



**ENVIRONMENTAL STEWARDSHIP PLAN  
FOR CONSTRUCTION, OPERATION, AND MAINTENANCE  
OF TACTICAL INFRASTRUCTURE, SEGMENT CV-1A  
U.S. Border Patrol, Yuma Sector  
Yuma Station, Arizona**

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



**December 2008**

## ACRONYMS AND ABBREVIATIONS

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AADT	Average annual daily traffic
ADA	Arizona Department of Agriculture
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
APE	Area of potential effect
AZDC	Arizona Department of Commerce
BEA	Bureau of Economic Analysis
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BMP	Best Management Practices
CAA	Clean Air Act
CBP	U.S. Customs and Border Protection
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CM&R	Construction Mitigation and Restoration
CO	carbon monoxide
CRS	Congressional Research Service
CWA	Clean Water Act
dB	Decibel
dbA	A-weighted decibel
DHS	U.S. Department of Homeland Security
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
EO	Executive Order
ESA	Endangered Species Act
ESP	Environmental Stewardship Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FY	Fiscal Year
GYPA	Greater Yuma Port Authority
IA	Illegal alien
IID	Imperial Irrigation District
IIRIRA	Illegal Immigration Reform and Immigrant Responsibility Act
INRMP	Integrated Natural Resource Management Plan
LWC	Low water crossing
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO <sub>2</sub>	Nitrous oxide
NRCS	Natural Resources Conservation Service

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## COVER SHEET

### ENVIRONMENTAL STEWARDSHIP PLAN FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF TACTICAL INFRASTRUCTURE, SEGMENT CV-1A U.S. BORDER PATROL, YUMA SECTOR YUMA STATION, ARIZONA

**Responsible Agencies:** U.S. Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP).

**Coordinating Agencies:** U.S. Army Corps of Engineers (USACE)-Los Angeles District; U.S. Fish and Wildlife Service (USFWS); and the U.S. Section, International Boundary and Water Commission (USIBWC).

**Affected Location:** U.S./Mexico border in Yuma County, Arizona.

**Project Description:** The Project includes the construction, operation, and maintenance of tactical infrastructure (TI) to include vehicle fence, a construction/access road, and improvements to an existing access road adjacent to approximately 5.0 miles of the U.S./Mexico border within the USBP Yuma Sector, Arizona. The use of one temporary staging area will be required during the construction of the vehicle fence and roads to store equipment and material.

**Report Designation:** Environmental Stewardship Plan (ESP).

**Abstract:** CBP plans to construct, operate, and maintain approximately 5.0 miles of TI, including vehicle fence, a construction/access road, and improvements to an existing access road along the U.S./Mexico border on the Colorado River in the USBP Yuma Sector, Arizona. One temporary staging area will also be developed near the Project corridor. The TI will extend approximately 50 feet east from Morelos Dam. At this point the TI will extend approximately 5 miles south to West County 13<sup>th</sup> Street. This ESP analyzes and documents environmental consequences associated with the Project.



## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

United States (U.S.) Customs and Border Protection (CBP) and U.S. Border Patrol (USBP) will construct, operate, and maintain 5 miles of tactical infrastructure (TI), which includes one discrete section of vehicle fence and construction road along the U.S./Mexico border in the USBP Yuma Sector, Arizona. This segment is known as CV-1A. The CV-1A segment begins at the Morelos Dam on the Colorado River and extends south to West County 13<sup>th</sup> Street near the City of Yuma, Arizona. The Project corridor varies in width. Two types of vehicle fence will be installed within the Project corridor, Normandy-style and post on rail style. The existing road will be used for construction and improved up to 28 feet wide. This Environmental Stewardship Plan (ESP) analyzes and documents environmental consequences associated with the Project.

On April 1, 2008, the Secretary of the U.S. Department of Homeland Security (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 tactical infrastructure (TI) along the U.S./Mexico border. The TI described in this ESP is covered by the Secretary's April 1, 2008, waiver (73 Federal Register [FR] 65, pp. 18293-24, Appendix A). Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the laws that are included in the waiver, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP strongly supports this objective and remains committed to being a good steward of the environment. CBP will continue to work in a collaborative manner with local government, state and Federal land managers, Indian tribes, and the interested public to identify environmentally sensitive resources and develop appropriate Best Management Practices (BMPs) to avoid or minimize adverse impacts resulting from the installation of TI.

To that end, CBP has prepared the following ESP, which analyzes the potential environmental impacts associated with construction of TI in the USBP Yuma Sector, Yuma Station's area of operation. The ESP also discusses CBP plans to mitigate potential environmental impacts. The ESP further details the BMPs associated with the TI that CBP will implement during, and after construction.

### **GOALS AND OBJECTIVES OF THE PROJECT**

The goal of the Project is to increase border security within the USBP Yuma Sector with the ultimate objective of achieving effective control of our Nation's borders. The project further meets the objectives of the Congressional direction in the Fiscal Year (FY) 2007 DHS Appropriations Act (Public Law [P.L.] 109-295), Border Security Fencing, Infrastructure, and Technology appropriation to install fencing, infrastructure, and technology along the border.

The USBP Yuma Sector identified a distinct area along the U.S./Mexico border that experiences high levels of illegal cross-border activity. Illegal entry activity typically occurs in areas that are remote and not easily accessed by USBP agents, near Ports of Entry (POE) where concentrated populations might live on either side of the border, or in locations that have quick access to U.S. transportation routes. The Project will help to deter illegal entries within the USBP Yuma Sector by improving enforcement efficiency, thus preventing terrorists and terrorist weapons, illegal aliens, drugs, and other cross border violators and contraband from entering the U.S., while providing a safer work environment for USBP agents.

## **PUBLIC OUTREACH AND COORDINATION**

A project description was posted on the Project Web site at [www.BorderFencePlanning.com](http://www.BorderFencePlanning.com) to inform the public of the Project. In addition, a public meeting was conducted in Yuma on 15 May 2008. No comments were received in response to the public meeting.

Although the Secretary of DHS issued the waiver, and thus, CBP has no responsibilities under the National Environmental Policy Act (NEPA) for this project, CBP will review, consider, and incorporate information received from the public and other Federal, state, and local agencies, as appropriate, during the preparation of this ESP. CBP's response to letters and other correspondence received during the previous public review period will be posted on the Internet at the following URL: [www.BorderFencePlanning.com](http://www.BorderFencePlanning.com).

In addition to the recent public involvement and outreach program, CBP has continued to coordinate with various Federal agencies during the development of this ESP. These agencies are described in the following paragraphs.

U.S. Section, International Boundary and Water Commission (USIBWC) - CBP has coordinated with USIBWC to ensure that any construction and maintenance along the international border does not adversely affect International Boundary Monuments or substantially impede floodwater conveyance within international drainages.

U.S. Army Corps of Engineers (USACE), Los Angeles District - CBP has coordinated all activities with USACE to identify potential jurisdictional Waters of the U.S., including wetlands, and to develop measures to avoid, minimize or compensate for losses to these resources.

U.S. Department of the Interior (DOI) - CBP has coordinated extensively with two resource managing agencies (U.S. Fish and Wildlife Service [USFWS] and U.S. Bureau of Land Management [BLM]), within DOI throughout the development of this ESP. CBP has coordinated extensively with USFWS to identify listed species that have the potential to occur in the project area and has coordinated with USFWS to prepare a Biological Resources Plan (BRP) that evaluates impacts to protected species and identifies BMPs to reduce or off-set any adverse impacts. A copy of the BRP is contained in Appendix B. CBP has also continued to coordinate with BLM, since

portions of the Project planned for construction are within or adjacent to BLM lands. CBP has coordinated with U.S. Bureau of Reclamation (Reclamation), since portions of the fence are planned for construction along Reclamation's Salinity Canal.

## **DESCRIPTION OF THE PROJECT**

CBP will construct and maintain approximately 5 miles of TI, which includes vehicle fence, and a construction road along the Colorado River (the U.S./Mexico border) in Yuma County, Arizona. The TI will extend 5 miles from Morelos Dam south to West County 13<sup>th</sup> Street near Yuma, Arizona (see Figures 2-1 and 2-2). The Project corridor varies in width and the vehicle fence will be installed along the western edge of the road. The constructed road will also be used to access the Project corridor.

Upon completion of the TI, CBP will be responsible for repair and maintenance of the fence and road. Such activities include replacement or repair of fence segments that are vandalized, removal of debris that becomes entrapped along the fence or within any drainage structures, and grading of the road surface. These activities will occur on an as-needed basis; however, routine road maintenance is expected to occur annually.

In order to facilitate operation of equipment, staging of materials, and construction access to the Project corridor, one temporary 0.4-acre staging area will be constructed. Vegetation will be cleared and grading may occur where needed in the staging area. Upon completion of construction activities, the temporary staging area will be rehabilitated.

## **SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION**

Table ES-1 provides an overview of potential environmental impacts by specific resource areas. Chapters 3 through 5 of this ESP address these impacts in more detail. CBP followed specially developed design criteria to reduce adverse environmental impacts and will implement mitigation measures to further reduce or offset adverse environmental impacts. Design criteria to reduce adverse environmental impacts include selecting an access route to minimize impacts, consulting with Federal and state agencies and other stakeholders to avoid or minimize adverse environmental impacts, and developing appropriate BMPs to protect natural and cultural resources. Potential effects on wetlands, riparian areas, streambeds, and floodplains, will be avoided whenever practicable, or mitigated if appropriate. BMPs will include implementation of a Storm Water Pollution Prevention Plan (SWPPP), Construction Mitigation and Restoration (CM&R) Plan, Spill Prevention Control and Countermeasures Plan (SPCCP), Dust Control Plan, Fire Prevention and Suppression Plan, and Unanticipated Discovery Plan to conserve natural and cultural resources.

**Table ES-1. Summary of Anticipated Environmental Impacts**

<b>Resource Area</b>	<b>Effects of the Project</b>	<b>Best Management Practices/Mitigation</b>
<b>Air Quality</b>	Minor and temporary impact on air quality will occur during construction; air emissions are not expected to exceed thresholds above <i>de minimis</i> levels.	Dust Control Plan. Fire Prevention and Suppression Plan. Maintain equipment according to specifications.
<b>Noise</b>	Minor temporary increases in noise levels during construction activities will occur. Two residential areas are within 600 feet of the Project corridor and will experience short-term temporary noise impacts from construction.	Equipment will be operated on an as-needed basis. A majority of the activities will occur away from population centers. The duration of construction near residential areas will be limited.
<b>Land Use and Aesthetics</b>	Approximately 0.4 acre of BLM land will be impacted temporarily through the use of staging area. An additional 33.4 acres of BLM land will be permanently impacted by the construction road and vehicle fence. There will be a minor permanent impact on visual resources. The Project will result in indirect beneficial effects such as reduced habitat degradation.	No mitigation necessary.
<b>Soils</b>	Minor impacts on soils from a loss of biological production are expected as a result of new road construction. Construction of vehicle fence will have minor impacts.	Dust Control Plan.
<b>Hydrology and Groundwater</b>	A one-time water usage for construction will require approximately 6 acre-feet of water, creating a negligible to minor impact on the availability of water in the region. Grading and contouring will result in short-term minor adverse impacts.	SPCCP and CM&R plans.
<b>Surface Waters and Waters of the United States</b>	Minor and temporary impacts will occur to local surface waters as a result of sedimentation and erosion during construction activities. Impacts will be minimized through mitigation measures, as appropriate. Surface runoff potential will result in short-term minor adverse impacts on adjacent wetlands. The project will permanently impact approximately 0.08 acre of potential jurisdictional wetlands.	SWPPP and CBP will provide appropriate mitigation for wetland impacts
<b>Floodplains</b>	The entire Project will be constructed in a floodplain. The Project will not cause significant deflection or obstruction of the normal or flood flows of the Colorado River.	Coordination with USIBWC and the local FEMA Floodplain Manager.
<b>Vegetation Resources</b>	Permanent loss of 25 acres of vegetation communities, due to construction of T1. Approximately eight acres of the Project corridor are already disturbed levee road with no vegetation, so there will be no additional adverse impacts on vegetation in that section of the Project corridor. Approximately 0.4 acre of vegetation will be temporarily impacted via the staging area, but will be rehabilitated upon completion of the construction activities.	Fire Suppression and Prevention Plan. Biological monitor on site during construction to ensure all BMPs and mitigation plans are followed.

Table ES-1, continued

Resource Area	Effects of the Project	Best Management Practices/Mitigation
<b>Wildlife and Aquatic Resources</b>	Negligible impact on wildlife expected. Some permanent loss of habitat. Potential loss of small mammals and reptiles during construction. There are no aquatic resources in the Project corridor.	No mitigation necessary. Construction will occur outside the nesting/breeding season. Rehabilitation plan for temporarily disturbed areas (i.e., staging area).
<b>Threatened and Endangered Species</b>	The Project may affect, but is not likely to adversely affect, the southwestern willow flycatcher and yellow-billed cuckoo and will have no effect on Yuma clapper rail. The Project has the potential to affect 14 acres of potential southwestern willow flycatcher habitat, which includes 1 acre of yellow-billed cuckoo habitat.	Construction will occur outside of the nesting/breeding season for the southwestern willow flycatcher, yellow-billed cuckoo, and Yuma clapper rail. Restore or replace riparian habitat for southwestern willow flycatcher (Appendix B).
<b>Roadways and Traffic</b>	Negligible impacts on roadways and traffic in and near the Project corridor.	No mitigation necessary.
<b>Cultural Resources</b>	No effects on cultural resources are expected, as there are no archaeological sites in the Project corridor.	No mitigation necessary.

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***SECTION 1.0***  
***INTRODUCTION***





## **1.0 INTRODUCTION**

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### **1.1 BACKGROUND**

On April 1, 2008, the Secretary of United States (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 (Appendix A). The TI described in this Environmental Stewardship Plan (ESP) is covered by the Secretary's April 1, 2008, waiver (73 Federal Register [FR] 65, pp. 18293-24, Appendix A). Although the Secretary's waiver means that U.S. Customs and Border Protection (CBP) no longer has any specific legal obligations under the laws that are included in the waiver, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP strongly supports this objective and remains committed to being a good steward of the environment. CBP will continue to work in a collaborative manner with local government, state and Federal land managers, Indian tribes, and the interested public to identify environmentally sensitive resources and develop appropriate Best Management Practices (BMPs) to avoid or minimize adverse impacts resulting from the installation of TI.

