultural Resource Manager



**U.S. Customs and
Border Protection**

AUG 21 2009

Ms. Bridget Nash-Chrabascz
Historic Preservation Officer
Quechan Indian Tribe
350 Picacho Road
PO Box 1899, Yuma, AZ 85366-1899
Winterhaven, California 92283

Dear Ms Nash-Chrabascz:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

Ms. Jill McCormick
Cultural Resources Specialist
Cocopah Tribe
County 15th and Avenue G
Somerton, Arizona 85350

Dear Ms McCormick:

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

Ms. JoAnne Medley
Arizona State Parks
State Historic Preservation Office
1300 West Washington Street
Phoenix, Arizona 85007

Dear Ms. Medley:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Benjamin H. Nuvamsa
Chairman
Hopi Tribal Council
Attn: Marvin Lalo, Acting Director
Hopi Cultural Preservation Office
1 Main Street
Kykotsmovi, Arizona 86039

Dear Chairman Nuvamsa:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Diane Enos
President
Salt River Pima-Maricopa Indian Community
Attn: Mr. Dan Daggett, Cultural Programs Supervisor
10005 East Osborn Road
Scottsdale, Arizona 85256

Dear President Enos:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Eldred Enas
Chairman
Colorado River Indian Tribes
Attn: Mr. E. George Ray, Director
Colorado River Indian Tribes Museum
26600 Mohave Road
Parker, Arizona 85344

Dear Chairman Enas:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Louis Manuel Jr.
Chairperson
Ak-Chin Indian Community Council
Attn: Cultural Resource Manager
Ak-Chin Him Dak Eco Museum & Archives
47685 North Eco Museum Road
Maricopa, Arizona 85239

Dear Chairperson Manuel Jr.:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Mike Jackson, Jr.
President
Quechan Indian Tribe
350 Picacho Road
Winterhaven, California 92283

Dear President Jackson:

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Ned Norris, Jr.
Chairman
Tohono O'odham Nation
Main Tribal Building Business Loop
Sells, Arizona 85634

Dear Chairman Norris:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Peter Yucupicio
Chairman
Pascua Yaqui Tribe
Attn: Ms. Amalia Reyes, Language and Cultural Preservation Specialist
7474 South Camino de Oeste
Tucson, Arizona 85746

Dear Chairman Yucupicio:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Ronnie Lupe
Chairman
White Mountain Apache Tribal Council
Attn: Mr. Mark Altaha, THPO
202 East Walnut Street
Whiteriver, Arizona 85941

Dear Chairman Lupe:

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Sherry Cordova
Chairperson
Cocopah Tribal Council
Attn: Jill McCormick
Cocopah Museum
County 15th and Avenue G
Somerton, Arizona 85350

Dear Chairperson Cordova:

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable Wendsler Nosie, Sr.
Chairperson
San Carlos Apache Tribe
Attn: Ms. Vernelda Grant, THPO
Historic Preservation & Archaeology Department
San Carlos Avenue
San Carlos, Arizona 85550

Dear Chairperson Nosie:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

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Christopher S. Oh
Director
Environmental Division

Enclosure(s)



**U.S. Customs and
Border Protection**

AUG 21 2009

The Honorable William Rhodes
Governor
Gila River Indian Community
Attn: Mr. Barnaby Lewis, Cultural Resource Specialist
315 West Casa Blanco Road
Sacaton, Arizona 85247

Dear Governor Rhodes:

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Enclosure(s)