To that end, CBP has prepared the following ESP, which analyzes the potential environmental impacts associated with construction of TI in the U.S. Border Patrol (USBP's) Yuma Sector, Yuma Station area of operation. The ESP also discusses CBP plans to mitigate potential environmental impacts. The ESP further details the BMPs associated with the TI that CBP will implement during, and after construction.

### **1.2 GENERAL GOALS AND OBJECTIVES**

The Project will provide USBP agents with the tools necessary to strengthen their control of the U.S. border between ports of entry (POE) in the USBP Yuma Sector. The Project will help to deter illegal entries within the USBP Yuma Sector by improving enforcement efficiency, thus preventing terrorists and terrorist weapons, illegal aliens, drugs, and other cross border violators and contraband from entering the U.S., while providing a safer work environment for USBP agents. The USBP Yuma Sector has identified this area along the border as experiencing high levels of illegal entry. Illegal entry activity typically occurs in areas that are remote and not easily accessed by USBP agents, near POEs where concentrated populations might live on either side of the border, or in locations that have quick access to U.S. transportation routes.

The Project is being carried out pursuant to Section 102 of IIRIRA, 8 U.S.C. § 1103 note. In Section 102(b) of IIRIRA, Congress called for the installation of fencing, barriers, roads, lighting, cameras, and sensors on not less than 700 miles of the southwestern border. This total includes certain priority miles of fencing that are to be completed by December of 2008. Section 102(b) further specifies that these priority

miles are to be constructed in areas where it would be practical and effective in deterring smugglers and aliens attempting to gain illegal entry into the U.S. Congress appropriated funds for this project in CBP's fiscal year (FY) 2007 and 2008 Border Security Fencing, Infrastructure, and Technology Appropriations (Public Law [P.L.] 109-295; P.L. 110-161).

### **1.3 INTRODUCTION TO THE ENVIRONMENTAL STEWARDSHIP PLAN (ESP)**

This ESP is divided into six chapters plus appendices. The first chapter presents a detailed overview. Chapter 2 presents a detailed description of the Project. Subsequent chapters present information on the resources present, and evaluate the direct, indirect, and cumulative effects of the Project. The ESP also describes measures CBP has identified to avoid, minimize, or mitigate impacts to the environment, whenever possible.

CBP will follow specially developed design criteria to reduce adverse environmental impacts and will implement mitigation measures to further reduce or offset adverse environmental impacts to the extent possible. Design criteria to reduce adverse environmental impacts include avoiding physical disturbance and construction of solid barriers in wetlands/riparian areas and streambeds. Consultation with Federal and state agencies and other stakeholders will augment efforts to avoid or minimize adverse environmental impacts. Implementation of appropriate BMPs to conserve natural and cultural resources will be utilized to the extent possible. BMPs will include implementation of a Construction Mitigation and Restoration (CM&R) Plan; Spill Prevention Control and Countermeasures Plan (SPCCP); Dust Control Plan; and Unanticipated Discovery Plan for Cultural Resources.

### **1.4 PUBLIC OUTREACH AND AGENCY COORDINATION**

A public announcement was published in the *Yuma Sun* regarding the availability of the description of the Project and public meeting. This was done to inform the public of the Project and its potential impacts. In addition, a public meeting was conducted in Yuma on 15 May 2008. No comments were received in response to the public meeting.

Although the Secretary of DHS issued the waiver, and thus, CBP has no responsibilities under the National Environmental Policy Act (NEPA) for this project, CBP will review, consider, and incorporate information received from the public and other Federal, state, and local agencies, as appropriate, during the preparation of this ESP.

In addition to the recent public involvement and outreach program, CBP has continued to coordinate with various Federal agencies during the development of this ESP. These agencies are described in the following paragraphs.

U.S. Section, International Boundary and Water Commission (USIBWC) - CBP has coordinated with USIBWC to ensure that any construction along the international border does not adversely affect International Boundary Monuments or substantially impede floodwater conveyance within international drainages.

U.S. Army Corps of Engineers (USACE), Los Angeles District - CBP has coordinated all activities with USACE to identify potential jurisdictional Waters of the U.S., including wetlands, and to develop measures to avoid, minimize or compensate for losses of these resources.

U.S. Department of the Interior (DOI) - CBP has coordinated extensively with two resource managing agencies (U.S. Fish and Wildlife Service [USFWS] and U.S. Bureau of Land Management [BLM]), within DOI throughout the development of this ESP. CBP has coordinated extensively with USFWS to identify listed species that have the potential to occur in the project area and have coordinated with USFWS to prepare a Biological Resources Plan (BRP) that evaluates impacts on protected species and identifies BMPs to reduce or off-set any adverse impacts. A copy of the BRP is contained in Appendix B. CBP has also continued to coordinate with BLM, since portions of the Project planned for construction are within and adjacent to BLM lands. CBP has also coordinated with U.S. Bureau of Reclamation (Reclamation), since portions of the fence are planned for construction along Reclamation's Salinity Canal.

## **1.5 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION, AND BMPs**

It is CBP's policy to reduce impacts through the sequence of avoidance, minimization, mitigation, and finally, compensation. Mitigation efforts vary and include activities such as restoration of habitat in other areas, and implementation of appropriate BMPs. CBP coordinates its mitigation measures with the appropriate Federal and state resource agencies, as appropriate.

This section describes those measures that will be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated by CBP as standard operating procedures on past projects. Mitigation measures are presented for each resource category that will be potentially affected. It should be emphasized that these are general mitigation measures; development of specific mitigation measures has been on-going for certain activities implemented under the Project. Appendix B contains the BRP, which includes the full list of environmental design measures and BMPs to be incorporated as part of the Project. Below is a summary of BMPs for each resource category that will be potentially affected. The mitigation measures will be coordinated with the appropriate agencies and land managers or administrators, as appropriate.

### **1.5.1 General Construction Activities**

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 following accepted industry guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although a major spill is unlikely to occur, any spill of a regulated substance in a

reportable quantity will be cleaned up and reported to the appropriate Federal and state agencies for informational purposes. Reportable quantities of regulated substances will be included as part of a project-specific SPCCP. An 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 equipment maintenance, laydown, and dispensing of fuel, oil, or any other such activities, will occur in the staging area identified for use in this ESP. The designated staging area will be located in such a manner as to prevent any runoff from entering Waters of the U.S., including wetlands. All used oil and solvents will be recycled if possible. All non-recyclable hazardous and regulated wastes will be collected, characterized, labeled, stored, transported, and disposed of consistent with U.S. Environmental Protection Agency (EPA) standards.

Solid waste receptacles will be maintained at the staging area. Non-hazardous solid waste (trash and waste construction materials) will be collected and deposited in on-site receptacles. Waste materials and other discarded materials contained in these receptacles will be removed from the site as quickly as possible. Solid waste will be collected and disposed of properly.

Once construction activities are completed, active measures will be implemented to rehabilitate the staging area. CBP will coordinate with the appropriate land managers to determine the most suitable and cost-effective measures for successful rehabilitation. For successful rehabilitation, all or some of the following measures may be conducted:

- Site preparation through ripping and disking to loosen compacted soils.
- Hydromulch with native grasses and forbs in order to control soil erosion and ensure adequate re-vegetation.
- Planting of native shrubs as needed.
- Temporary irrigation (i.e., truck watering) for seedlings.
- Periodic monitoring to determine if additional actions are necessary to successfully rehabilitate disturbed areas.

### **1.5.2 Air Quality**

Mitigation measures will be incorporated to ensure that particulate matter, less than 10 microns in size (PM-10), emission levels remain minimal. Measures will include dust suppression methods to minimize airborne particulate matter created during construction activities. Standard construction BMPs, such as routine watering of the construction site and access roads, will be used to control fugitive dust during the construction phases of the Project. Additionally, all construction equipment and vehicles will need to be kept in good operating condition to minimize exhaust emissions. Construction speed limits will not exceed 35 miles per hour on major unpaved roads (graded with ditches on both sides) and 25 miles per hour on all other unpaved roads.

### **1.5.3 Noise**

Construction equipment will possess properly working mufflers and will be maintained properly to reduce backfires. All 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.

### **1.5.4 Soils**

Proper site-specific BMPs are designed and utilized to reduce the impact of non-point source pollution during construction activities. BMPs include such things as buffers around washes to reduce the risk of siltation, installation of waterbars to slow the flow of water down hill, and placement of culverts, low-water crossings, or bridges where washes need to be traversed. These BMPs will greatly reduce the amount of soil lost to runoff during heavy rain events and ensure the integrity of the construction site. Soil erosion BMPs can also beneficially impact air quality by reducing the amount of fugitive dust.

Any unnecessary ground disturbance, such as scraping or vegetation removal, will be avoided within the temporary staging area as approved by the Government construction representative. When required, these areas will be hand cleared to avoid disturbance to soils. Minimizing disturbance of the soils will facilitate natural restoration (i.e., some native plants will resprout if not heavily disturbed), and will impede the establishment of non-native plant species (i.e., many invasive, non-native plant species will easily invade and dominate heavily disturbed areas).

Areas with highly erodible soils will be given special consideration to ensure incorporation of various and effective compaction techniques, aggregate materials, wetting compounds, and rehabilitation to reduce potential soil erosion, as necessary. Erosion control measures such as waterbars, gabions, straw bales, and re-vegetation will be implemented during and after construction activities. Re-vegetation efforts will be implemented to ensure long-term recovery of the area and to prevent significant soil erosion problems.

### **1.5.5 Water Resources**

CBP will require its contractor(s) to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to avoid or reduce erosion and sedimentation outside the construction footprint.

All engineering designs and subsequent hydrology reports will be provided to USIBWC prior to start of construction activities for recommendations of measures to avoid an increase, concentration, or relocation of overland surface flows into either the U.S. or Mexico. Furthermore, CBP will routinely check and maintain drainage structures, including low water crossings, and vehicle fence installed within drainages. Such activities may include, but are not limited to, removal of debris that would impede proper conveyance, repair/maintenance of erosional features, installation of energy dissipation measures, and re-vegetation of temporarily disturbed areas.

CBP will coordinate within the USACE, Los Angeles District and mitigate for the loss of approximately 0.08 acre of potential jurisdictional wetlands.

### **1.5.6 Biological Resources**

Construction equipment will be cleaned using a high-pressure water system prior to entering and departing the Project corridor to minimize the spread and establishment of non-native invasive plant species. Soil disturbances in temporary impact areas will be rehabilitated. Rehabilitation includes re-vegetation or the distribution of organic and geological materials over the disturbed area to reduce erosion while allowing the area to naturally revegetate. Rehabilitation methods will be outlined in a rehabilitation plan. At a minimum, the rehabilitation plan will include: the plant species to be used, a planting schedule, measures to control non-native species, specific success criteria, and the party responsible for maintaining and meeting the success criteria. Seeds or plants native to Yuma County will be used to the extent practicable.

Disturbed and restored areas will be monitored for the spread and eventual control of non-native invasive plant species as part of periodic maintenance activities as appropriate.

A qualified biologist (i.e., professional biologist with education and training in wildlife biology or ecology) will monitor construction operations to ensure adherence with the BMPs and provide advice to the construction contractor as needed.

Construction of the Project will occur outside the breeding/nesting season (March through September) for migratory birds. However, surveys for migratory birds may be completed prior to clearing and grubbing activities if these activities occur during the breeding/nesting season. Any migratory bird nests observed in the Project corridor that contain eggs or chicks will be flagged and avoided to the extent practicable, or the eggs or chicks relocated by a qualified biologist.

USFWS may restore or replace riparian habitat for southwestern willow flycatcher using funds from the mitigation pool established by CBP (see Appendix B).

### **1.5.7 Cultural Resources**

All construction will be kept in areas previously surveyed for cultural resources. If any cultural material is discovered during the Project, then all construction activities will be halted in the vicinity of the discovery until a qualified archaeologist assesses the cultural remains and notifies the appropriate entities. Construction activities will not be re-initiated in the area until clearance is provided by a qualified archaeologist.

***SECTION 2.0***  
***GENERAL PROJECT DESCRIPTION***

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## 2.0 GENERAL PROJECT DESCRIPTION

The Project consists of constructing, operating, and maintaining approximately 5 miles of TI, which consists of vehicle fence and associated construction roads (including drainage structures) and (Figures 2-1 and 2-2). The TI will extend approximately 50 feet east from Morelos Dam. At this point the TI will extend approximately 5 miles south to West County 13<sup>th</sup> Street. Detailed maps of the project are presented in Appendix C. The Project corridor is approximately 0.4 miles east of the U.S./Mexico border in southern Yuma County, Arizona. Figure 2-3 is a schematic depicting the various TI components discussed as part of this Project.

Vehicle fences are structures designed to prevent illegal vehicle traffic; however, they are not designed to preclude pedestrian or wildlife movement. The vehicle fence, post on rail and Normandy-style, to be constructed and installed as part of the Project (Photograph 2-1 and 2-2, respectively) will be placed near the western edge of the existing road to greatest extent practicable. The design for post on rail vehicle fence



**Photograph 2-1. Vehicle Fence  
(Post on Rail)**



**Photograph 2-2. Vehicle Fence  
(Normandy-style)**

consists of placing steel (approximately 6 to 8 inches in diameter) into the ground, filling the steel with concrete, and welding steel along the tops of the support braces in a horizontal manner. The vertical support braces are placed in the ground on 4 to 5 foot centers. The Normandy-style vehicle fence is typically constructed of welded metal similar to railroad rail. This type of vehicle fence cannot be rolled or moved manually, and must be lifted using a forklift or front-end loader. The fence will be constructed within the staging area or construction easement, transported throughout the Project corridor, placed on the ground, and then welded together. A typical section of Normandy-style vehicle fence is 10 to 12 feet long and stands 4 to 6 feet high.

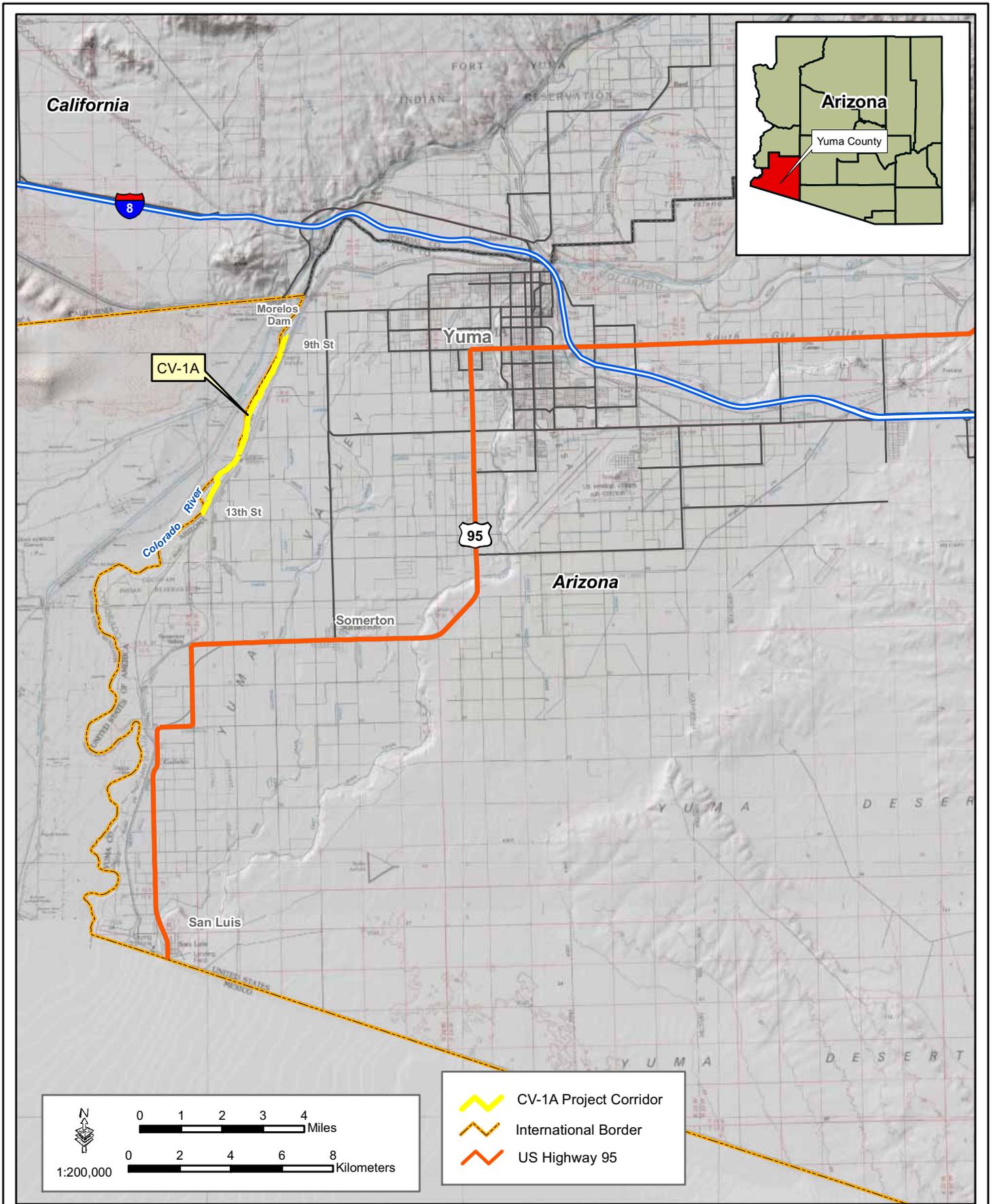


Figure 2-1: Vicinity Map



August 2008

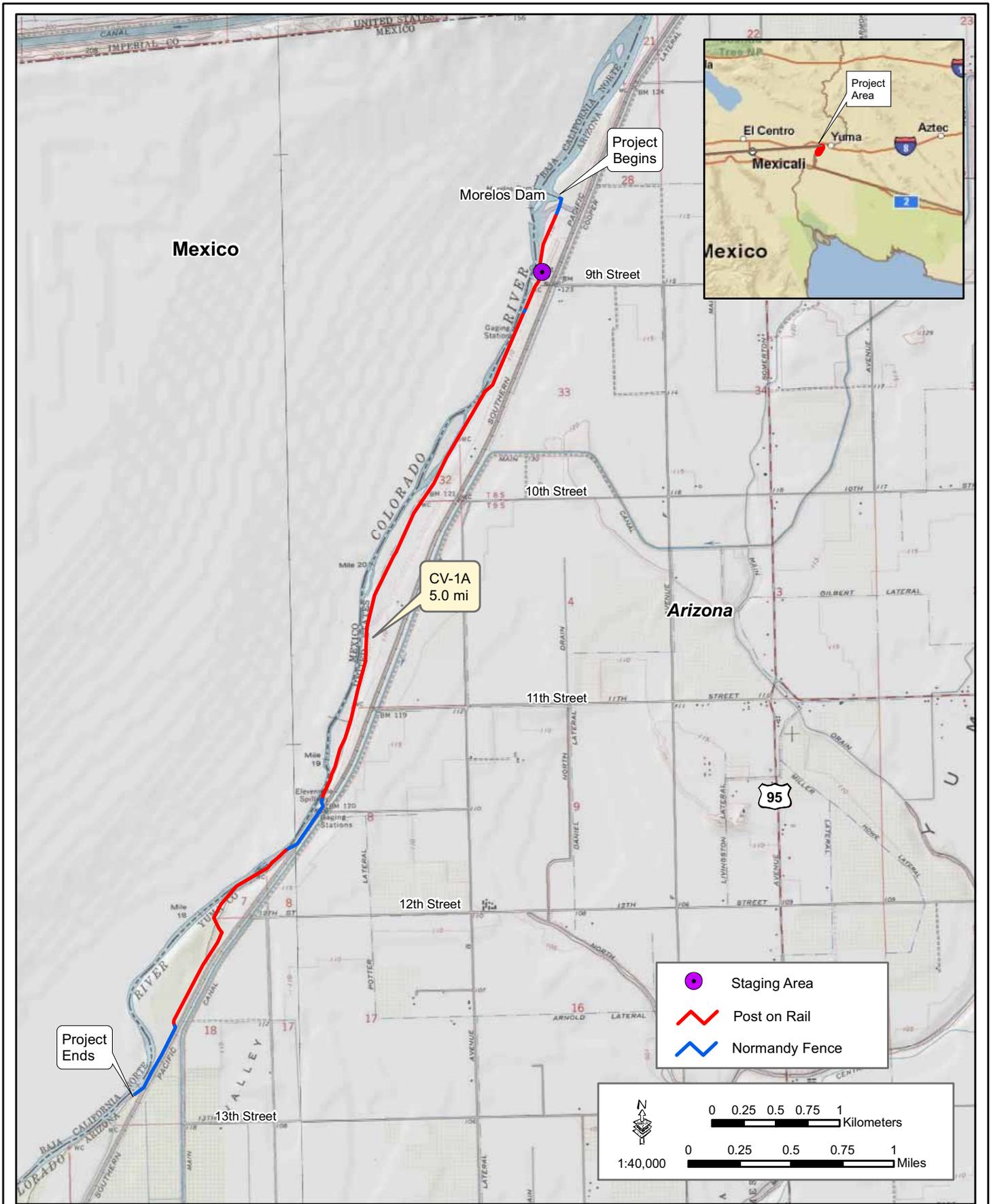


Figure 2-2: Planned Project Corridor



August 2008

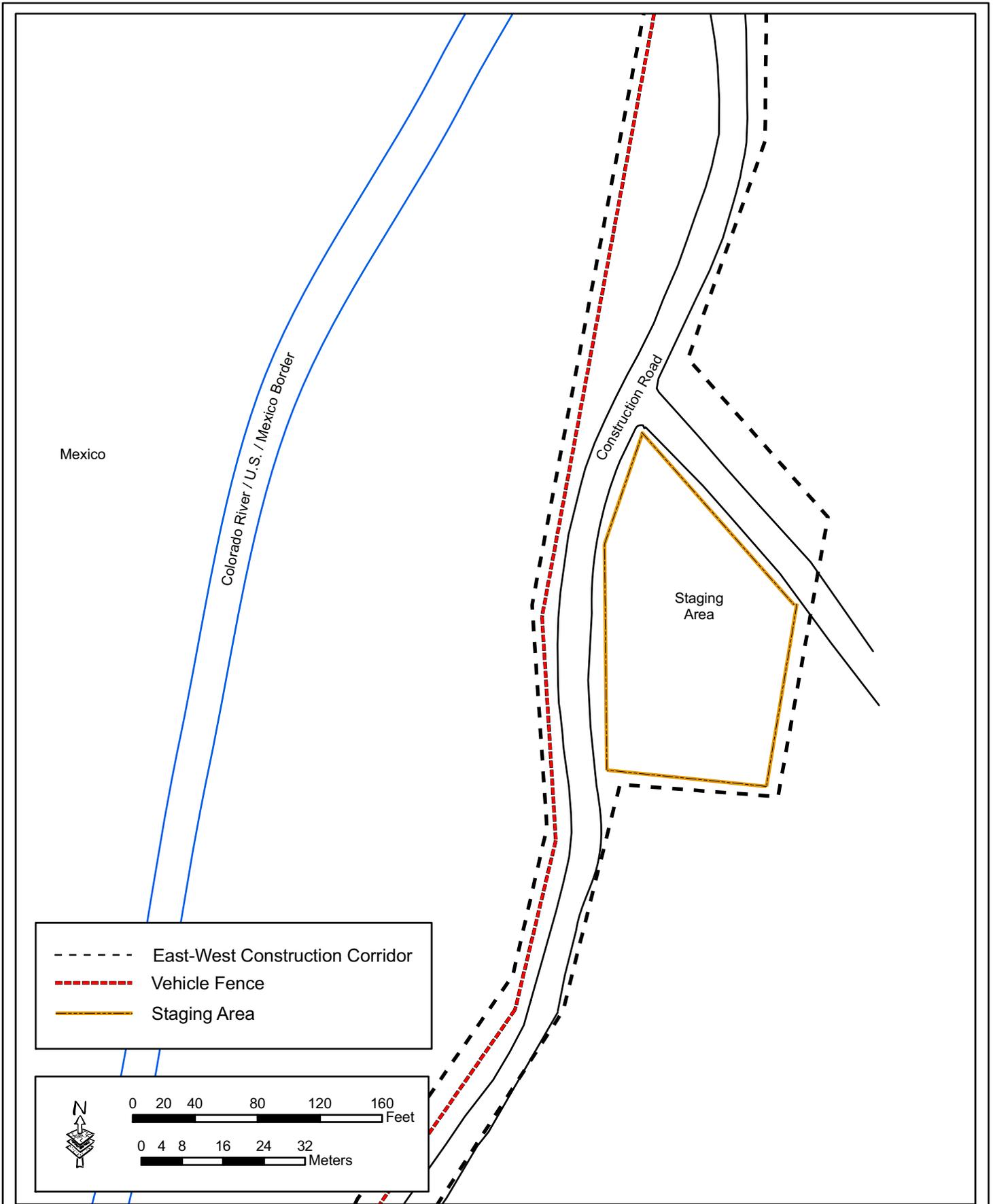


Figure 2-3: Schematic for Section of Planned Vehicle Fence and Associated Construction Road



August 2008

Construction roads are needed to build the vehicle fence along the border. These are typically 28 feet wide. Existing roads provide access throughout the majority of the Project corridor. However, four new road segments totaling 0.5 miles will need to be constructed to meet the design/build requirements. Aggregate and soil stabilizing or binding agent (e.g., PennzSuppress®) will be added to the surface of the new road once the construction is completed to reduce erosion and the need for maintenance activities. A top shot of the soil stabilizing agent will be added to the surface on an annual basis to ensure the road surface longevity. The existing access road will be widened as needed for the safe access of construction equipment. Additionally, compacted aggregate will be used for stabilizing the existing road as needed to aid in the accessibility of construction materials and equipment.

The construction roads will also include the construction of new drainage structures or low water crossings (LWC), as appropriate. Drainage structures will consist of corrugated pipe or concrete box culverts, while LWCs will consist of concrete slabs designed with suitable approach angles. Culverts may also be incorporated into the design of LWCs, as appropriate. The size and number of culverts required will depend upon the width of the drainage and the expected flood flow volumes and velocities at each of the drainage crossings. Each drainage structure will be designed to ensure that flows are not impeded, thus avoiding creation of backwater areas. The designs will also ensure that water velocity is not significantly changed at the outfall. Stilling basins, rip rap, gabion baskets, and other designs will be used on both ends of the drainage structure to dissipate the water flow energy. Head, tail, and cut-off walls will be constructed, as appropriate, to reduce scouring and ensure the stability of the drainage structure.

In order to facilitate operation of equipment, staging of materials, and construction access to the Project corridor, one temporary staging area, totaling 0.4 acre will be constructed. Vegetation will be cleared and grading may occur where needed in the staging area. Upon completion of construction activities, the temporary staging area will be rehabilitated per the rehabilitation plan described in Section 1.5.6.

To account for heat restrictions for adequate concrete drying and curing processes, most concrete pours for low water crossings, other drainage structures, and fencing will need to take place during the pre-dawn hours. However, the possibility exists that work will have to occur on a 24-hour basis. A 24-hour schedule will be implemented only when additional efforts are needed in order to maintain the work task schedule as Federally mandated. In order to facilitate construction activities during these work hours, portable lights will be used. It is estimated that no more than 12 lights will be in operation at any one time at each project site.

A 6-kilowatt self-contained diesel generator powers these lights (Photograph 2-3). Each unit typically has four 400- to 1,000-watt lamps. The portable light systems can be towed to the desired construction location as needed and removed upon completion of construction activities. If construction or maintenance activities continue at night, all lights will be shielded to direct light only onto the area required for worker safety and productivity. The minimum wattage needed will be used and the number of lights will be minimized.



**Photograph 2-3. Portable lights**

All materials and equipment will be stored on site within the construction footprint and designated staging area. The Project will be constructed by private contractors, though some military units could be used to assist in road construction. The anticipated completion date for the construction is December 2008.

***SECTION 3.0***  
***ENVIRONMENTAL BASELINE AND EVALUATION***





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## 3.0 ENVIRONMENTAL BASELINE AND EVALUATION

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### 3.1 INTRODUCTION

CBP has compiled extensive information about the environmental resources that will be affected by the construction, operation and maintenance of TI along the U.S/Mexico border. CBP used this information to establish the baseline against which it evaluated the impacts of the construction, maintenance and operation of the vehicle fence and supporting infrastructure. CBP obtained baseline regulatory information from many sources, including the Clean Air Act (CAA), Endangered Species Act (ESA), Clean Water Act (CWA), Compensation, and Liability Act (CERCLA), National Historic Preservation Act (NHPA), Executive Order (EO) 12898, and EO 13045.

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the laws included in the waiver, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with applicable laws as the basis for evaluating potential environmental impacts and appropriate mitigation.

Only those resources that have the potential to be affected by the Project are addressed in this ESP. Some topics are limited in scope due to the lack of direct effect from the Project on the resource, or because that particular resource is not located within the Project corridor. Therefore, resources such as utilities and infrastructure, communications, geology, climate, wild and scenic rivers, aquatic resources, prime farmlands, sustainability and human health and safety, are not addressed for the following reasons:

- Utilities: The Project will not affect any public utilities.
- Communications: The Project will not affect communications systems in the area.
- Geology: The Project will result in minor, localized effects on surficial geological features. Topography will be slightly altered within the project footprint; however, physiography of the project region will not be affected.
- Climate: The Project will not affect nor be affected by the climate.
- Wild and Scenic Rivers: The Project will 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 the Project corridor. Although the Salinity Canal and Colorado River are adjacent to the construction footprint, the canal is separated from the footprint by a levee and, thus, is not expected to be affected; and the river is not expected to be impacted due to implementation of erosion control and BMPs.

- Prime farmlands: No impact will occur to soils protected by the Farmland Protection Policy Act since none are located within the Project corridor.
- Sustainability: The Project will use minimal amounts of resources during construction and maintenance.
- Human Health and Safety: OSHA 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 will be required to establish and maintain safety programs at the construction site, consistent with these standards. The Project will not expose members of the general public to increased safety risks.

## 3.2 AIR QUALITY

### 3.2.1 Environmental Setting

The EPA 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 (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), 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 3-1.

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 Code of Federal Regulations [CFR] Parts 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. Yuma County is classified, under the NAAQS, as a moderate non-attainment area for PM-10 (EPA 2008a). Sources of PM-10 include wind-blown dust, emissions from combustion engines, and burning of domestic and agricultural wastes.

### 3.2.2 Effects of the Project

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the CAA, for the TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the CAA as the basis for evaluating potential environmental impacts and appropriate mitigation.

**Table 3-1. National Ambient Air Quality Standards**

POLLUTANT	STANDARD VALUE	STANDARD TYPE
<b>Carbon Monoxide (CO)</b>		
8-hour average	9ppm (10mg/m <sup>3</sup> )*	P
1-hour average	35ppm (40mg/m <sup>3</sup> )*	P
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>		
Annual arithmetic mean	0.053ppm (100µg/m <sup>3</sup> )*	P and S
<b>Ozone (O<sub>3</sub>)</b>		
8-hour average	0.08ppm (157µg/m <sup>3</sup> )*	P and S
1-hour average	0.12ppm (235µg/m <sup>3</sup> )*	P and S
<b>Lead (Pb)</b>		
Quarterly average	1.5µg/m <sup>3</sup>	P and S
<b>Particulate&lt;10 micrometers (PM-10)</b>		
Annual arithmetic mean	50µg/m <sup>3</sup>	P and S
24-hour average	150µg/m <sup>3</sup>	P and S
<b>Particulate&lt;2.5 micrometers (PM-2.5)</b>		
Annual arithmetic mean	15µg/m <sup>3</sup>	P and S
24-hour average	65µg/m <sup>3</sup>	P and S
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>		
Annual average mean	0.03ppm (80µg/m <sup>3</sup> )	P
24-hour average	0.14ppm (365µg/m <sup>3</sup> )	P
3-hour average	0.50ppm (1300µg/m <sup>3</sup> )	S

Legend: P= Primary S= Secondary

Source: EPA 2008a.

ppm = parts per million

mg/m<sup>3</sup> = milligrams per cubic meter of airµg/m<sup>3</sup> = micrograms per cubic meter of air

\*Parenthetical value is an approximate equivalent concentration

A minimal increase in local air pollution will be expected from vehicle fence and road construction. Temporary increases in air pollution will result from the use of construction equipment, portable lights, and fugitive dust. Due to the short duration of the Project, any impacts on ambient air quality during construction activities are expected to be short-term, and can be reduced through the use of standard dust control techniques, including roadway watering and chemical dust suppressants, such as PennzSuppress<sup>®</sup> or an equivalent product. During construction, proper and routine maintenance of all vehicles and other construction equipment will ensure that emissions are within the equipment's design standards. Air emissions from the Project will be temporary and will result in negligible impacts on air quality in the region.

EPA's NONROAD (2005a) Model 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 such as bulldozers, cranes, etc. Assumptions were made regarding the type of equipment, the total number of days each piece of equipment will be used, and the number of hours per day each type of equipment will be used. It is estimated that the construction period will be 3 months.

Similarly, emissions from delivery trucks and commuters traveling to the job site were calculated using the EPA MOBILE6.2 Model (EPA 2005b and 2005c). Construction workers will temporarily increase the combustible emissions in the airshed during their

commute to and from the project area. These emissions were calculated in the air emission analysis and included in the total emission estimates.

Furthermore, large amounts of dust (i.e., fugitive dust) can arise from the mechanical disturbance of surface soils, including grading, driving, and road and fence construction. 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).

The total air emissions were calculated for the construction activities occurring in Yuma County to compare to the Federal *de minimis* thresholds. Summaries of the total emissions for the project are presented in Table 3-2. Details of the analyses are presented in Appendix D.

**Table 3-2. Total Air Emissions (tons/year) from Construction Activities vs. *de minimis* Levels**

Pollutant	Total (tons/year)	<i>de minimis</i> Thresholds (tons/year)
CO	26.25	NA
VOCs	5.99	NA
NOx	49.70	NA
PM-10	27.33	100
PM-2.5	8.88	NA
Sulfur Dioxide (SO <sub>2</sub> )	6.84	NA

Source: *De minimis* thresholds are from 40 CFR 51.853 and emissions were predicted by GSRC model projections.

NA = Non Applicable (Yuma County is in attainment for these criteria pollutants)

As can be seen from Table 3-2, the construction activities will not exceed *de minimis* thresholds. There will be negligible impacts on air quality from the implementation of the Project. Impacts from combustible air emissions from USBP traffic are expected to be the same before and after the construction activities. Construction workers will temporarily increase the combustible emissions in the air shed during their commute to and from the project area.

Diesel generators will be used to power the portable lights, and these generators will cause low amounts of air emissions. If a 24-hour work schedule is needed, then the portable lights will operate throughout the night. However, this will be temporary, and as construction activities are completed within a particular area, the lights will be relocated to a new area; thus, the light generators will have negligible effects on air quality in the region. The calculations for generator emissions are presented in Appendix D and the results are included in the summary Table 3-2 above. Since amounts will be below the *de minimis* threshold (i.e., 100 tons per year), emissions will not violate National or state standards.

During the construction of the TI projects, proper and routine maintenance of all vehicles and other construction equipment will ensure that emissions are within the design standards of the equipment. Dust suppression methods will be implemented to minimize fugitive dust. In particular, wetting solutions will be applied to construction areas to minimize the emissions of fugitive dust. By using these environmental design measures, air emissions from the Project will be temporary and will result in minor impairments to air quality in the region.

### **3.3 NOISE**

#### **3.3.1 Environmental Setting**

Noise is generally described as unwanted sound, which can be based either on objective effects (i.e., hearing loss, damage to structures) 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 0 dB, and the threshold of discomfort or pain is around 120 dB.

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 (A-weighted decibel is a measure of noise at a given, maximum level or constant state level) 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.

Acceptable noise levels have been established by the U.S. Department of Housing and Urban Development (1984) for construction activities in residential areas:

- 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 constructions 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.

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 will 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 (California Department of Transportation [Caltrans] 1998):

$$\text{Equation 1: } dBA_2 = dBA_1 - 20 \log^{(d_2/d_1)}$$

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

### 3.3.2 Effects of the Project

The CV-1A Project corridor is located primarily in a rural area with few sensitive noise receptors nearby. The closest sensitive noise receptor is a single-family home located approximately 142 feet east of the Project corridor between West County 12<sup>th</sup> Street and West County 11<sup>th</sup> Street. The second closest residence is located on the West County 10<sup>th</sup> Street, approximately 600 feet east the Project corridor. Construction equipment has the potential to expose the mentioned closest residence to levels that are normally unacceptable (above 65 but not greater than 75 dBA).

Table 3-3, on the following page, describes noise emission levels for construction equipment which range from 76 dBA to 84 dBA at a distance of 50 feet (Federal Highway Administration [FHWA] 2007). As can be seen from this table, assuming the worst-case scenario of 84 dBA, the noise model projected that noises levels of 84 dBA from the construction equipment will have to travel 500 feet before they attenuate to an acceptable level of 65 dBA. To reduce noise levels of 84 dBA to a normally unacceptable level of 75 dBA, the distance from the noise source to the receptor is 140 feet. The closest sensitive noise receptor is 142 feet from the Project corridor. However, it should also be noted that these estimates are based on straight-line distances and do not necessarily consider other factors that could enhance or reduce attenuation, such as topography, climate, and vegetation.

## 3.4 LAND USE AND AESTHETICS

### 3.4.1 Environmental Setting

#### 3.4.1.1 Land Use

Yuma County, Arizona, covers 5,522 square miles of the southwest corner of Arizona (Arizona Department of Commerce [AZDC] 2007). Land use within Yuma County is dependent upon soil characteristics and water availability. BLM accounts for 14.8 percent of land ownership; Native American reservations, 0.2 percent; State of Arizona, 7.7 percent; private or corporate entities, 10.5 percent; and other public lands, 66.8 percent (AZDC 2007). Agriculture production is the principal land use in Yuma County.

**Table 3-3. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances<sup>1</sup>**

Noise Source	50 feet	100 feet	200 feet	500 feet	1000 feet
Backhoe	78	72	68	58	52
Crane	81	75	69	61	55
Dump truck	76	70	64	56	50
Excavator	81	75	69	61	55
Front end loader	79	73	67	59	53
Concrete mixer truck	79	73	67	59	53
Pneumatic tools	81	75	69	61	55
Auger drill rig	84	78	72	64	58
Bull dozer	82	76	70	62	56
Generator	81	75	69	61	55

Source: FHWA 2007 and GSRC

1. The dBA at 50 feet is a measured noise emission (FHWA 2007). The 100 to 1,000 foot results are estimates modeled by GSRC.

Mitigation measures discussed in Section 1.5 will minimize impacts during construction activities.

#### **3.4.1.2 Aesthetics**

Aesthetic and visual resources consist of the natural and man-made landscape features indigenous to the area that give a particular environment its visual characteristics. The Project is located near the Colorado River riparian corridor and prominent landscape features include man-made canals, levees, roads, and agriculture fields. Portions of the Project corridor have been recently cleared of vegetation as part of BLM's brush clearing efforts along the Colorado River in support of fire prevention and control, as well as USBP operations.

#### **3.4.2 Effects of the Project**

Construction and operation of TI will increase border security in the Project corridor and may result in a change of illegal traffic patterns. However, changes in illegal alien (IA) traffic patterns result from a myriad of factors and, therefore, are considered unpredictable and beyond the scope of this ESP.

##### **3.4.2.1 Land Use**

Approximately 25 acres of vegetation along the Colorado River will be permanently converted for USBP enforcement purposes. The remaining 8 acres are currently being used for USBP enforcement purposes. All the lands are managed by BLM. However, the canal and levee system are maintained by Reclamation. This direct impact will be localized and minor due to the vast amount of similar lands surrounding the Project corridor, and the fact that portions of the Project corridor are currently degraded by past and ongoing activities. Reclamation will still be capable of managing the nearby Colorado River levee system and, in fact, the TI will provide additional protection for this system.

### **3.4.2.2 Aesthetics and Recreation**

The construction of vehicle fence and construction road will have adverse impacts on the appearance of the Project corridor. Unimproved roads and canal levee construction near the Project corridor have already degraded the aesthetic value of the project area. The presence of construction equipment and use of portable lighting will have a minimal impact on appearance during construction. The Project will not substantially degrade the existing visual character of the region; thus, impacts are expected to be minimal.

## **3.5 SOILS**

### **3.5.1 Environmental Setting**

According to soil surveys and general soil maps for Yuma County, prepared by the Natural Resources Conservation Service (NRCS 1980), there are four soil associations composed of several corresponding soil types within the CV-1A segment. These associations are Holtville clay, Indio-Ripley-Lagunita silty soil, Rositas sands, and Glenbar silty clay loam.

The Holtville clay association is classified as deep, well drained, nearly level soil situated on floodplains. This association is utilized mainly for irrigated and non-irrigated crops such as hay, cotton, as well as vegetable crops. The Holtville clay association is classified as a prime farmland soil if it is irrigated and reclaimed of excess salts.

The Indio-Ripley-Lagunita association is classified as deep, nearly level to gently sloping, well drained and somewhat excessively drained, silty and sandy soils with sand to silt loam as the underlying material. This association is utilized mainly for irrigated farmland. Indio, Ripley, and Lagunita soils are prime farmland soils.

The Rositas sands association is classified as deep, somewhat excessively drained, nearly level to rolling soil on terraces, alluvial fans and sand dunes. The soil is predominantly used as rangeland, although some small areas may be used for irrigated cropland. The Rositas sands association is not classified as a prime farmland soil.

The Glenbar silty clay loam association is classified as deep, well drained, nearly level soil found on floodplains and low terraces. This association is used for irrigated hay, grain, cotton, and fruit and vegetable crops. The Glenbar loam is classified as prime farmland soil if it is irrigated and reclaimed of excess salts.

### **3.5.2 Effects of the Project**

The Project will have a direct, permanent impact and temporary impacts to 3.1 acres of Holtville clay soils, direct impact on 0.1 acre Indio-Ripley-Lagunita silty soils, direct, impact on approximately 9 acres of Rositas sands, and direct, permanent impact on 3.3 acres of Glenbar silty clay loam soils, and a direct, permanent impact on 18 acres of floodplain soils. These soils are common locally and regionally and have received some previous disturbance from the existing border road; therefore, negligible impacts are expected. Since none of the soils in the Project corridor are under agricultural production, none are considered prime farmlands.

Short-term impacts on soils, such as increased erosion, can be expected from the construction of roads; however, negligible additional impacts are expected from the Project. Long-term effects on soils will result from the compaction of the soils due to the construction of the vehicle fence and associated road and loss of biological production. Pre- and post-construction BMPs will be developed and implemented to reduce or eliminate erosion and potential downstream sedimentation. Compaction techniques and erosion control measures, such as waterbars, gabions, straw bales, and the use of rip-rap or sediment traps, will be some of the BMPs implemented.

The temporary operation of portable lights within the construction footprint will have no effect on soils. The potential exists for petroleum, oil, and lubricants (POLs) to be spilled during refueling of the portable lights' generators, adversely impacting soils; however, drip pans will be provided for the power generators to capture any POLs accidentally spilled during maintenance activities or leaks from the equipment; thus, the operation of the portable lights will have negligible impacts.

## **3.6 WATER USE AND QUALITY**

### **3.6.1 Hydrology and Groundwater**

#### **3.6.1.1 Environmental Setting**

The water budget comprises inflows and outflows to the ground-water system. The 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 [ADWR] 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, groundwater now discharges into the rivers instead of being recharged by the rivers. Groundwater levels in most of the Yuma area are higher now than they were in predevelopment time (Lacroix 2008). A ground-water 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 (ADWR 2007). The Yuma Basin aquifer experiences a groundwater deficit.

#### **3.6.1.2 Effects of the Project**

Water will be required for watering construction and access road surfaces to compact the road bed and minimize fugitive dust during construction activities. The volume of water used for construction of new fencing and new access roads is estimated to be 1.7 acre-feet per mile (554,000 gallons per mile) (Miranda 2006). Therefore, approximately 8.5 acre-feet of water will be required for the project in Yuma County. These withdrawals will occur over the entire construction period of about 3 months.

The Yuma Basin experiences an overdraft of groundwater resources; although the water needs are approximately 8.5 acre-feet, CBP will consider methods to avoid increasing this deficit such as, trucking water in from other sources, or using gray water from water treatment plants with tertiary treatment. 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 will be moderate. Inflow from canal seepage, agriculture return, and other sources will help offset this one time withdraw.

The fence and roads will be designed and constructed to ensure that natural drainage patterns are not altered. The roads will be surfaced with aggregate generated from within the Project corridor or brought on-site from off-site commercial borrow sites. Therefore, little impermeable surface will be created as a result of the construction of the fence and road and, thus, will not interfere with groundwater recharge.

### 3.6.2 Surface Waters and Waters of the U.S.

#### 3.6.2.1 Environmental Setting

The Project corridor is located in the Lower Colorado Basin. The Lower Colorado watershed (Arizona Department of Environmental Quality [ADEQ] # 15030107-001) is on the Arizona 2006 Section 303(d) list for non-compliance with dissolved oxygen (DO) and selenium water quality standards. The ADEQ has given the Lower Colorado watershed (# 15030107-001) a Category 5 overall assessment, which means that it is impaired for one or more public uses. Suspected causes of impairment for low DO are agricultural and urban runoff. It is not known if the selenium sources are natural or man-made; however, man-made sources of selenium in Arizona may include irrigated agriculture return flows and drainage; combustion of fossil fuels; coal mining; sulfide ore mining (copper, lead, zinc mines); or animal feed supplements (ADEQ 2006).

During the biological survey in August 2008 five wetland areas were identified within the Project corridor. Wetlands 1 through 4 (Figure 3-1) are located in the riparian zone of the Colorado River and comprise approximately 0.08 acres within the Project corridor. These wetlands contained both standing water from the Colorado River and saturated soil located on the upper edges of the wetlands. Common species observed included southern cattail (*Typha domingensis*), common reed (*Phragmites australis*), seep willow (*Baccharis salicifolia*), and Goodings willow (*Salix gooddingii*). Salt cedar (*Tamarix ramosissima*) and Fremont cottonwood (*Populus fremontii*) were observed along the upland edge of the wetlands (Photograph 3-1).



Photograph 3-1. Representative photograph of Wetlands 1 through 4

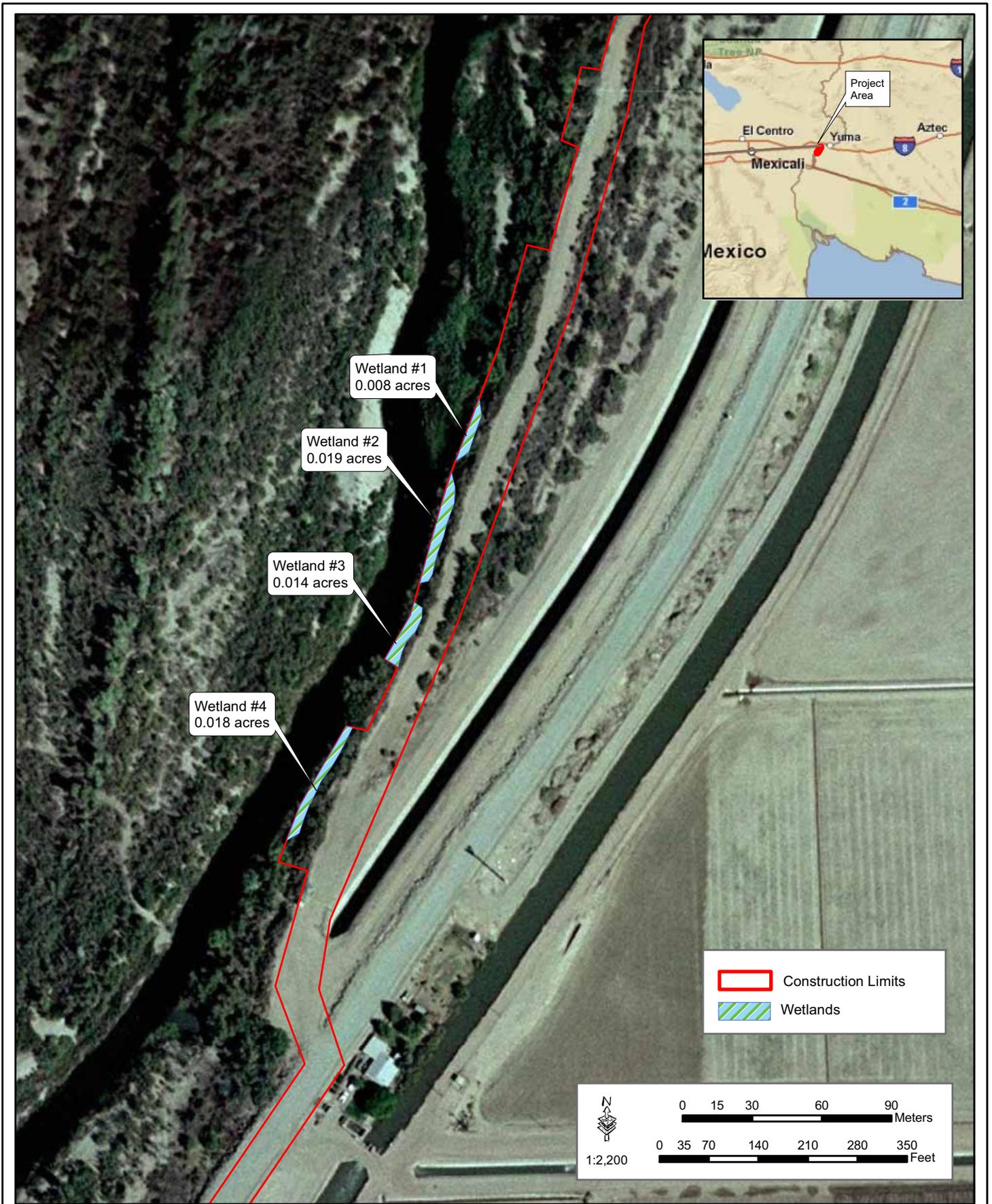


Figure 3-1: Wetlands in the Project Corridor



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Wetland #5 was a small (0.02 acre), isolated, depressional system (Figure 3-2) which appeared to be connected to the Colorado River via a small, shallow, overflow channel, terminating at the base of the existing road within the project area. This system, which contained very shallow standing water during the field investigation, was dominated by southern cattail and common reed.

### **3.6.2.2 Effects of the Project**

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the CWA, for TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the CWA as the basis for evaluating potential environmental impacts and appropriate mitigation.

The Project will have minimal impact on surface water quality. Some temporary water quality impairments may occur if there is a major rain event during the construction efforts. Construction activities can disturb soils, increasing the probability of sediment migration.

A SWPPP will be prepared and implemented prior to the start of construction activities. The SWPPP will identify the storm water drainage system for each discharge point, actual and potential pollutant contact, and surface water locations. The SWPPP will also incorporate storm water management controls and other BMPs. Implementation of the SWPPP and BMPs will minimize potential impact on surface water quantity and quality.

Construction equipment and operations may create miscellaneous operational pollution, such as oil leaks, mud spatters, and discards from human activities. The Government representative will ensure that an adequate number of latrines and covered trash cans are available at the job site, and that any leaks or spills from construction equipment are properly cleaned. BMPs for construction site soil erosion will be implemented to prevent the migration of soils, oil and grease, and construction debris into the local stream networks. Consequently, negligible adverse impact on surface water is expected.

## **3.6.3 Floodplains**

### **3.6.3.1 Environmental Setting**

Construction activities that occur within the 100-year floodplain are governed by the National Flood Insurance Act of 1968, as amended (42 USC 4001 et seq.), and the Flood Disaster Protection Act of 1973 (P.L. 93-234, 87 Stat. 975) and EO 11988. These statutes and EO are designed to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and preserve the beneficial values which floodplains serve. Although the Secretary's waiver means that CBP no longer has any specific legal obligations under these regulations, for the TI segment addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has

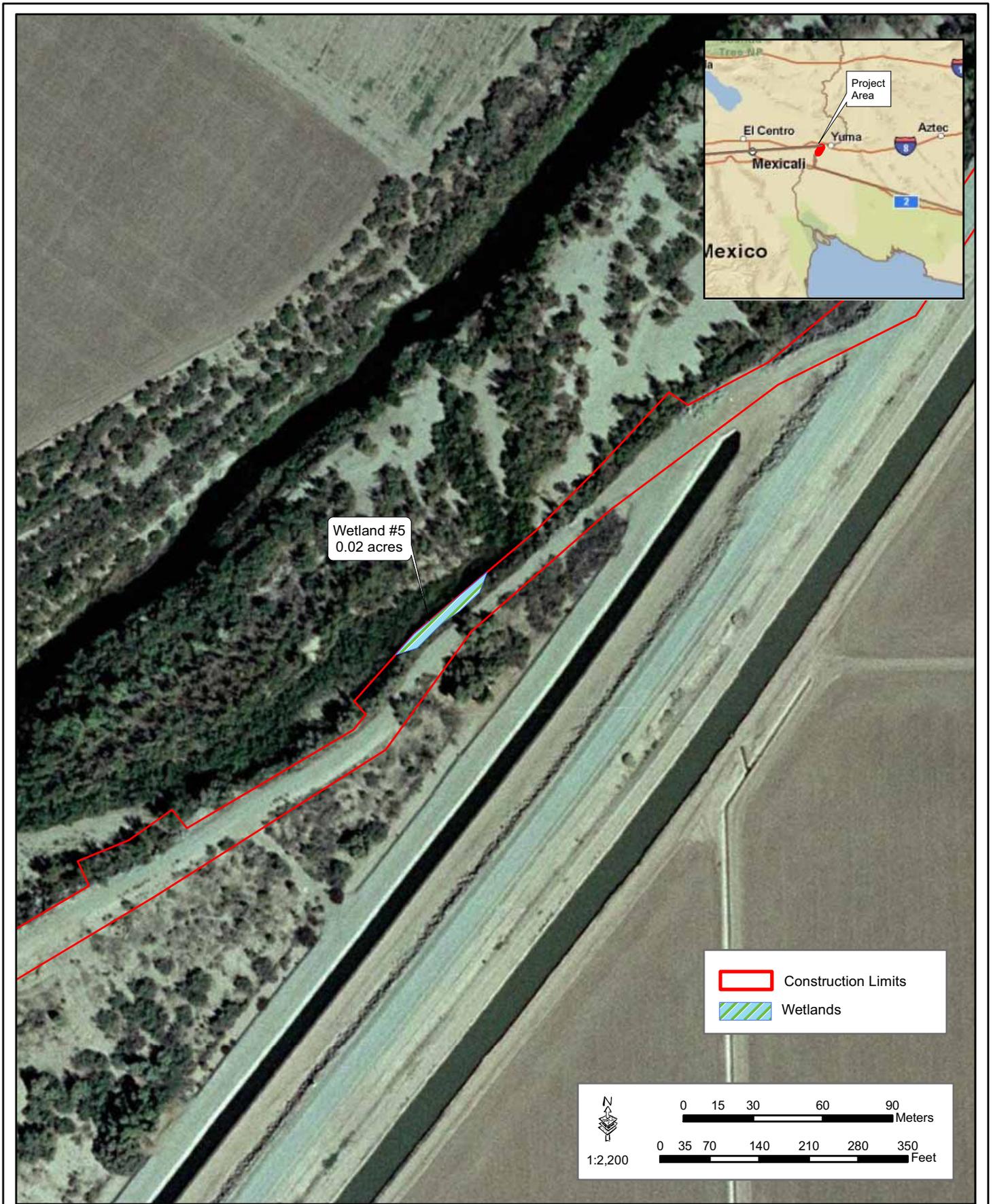


Figure 3-2: Wetlands in the Project Corridor



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applied the appropriate standards and guidelines associated with these regulations as the basis for evaluating potential environmental impacts and appropriate mitigation.

According to panel 040099-0875-B, 040099-0850-C, 040099-0975-C and 040099-1050-C of the FEMA floodplain maps (FEMA 1985), the Project corridor is almost entirely within the 100-year floodplain. All construction activities within or near the floodplain have been coordinated with USIBWC and the local FEMA Floodplain Manager in an attempt to avoid any conflicts or adverse effects. A general map of the 100-year floodplain within the region is presented as Figure 3-3.

### **3.6.3.2 Effects of the Project**

As indicated previously, the majority of the 5-mile CV-1A Project corridor is within the 100-year floodplain. The majority of the road and vehicle fence are adjacent to the levee west of the Salinity Canal and parallel to the flow of the floodplain. However, the portion of vehicle fence that extends from Morelos Dam to the levee is located perpendicular to the flow of the floodplain. CBP has determined that there is no other practicable alternative to constructing this section of the vehicle fence within the floodplain that meets USBP's mission and operational needs. A Normandy-style vehicle fence will be constructed in the area immediately east of Morelos Dam. This will allow the vehicle fence in this area to be removed during major rain and/or flooding events.

## **3.7 BIOLOGICAL RESOURCES**

### **3.7.1 Vegetation Resources**

#### **3.7.1.1 Environmental Setting**

The Project corridor lies within the Sonoran Desert biome located in the Lower Colorado River Valley subdivision (Brown 1994) and consists of two plant communities, specifically a riparian community immediately adjacent to the Colorado River and a creosotebush–bursage community on the upper shelf located east of the riparian zone.

There were four vegetation types observed in the Project corridor: 1) the Arrowweed/Quailbrush/Saltcedar type; 2) the Arrowweed/Saltcedar type; 3) the Goodings Willow/Cottonwood/Saltcedar type; and 4) the Athel Saltcedar type. These vegetation types are characteristically species poor and typically consist of a single canopy of low shrubs and sparse herbaceous cover. The Arrowweed/Quailbrush/Saltcedar vegetation type was found along the disturbed portion of the road. The Arrowweed/Saltcedar type was found within the riparian corridor of the Colorado River. The Goodings/Willow/Cottonwood/Saltcedar vegetation type was found immediately east of Morelos Dam and the Athel Saltcedar vegetation type was also found along the disturbed portion of the road.

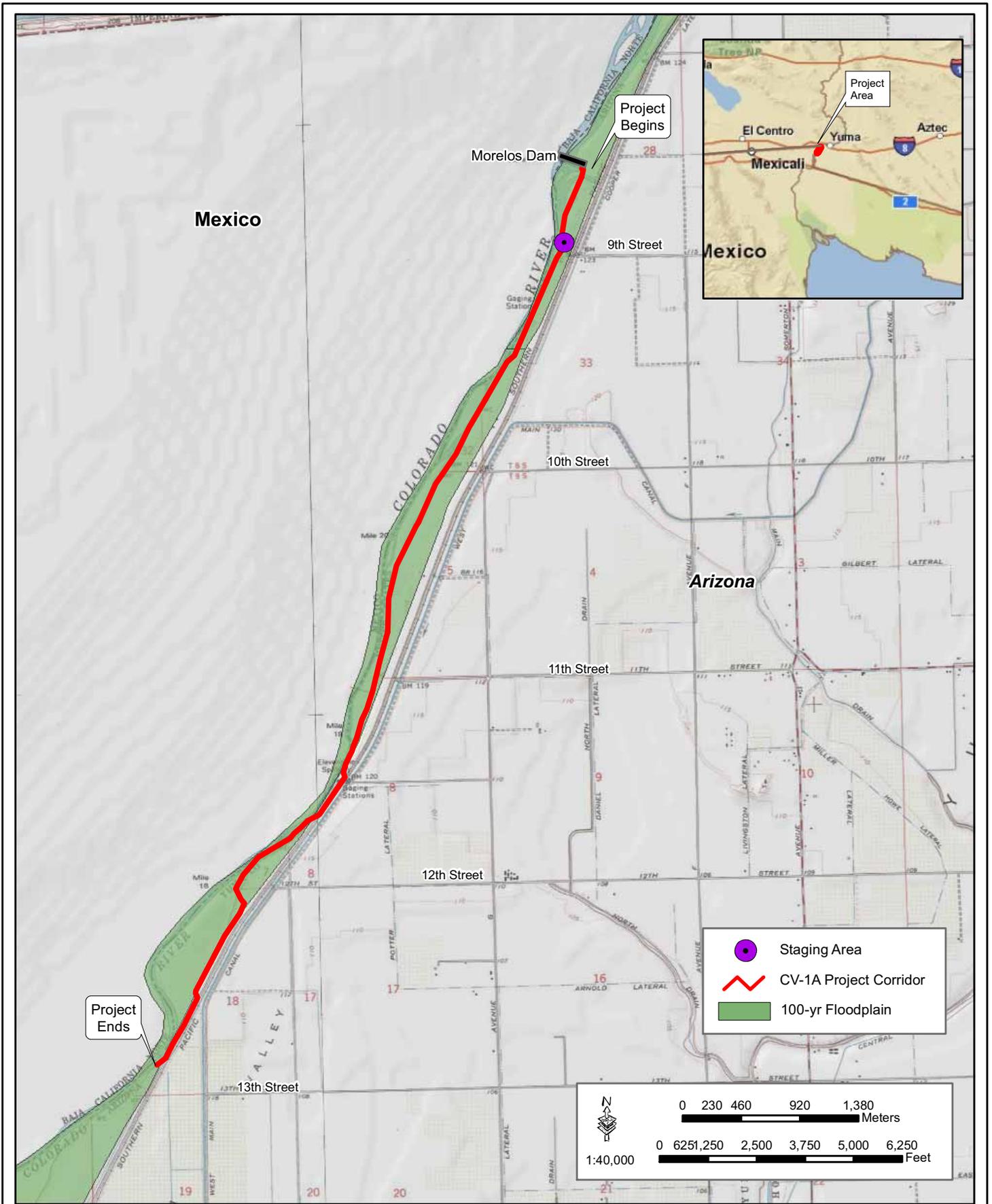


Figure 3-3: Floodplain in the Project Corridor

Common species found within the Arrowweed/Quailbrush/Saltcedar type are arrowweed (*Pluchea sericea*), quailbrush (*Atriplex lentiformis*), four-wing saltbush (*Atriplex canescens*), and saltcedar (Photograph 3-2). Species found in the Arrowweed/Saltcedar type include arrowweed, saltcedar, and four-wing saltbush. Plant species found in the Goodings Willow/Cottonwood/Saltcedar type include Fremont cottonwood, Gooding willow, southern cattail, and common reed (Photograph 3-3). The Athel Saltcedar type consists of Athel saltcedar (*Tamarix aphylla*) and common reed.



**Photograph 3-2. Arrowweed/Saltcedar Vegetation Type in the Project Corridor**



**Photograph 3-3. Goodings Willow/Cottonwood/Saltcedar Vegetation Type in the Project Corridor**

Non-native and invasive plant species within the CV-1A segment include salt cedar, Russian thistle (*Salsola kali*), Johnson grass (*Sorghum halepense*), and Bermuda grass (*Cynodon dactylon*).

### **3.7.1.2 Effects of the Project**

The Project will permanently alter 11.6 acres of the Arrowweed/Quailbrush/Saltcedar vegetation type, 12.1 acres of the Arrowweed/Saltcedar type, 0.9 acre of Goodings/Willow/Cottonwood/Saltcedar type, and 0.4 acre of the Athel Saltcedar vegetation type. Additionally, 8.4 acres within the Project corridor are disturbed levee road and have very limited vegetation. The Project will temporarily alter 0.4 acre of Arrowweed/Saltcedar type. These plant communities are both locally and regionally common, and the permanent loss of vegetation will not adversely affect the population viability or fecundity of any floral species. Therefore, impacts are expected to be negligible. Portions of the CV-1A segment were previously cleared via mowing and hand clearing of native vegetation (creosotebush, saltbush, arrowweed, and mesquite) and non-native invasive plant species (salt cedar) during the spring of 2008 by the National Guard as part of a BLM Environmental Assessment entitled *Vegetation Treatments in Limotrophe for Safety and Law Enforcement* (BLM 2008). The use of the staging area will temporarily impact 0.4 acre for the duration of the construction activities. Upon completion of the construction activities this temporary staging area will be rehabilitated using methods discussed in Section 1.5; therefore, impacts will be negligible.

The Project will also have temporary indirect impacts on vegetation. Fugitive dust emissions resulting from construction will affect photosynthesis and respiration of plants adjacent to the Project corridor. The magnitude of these effects will 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. Acute toxicity tests have been completed for PennzSuppress® to determine its effects on plant growth. Based upon these tests and the EPA's assessment of "low concern", PennzSuppress® is considered not to be harmful to plant growth (PennzSuppress® 2002).

The use of portable lighting could affect plant growth, but these effects will be temporary. As construction activities are completed within a particular area, the lights will be moved to the new construction area. It is anticipated that the temporary lights will not operate any longer than 4 weeks in one location, and no more than 12 light units will be used at once at each project location. Also, all lights will be removed from the Project corridor upon completion of construction activities, and the lights will be fitted with backlighting shields to minimize any stray light escaping to areas outside of the project area. Therefore, minor temporary impacts on vegetation from the use of portable lights are expected.

### **3.7.2 Wildlife Resources**

#### **3.7.2.1 Environmental Setting**

Although the Sonoran Desert generally supports a diverse assemblage of wildlife, the general lack of vegetative communities and low native plant diversity within the Project corridor limit the wildlife species that occur in the vicinity. Still, due to the proximity of the Colorado River riparian area, some wildlife species occur in the Project corridor.

For example, coyotes (*Canis latrans*) are extremely adaptable and likely occur throughout the Region of Influence (ROI). Small mammals typical of the region include black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), kangaroo rats (*Dipodomys* spp.), and pocket mice (*Perognathus* spp.). Several non-native bird species including, but not limited to, rock dove (*Columba livia*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesticus*) have become established in the region and are likely to be found near urban areas.

Reptiles are the most diverse animal group in the (Stebbins 2003). A wide variety of lizards will be expected to occur in the ROI, including the zebra-tailed lizard (*Callisaurus draconoides*), western whiptail lizard (*Cnemidophorus tigris*), desert iguana (*Dipsosaurus dorsalis*), chuckwalla (*Sauromalus obesus*), whiptails (*Cnemidopohorus* spp.), and several more common species. Snakes are also diverse and include several non-venomous species and six species of rattlesnake (*Crotalus* spp.). Although less common, desert tortoise (*Gopherus agassizii*) is also found in the ROI.

During recent biological field surveys of the entire Project corridor, 51 wildlife species were identified in the field survey conducted in June 2008 (Table 3-4).

Table 3-4. Species Identified During Field Survey

Common Name	Scientific Name
<b>BIRDS</b>	
Rock pigeon	<i>Columba livia</i>
Mourning dove	<i>Zenaida macroura</i>
White-winged dove	<i>Zenaida asiatica</i>
Common ground-dove	<i>Columbina passerina</i>
Eurasian collared dove	<i>Streptopelia decaocto</i>
American kestrel	<i>Falco sparverius</i>
Black phoebe	<i>Sayornis nigricans</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Black-tailed gnatcatcher	<i>Poliophtila melanura</i>
Western kingbird	<i>Tyrannus verticalis</i>
Abert's towhee	<i>Pipilo aberti</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Great-tailed grackle	<i>Quiscalus mexicanus</i>
Bronzed cowbird	<i>Molothrus aeneus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Gambel's quail	<i>Callipepla gambelii</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Common raven	<i>Corvus corax</i>
Pied-billed grebe	<i>Podilymbus podiceps</i>
Great blue heron	<i>Ardea herodias</i>
Snowy egret	<i>Egretta thula</i>
Cattle egret	<i>Bubulcus ibis</i>
Green heron	<i>Butorides virescens</i>
Common moorhen	<i>Gallinula chloropus</i>
American coot	<i>Fulica americana</i>
Black-necked stilt	<i>Himantopus mexicanus</i>
Killdeer	<i>Charadrius vociferus</i>
Crissal thrasher	<i>Toxostoma crissale</i>
Ladder-backed woodpecker	<i>Picoides scalaris</i>
Gila woodpecker	<i>Melanerpes uropygialis</i>
Costa's Hummingbird	<i>Calypte costae</i>
Turkey vulture	<i>Cathartes aura</i>
Burrowing owl	<i>Athena cunicularia</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Common yellowthroat	<i>Geothlypis trichas</i>
House finch	<i>Carpodacus mexicanus</i>
Song sparrow	<i>Melospiza melodia</i>
Blue grosbeak	<i>Passerina caerulea</i>
Western meadowlark	<i>Sturnella neglecta</i>
Bullock's oriole	<i>Icterus bullockii</i>
Lesser goldfinch	<i>Carduelis psaltria</i>
Verdin	<i>Auriparus flaviceps</i>
<b>MAMMALS</b>	
Round-tailed ground squirrel	<i>Spermophilus tereticaudus</i>
Audubon's cottontail	<i>Sylvilagus audubonii</i>

Table 3-4, continued

Common Name	Scientific Name
Common Raccoon	<i>Procyon lotor</i>
Coyote	<i>Canis latrans</i>
American beaver	<i>Castor canadensis</i>
<b>REPTILES</b>	
Long-tailed brush lizard	<i>Urosaurus graciosus</i>
Western whiptail	<i>Cnemidophorus tigris</i>

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### 3.7.2.2 Effects of the Project

The Project will permanently impact approximately 25 acres of potential wildlife habitat. These impacts are considered negligible, as some of the project components occur near and within previously disturbed areas (e.g., existing roads and agricultural areas) and the wildlife habitats are locally and regionally common.

The Project will not have direct impacts on fish or other aquatic species, because the construction activities will not take place in naturally flowing or standing water. Mitigation measures will be implemented for construction in or near washes to reduce potential impacts on riparian areas from erosion or sedimentation.

Mobile animals (e.g., birds) will escape to areas of similar habitat, while individuals of 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 Project will not result in any substantial reduction of the breeding opportunities for birds and other animals on a regional scale due to the suitable, similar habitat adjacent to the Project corridor. Additionally, mitigation measures will be implemented to ensure minimal impacts on migratory birds.

Increased noise during construction activities could have short-term impacts on wildlife species (e.g., coyote, raccoon, and Audubon's cottontail). 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 to 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 will 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 will be conducted during daylight hours to the maximum extent practicable, short-term impacts of noise on wildlife species are expected to be minimal to moderate.

The operation of portable lights could potentially affect wildlife. Some species, such as insectivorous bats, may benefit from the concentration of insects that will be attracted to the lights. However, the portable lights will only illuminate a minimal amount of area (200 feet per light), will be fitted with backlighting shields, and will be temporary. Any adverse and beneficial effects of lighting on reptiles and amphibians are currently unknown (Rich and Longcore 2006). However, the temporary exposure to light as a result of the Project will not significantly alter circadian rhythms in mammals and birds. This artificial lighting may cause activity levels of diurnal animals to increase; however, any increase will not create major impacts (Rich and Longcore 2006). It is anticipated that the temporary lights will not operate any longer than 4 weeks in one location and no more than 12 light units will be used at once at each project location. The generators used for these lights produce noise levels as high as 75 dBA within 20 feet of the generators, but attenuate to acceptable levels of 65 dBA at 75 feet (Caltrans 1998). Noise emissions from the generators will create minimal temporary impacts. Wildlife will not be exposed to a nighttime lighting source once the project is complete. Therefore, impacts on wildlife are expected to be negligible and temporary as a result of the operation of portable lights. Beneficial indirect impacts will be expected from the protection afforded areas east of the Project corridor.

Construction and operation of TI will increase border security in the Project corridor and may result in a change to IA traffic patterns. However, changes to IA traffic patterns result from a myriad of factors and, therefore, are considered unpredictable and beyond the scope of this ESP.

### **3.7.3 Protected Species**

#### **3.7.3.1 Environmental Setting**

USFWS is the primary agency responsible for implementing the ESA and is responsible for birds and other terrestrial and freshwater species. USFWS has identified species that are listed as threatened or endangered as well as candidates for listing as a result of identified threats to their continued existence. Although not protected by the ESA, candidate species may be protected under other Federal or state laws. Some species can be identified as a conservation agreement species, for which USFWS cooperates with other Federal agencies to implement conservation measures to prevent official listing of species.

Seven Federally threatened and endangered species, one candidate species for Federal protection, and one conservation agreement species inhabit Yuma County, Arizona (Table 3-5) (USFWS 2008; Appendix E). Three of these species have the potential to occur within the Project corridor, the Southwestern willow flycatcher, Yellow-billed cuckoo, and Yuma clapper rail. The razorback sucker has the potential to occur within the Colorado River and riparian areas adjacent to the Project corridor.

**Table 3-5. Federally Listed Species Potentially Occurring Within Yuma County, Arizona**

Common/Scientific Name	Federal Status	Habitat	Potential to occur within Project Corridor
<b>BIRDS</b>			
<b>Bald eagle (wintering population)</b> <i>Haliaeetus leucocephalus</i>	Threatened*	Large trees or cliffs near water (reservoirs, rivers, and streams) with abundant prey.	No – No suitable habitat or known occurrences.
<b>California brown pelican</b> <i>Pelecanus occidentalis californicus</i>	Threatened, Proposed delisted	Coastal land and islands; species found around many Arizona lakes and rivers.	No – No suitable habitat or known occurrences.
<b>Southwestern willow flycatcher</b> <i>Empidonax traillii extimus</i>	Endangered	Thickets, scrubby and brushy areas, open second growth, and riparian woodland.	Yes – Potential habitat occurs in the Arrowweed/Saltcedar vegetation type and the Goodings Willow/Cottonwood/Saltcedar type
<b>Yellow-billed cuckoo</b> <i>Coccyzus americanus</i>	Candidate	Dense willow and cottonwood mature trees in riparian areas and pockets of low, dense shrubby vegetation.	Yes – Potential habitat occurs in the Goodings Willow/Cottonwood/Saltcedar vegetation type
<b>Yuma clapper rail</b> <i>Rallus longirostris yumanensis</i>	Endangered	Marshes with stands of cattail and bulrush.	Yes – Wetland areas within the Project corridor.
<b>FISHES</b>			
<b>Razorback sucker</b> <i>Xyrauchen texanus</i>	Endangered	Backwaters, sloughs, oxbow lakes, and seasonally inundated floodplain. Limited to the mainstream of the Colorado River, Lake Mohave, and upstream Lake Mead.	No – However, potentially suitable habitat occurs along the Colorado River 0.4 mile to the west
<b>REPTILES</b>			
<b>Flat-tailed horned lizard</b> <i>Phrynosoma mcallii</i>	Conservation Agreement Species	Lower Colorado River subdivision of the Sonoran desert scrub community.	No – No suitable habitat.
<b>MAMMALS</b>			
<b>Lesser long-nosed bat</b> <i>Leptonycteris curasoae</i>	Endangered	Desert scrub habitat with agave and columnar cacti present as food plants.	No – No suitable habitat.
<b>Sonoran pronghorn</b> <i>Antilocapra americana sonoriensis</i>	Endangered	Broad alluvial valleys with creosote-bursage and palo verde-mixed cacti vegetation.	No – No suitable habitat.

**Source:** USFWS 2008 (Appendix E) and CBP 2008a.

Note: \*Once endangered, this species was downlisted to threatened on August 11, 1995, and delisted August 8, 2007. Threatened status reinstated for desert nesting bald eagles.

Of these five species, two currently have designated critical habitat within Yuma County; however, no critical habitat is located in or near the Project corridor.

The Arizona Game and Fish Department (AGFD) Natural Heritage Program maintains a list of Wildlife of Special Concern (WSC) in Arizona. This list includes fauna whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or

population declines (AGFD 2008). These species are not necessarily the same as those protected by the Federal government under the ESA. Of the 18 WSC species known to occur in Yuma County, none are likely to occur within the Project corridor. Eight bird species and one bat species listed as WSC are likely to occur within the riparian areas of the Lower Colorado River. Additionally, one fish species is likely to occur within the Colorado River. These species could occur near the Project corridor, but are not likely to use the agricultural fields that comprise parts of the Project corridor. Agriculture crops do not provide the quality of habitat found along the Colorado River.

The Arizona Department of Agriculture (ADA) maintains a list of protected plant species within Arizona. The 1999 Arizona Native Plant Law defined five categories of protection within the state. These include: Highly Safeguarded (HS), no collection allowed; Salvage Restricted (SR), collection only with permit; Export Restricted, transport out of state prohibited; Salvage Assessed, permit required to remove live trees; and Harvest Restricted, permit required to remove plant by-products (ADA 2008). Of the nine HS or SR status species, none have the potential to occur in habitats within or near the Project corridor.

### **3.7.3.2 Effects of the Project**

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the ESA, for the TI segment addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the ESA as the basis for evaluating potential environmental impacts and appropriate mitigation.

Indirect impacts could occur on the species in the Colorado River and adjacent riparian areas. The Project may affect, but is not likely to adversely affect, the southwestern willow flycatcher and yellow-billed cuckoo. No effects to the Yuma clapper rail are expected as part of the Project. The greatest impact will be the removal of habitat through the construction of the vehicle fence and associated construction road. However, an abundance of similar habitat exists both locally and regionally, and the removal of approximately 14 acres of potential habitat for southwestern willow flycatcher and approximately 1 acre for yellow-billed cuckoo is considered minimal. Additionally, the Project corridor is disturbed and is in close proximity to agricultural development. CBP will be clearing the Project corridor in non-breeding and non-migratory season. Therefore, any potential impacts on individuals or habitat as a result of the construction of the vehicle fence and associated road is expected to be minor. Beneficial indirect impacts will be expected from the protection afforded to areas east of the Project corridor.

No designated critical habitat exists within the Project corridor; therefore, the Project will have no effect on critical habitat. As discussed in Section 1.5 of this ESP, construction BMPs will be implemented to further reduce any effects, which could include preconstruction surveys for migratory birds during nesting season and, as deemed necessary, use of biologists to monitor construction progress.

Construction and operation of the vehicle fence will increase border security in the Project corridor and may result in a change of illegal traffic patterns. However, changes in IA traffic patterns result from a myriad of factors and, therefore, are considered unpredictable and beyond the scope of this ESP.

### **3.8 CULTURAL RESOURCES**

#### **3.8.1 Environmental Setting**

The Lower Colorado River Valley and surrounding regions have a long history of human occupation and settlement. The cultural overview of the region was described in detail in the Cultural Resources Survey Report for the CV-1A Segment of a Proposed Vehicle Fence along the Colorado River, West of Yuma, Yuma County, Arizona and are incorporated herein by reference (CBP 2008b). Briefly, the cultural history of the area is usually discussed in periods: Paleo-Indian, the Early, Middle and Late Archaic periods (from 7,500 B.C. and A.D. 150), the Ceramic Period (A.D. 150 to 1500), the Protohistoric Period, and the Historical Period. Cultural remains have been documented in the region from about 10,000 B.C. to the present (Stone 1991). Historical remains dating to the late 19<sup>th</sup> and early 20<sup>th</sup> centuries have also been recorded.

A records review and cultural resources survey were conducted in order to identify any cultural resources that may be impacted by the Project. Cultural resources surveys were conducted within the Project corridor in June and August 2008. Three previous cultural resources surveys are recorded within 1-mile of the Project (CBP 2008b). These surveys, along with other work, have identified 11 archaeological sites within 1-mile of the Project. These sites consist of historic canal and levee structures, a wooden bridge, a spillway and residence, a historic railroad, along with historic and multicomponent artifact scatters. No new archaeological sites and only four isolated occurrences were identified within the area of potential effect (APE) and recorded as part of the present survey. These occurrences include bottle bases, a culvert, and a pipe.

#### **3.8.2 Effects of the Project**

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the National Historic Preservation Act (NHPA), for TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the NHPA as the basis for evaluating potential cultural effects and appropriate avoidance and/or mitigation measures.

The Project will have no adverse effect on any known cultural resources sites within the APE. If any cultural material is discovered during the Project, then all construction activities will be halted in the vicinity of the discovery until a qualified archaeologist assesses the cultural remains and the appropriate entities are notified.

## 3.9 SOCIOECONOMICS

### 3.9.1 Environmental Setting

The ROI for the TI construction is defined as Yuma County, Arizona, which is part of the Yuma Metropolitan Statistical Area. Yuma is one of 15 counties in Arizona. Its 2005 population of 181,598 ranked 6<sup>th</sup> in the state (Bureau of Economic Analysis [BEA] 2007a). The racial mix of Yuma County is mainly composed of Caucasians (71.6 percent), followed by people claiming to be some race other than Caucasian, African American, Native American, Asian, Native Hawaiian, or other Pacific Islander (21.5 percent), and people claiming to be two or more races (2.1 percent). The remaining 4.8 percent is split among African Americans, Native Americans, Asians, and Native Hawaiians or other Pacific Islanders. More than half of the total estimated 2006 population of Yuma County (55.9 percent) claim to be of Hispanic origin (U.S. Census Bureau 2006).

The total number of jobs in Yuma County in 2005 was 72,746 (BEA 2007b). The largest number of people employed in Yuma County in 2005 worked in government or government enterprises, followed by forestry, fishing, and related activities, state and local government, and retail trade (BEA 2007b). The 2006 estimated average annual unemployment rate for Yuma County was 9.2 percent.

In 2005, Yuma County had a per capita personal income (PCPI) of \$21,005 (BEA 2007a). This PCPI ranked 9<sup>th</sup> in the state and was 70 percent of the state average, \$30,019, and 61 percent of the national average, \$34,471. Total personal income (TPI) of an area is the income that is received by, or on behalf of, all the individuals who live in that area. In 1995, the TPI of Yuma County was \$2.2 billion and ranked 4<sup>th</sup> in the state.

### 3.9.2 Effects of the Project

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under EO 12898 and EO 13045 for the TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the EOs as the basis for evaluating potential environmental impacts and appropriate mitigation.

The Project will have no impacts, direct or indirect, on long-term population or employment. The total cost of this project is approximately \$5 million, but the amount that will be spent in the local area can be assumed to be between 15 and 30 percent of the total project cost. These expenditures are subject to economic multiplier effects, which will have overall beneficial, short-term impacts on the economy within the ROI.

The Yuma County community will benefit from effective enforcement operations across the project area. Overall, construction of the vehicle fence will be expected to reduce adverse impacts currently experienced by local law enforcement and the emergency

response community. The Project will provide additional protection from illegal vehicle traffic, lower crime, and potentially improve the quality of life along the border.

Construction and operation of TI will increase border security in the Project corridors and may result in a change of illegal traffic patterns. However, changes in IA traffic patterns result from a myriad of factors and, therefore, are considered unpredictable and beyond the scope of this ESP.

### **3.10 ROADWAYS AND TRAFFIC**

#### **3.10.1 Environmental Setting**

The CV-1A Project corridor runs adjacent to Salinity Road/Levee, which connects the towns of Yuma, Gadsden, and San Luis with direct routes and access roads to U.S. 95 (Figure 3-4). U.S. 95 provides a direct to Interstate 8 (I-8) in Yuma. Traffic flow is usually low on these roads, because most vehicular movement in the region occurs on U.S. 95 and I-8. Transportation routes to and from the Project corridor include U.S. 95, West 16<sup>th</sup> Street. West County 9<sup>th</sup> Street will likely be used to access the Project corridor, however, a number of routes to and from the Project corridor may be used, depending on the work location and logistical needs.

#### **3.10.2 Effects of the Project**

Under the Project, vehicle fence and associated roads will be constructed to assist USBP in maintaining a secure border. Construction and staging for the access roads and fencing will create a minor short-term impact on roadways and traffic within the Project corridor. An increase in vehicular traffic will result from the transport of supply materials and work crews for the entire construction period, ending in December 2008. An increase of approximately 10 commuter vehicles and three equipment trucks daily will only increase the traffic count by 26 vehicle trips per day. Therefore, the Proposed Action Alternative will have a negligible effect on the AADT at the I-8 and U.S. 95 interchanges. Once the staging area is established, traffic near the construction site will increase from the influx of construction workers and new materials. The staging area will be established off the main road, and will not disrupt the flow of traffic.

No anticipated long-term impacts on traffic are expected from the installation of the TI. After construction work is completed, occasional maintenance visits to each site will be required. These visits will not increase normal traffic activity locally or regionally.

### **3.11 HAZARDOUS MATERIALS AND WASTE**

#### **3.11.1 Environmental Setting**

Solid and hazardous wastes are regulated in Arizona by a combination of mandated laws promulgated by the Federal, state, and regional Councils of Government. EPA provides information on environmental activities that may affect air, water, and land within the U.S. Information on hazardous waste sites, waste storage/treatment facilities, and former industrial manufacturing sites are a few of the specifics that can be found in

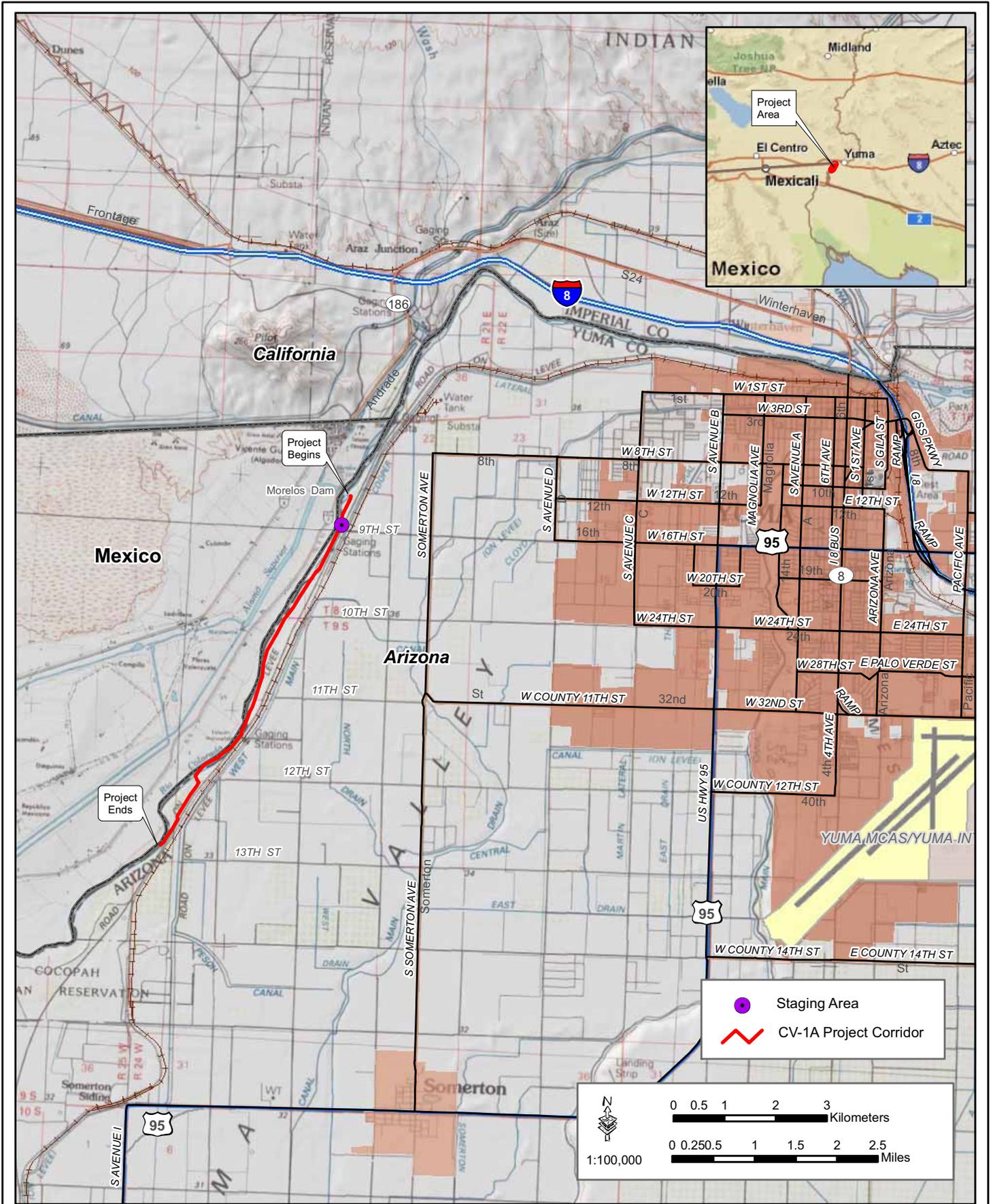


Figure 3-4: Transportation Routes near the Project Corridor

various databases and on-line systems such as the Superfund Information System, the Environmental and Compliance History Online and the Envirofacts Data Warehouse. Chemical contaminants released into the environment (air, soil, water, or groundwater) from hazardous waste sites and facilities may include heavy metals, organic compounds, solvents, and other chemicals. The potential adverse impact of hazardous waste sites on human health is a considerable source of concern to the general public, as well as government agencies and health professionals. These databases were reviewed for the locations of hazardous waste sites within or near the Project corridor (EPA 2008b, 2008c, 2008d). According to these online database resources, three hazardous waste small quantity generators are within 2 miles of the Project corridor; however, no hazardous waste sites or facilities not currently in EPA compliance are located within 1 mile of the Project corridor. During biological surveys, no visual evidence of hazardous materials was discovered within the Project corridor.

### **3.11.2 Effects of the Project**

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under RCRA and CERCLA for the TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with RCRA and CERCLA as the basis for evaluating potential environmental impacts and appropriate mitigation.

No recognized environmental conditions have been observed or are expected to occur within the Project corridor. Petroleum, oils, and lubricants will be stored properly and within designated containers, which will include primary and secondary containment measures. Clean-up materials (e.g., oil mops), in accordance with the project's SPCCP, will also be maintained at the site to allow immediate action in case an accidental spill occurs. Drip pans will be provided for the power generators and other stationary equipment to capture any POL that is accidentally spilled during maintenance activities or leaks from the equipment.

Sanitary facilities will be provided during construction activities, and waste products will be collected and disposed of by licensed contractors. No gray water will be discharged to the ground. Disposal contractors will use only established roads to transport equipment and supplies; all waste will be disposed of in accordance with the contractor's permits. Because the proper permits will be obtained by the licensed contractor tasked to handle any unregulated solid waste, and because all of the unregulated solid waste will be handled in the proper manner, no hazards for the public are expected through the transport, use, or disposal of unregulated solid waste.

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**SECTION 4.0**  
***BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES***

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## **4.0 BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES**

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It is CBP's policy to reduce impacts through the sequence of avoidance, minimization, mitigation, and finally, compensation. Mitigation efforts vary and include activities such as restoration of habitat in other areas and implementation of appropriate BMPs. CBP coordinates its environmental design measures with the appropriate Federal and state resource agencies, as appropriate. Both general BMPs and species-specific BMPs have been developed during the preparation of this ESP.

This section describes those measures that may be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated by CBP as standard operating procedures on past projects. Appendix B contains the BRP, which includes the full list of environmental design measures and BMPs that will be incorporated as part of the Project to alleviate or minimize impacts to wildlife. Below is a summary of BMPs for each resource category that will be potentially affected. The mitigation measures will be coordinated with the appropriate agencies and land managers or administrators, as appropriate. Table 4-1 provides an overview of potential environmental impacts by specific resource areas. Other BMPs are discussed in the following paragraphs.

### **4.1 GENERAL CONSTRUCTION ACTIVITIES**

BMPs will be implemented as standard operating procedures during all construction activities. These BMPs 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 following accepted 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 petroleum liquids (e.g., fuel) or material listed on 40 CFR 302 Table 302.4 of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies for informational purposes. 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 construction personnel will be briefed on the implementation and responsibilities of this plan.

**Table 4-1. Potential Environmental Impacts by Specific Resource Areas**

<b>Resource Area</b>	<b>Best Management Practices/Mitigation</b>
<b>Air Quality</b>	Dust Control Plan. Fire Prevention and Suppression Plan. Maintain equipment according to specifications.
<b>Noise</b>	Equipment will be operated on an as-needed basis. A majority of the activities will occur away from population centers. The duration of construction near residential areas will be limited.
<b>Land Use and Aesthetics</b>	No mitigation necessary. .
<b>Soils</b>	Dust Control Plan, SWPPP.
<b>Hydrology and Groundwater</b>	SPCCP and CM&R plans.
<b>Surface Waters and Waters of the United States</b>	SWPPP and CBP will provide appropriate mitigation for wetland impacts.
<b>Floodplains</b>	Coordination with USIBWC and the local FEMA Floodplain Manager.
<b>Vegetation Resources</b>	Fire Suppression and Prevention Plan. Biological monitor on site during construction to ensure all BMPs and mitigation plans are followed.
<b>Wildlife and Aquatic Resources</b>	Construction will occur outside of the nesting/breeding season. No mitigation required.
<b>Threatened and Endangered Species</b>	Construction will occur outside of the nesting/breeding season of the southwestern willow flycatcher and yellow-billed cuckoo, and Yuma clapper rail. Restore or replace riparian habitat for Southwestern willow flycatcher (Appendix B).
<b>Roadways and Traffic</b>	No mitigation necessary.
<b>Cultural Resources</b>	No mitigation necessary.

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.

Solid waste receptacles will be maintained at staging areas. 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.

The perimeter of all areas to be disturbed during construction or maintenance activities will be clearly demarcated using flagging or temporary construction fence, and no disturbance outside of that perimeter will be authorized.

## **4.2 AIR QUALITY**

Standard construction BMPs, such as routine watering of the construction/access roads, will be used to control fugitive dust during the construction phases of the Project. Additionally, all construction equipment and vehicles will be maintained in good operating condition to minimize exhaust emissions.

## **4.3 NOISE**

Construction equipment will possess properly working mufflers and will be maintained properly to reduce backfires. All 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.

## **4.4 SOILS**

Vehicular traffic associated with the construction activities will remain on established roads to the maximum extent practicable. Areas with highly erodible soils will be given special consideration when designing the Project to ensure incorporation of various BMPs, such as, straw bales, aggregate materials, and wetting compounds, to control erosion. A SWPPP will be prepared prior to construction activities and BMPs described in the SWPPP will be implemented to reduce erosion.

Materials such as gravel or topsoil will be obtained from existing developed or previously used sources not from undisturbed areas adjacent to the project area.

## **4.5 WATER RESOURCES**

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease if necessitated by heavy rains, and will not resume until conditions are suitable for the movement of equipment and material. The refueling of machinery will be completed following accepted guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. No refueling or storage will take place within 100 feet of any drainage. Other mitigation measures will be implemented, such as straw bales (weed and seed free), silt fencing, aggregate materials, wetting compounds, and re-vegetation with native plant species, where possible, to decrease erosion and sedimentation. Furthermore, a SWPPP will be completed before construction is initiated.

CBP will coordinate with the USACE, Los Angeles District for the mitigation of approximately 0.08 acre of potential jurisdictional wetlands.

#### **4.6 BIOLOGICAL RESOURCES**

Construction equipment will be cleaned using BMPs prior to entering and departing the Project corridor to minimize the spread and establishment of non-native invasive plant species.

A qualified biologist (i.e., professional biologist with education and training in wildlife biology or ecology) will monitor construction operations to ensure adherence with the BMPs and provide advice to the construction contractor as needed.

If an individual of a Federally protected species is found in the designated project area, work will cease in the area of the species until either a qualified environmental monitor can safely remove the individual in accordance with accepted species handling protocols, or it moves away on its own. The environmental monitor will document all occurrences and resulting activities and incorporate that documentation into the Project Report. Federally protected, species-specific measures, if any, resulting from the completion of the relevant BRP, will be implemented by the Design-Build Contractor as required.

General and species specific BMPs outlined in the BRP will be adhered to as part of the Project (Appendix B).

If construction or maintenance activities continue at night, all lights will be shielded to direct light only onto the area required for worker safety and productivity. The minimum wattage needed will be used and the number of lights will be minimized.

#### **4.7 CULTURAL RESOURCES**

All construction will be kept in areas previously surveyed for cultural resources. If any cultural material is discovered during the Project, then all construction activities will be halted in the vicinity of the discovery until a qualified archaeologist assesses the cultural remains and the appropriate entities are notified. The construction contractor may continue to work in areas that have also been previously surveyed for cultural resources, unless further cultural materials are discovered in these areas.

**SECTION 5.0**  
**RELATED PROJECTS AND POTENTIAL EFFECTS**





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## 5.0 RELATED PROJECTS AND POTENTIAL EFFECTS

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### 5.1 INTRODUCTION

This section of the ESP addresses the potential cumulative impacts associated with the implementation of the Project and other projects/programs that are planned for the region.

USBP has been conducting law enforcement actions along the border since its inception in 1924, and has continually transformed its methods as new missions, IA 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 on 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 funding and implementation of CBP's environmental conservation measures, use of biological and archaeological monitors, and restoration activities, adverse impacts of future and ongoing projects will be prevented or minimized. However, recent, ongoing, and reasonably foreseeable proposed projects will result in cumulative impacts. General descriptions of these types of activities are discussed in the following paragraphs.

***Cumulative Fencing along Southwestern Border.*** There are currently 62 miles of landing mat pedestrian fence at various locations along the U.S./Mexico border (CRS 2006); approximately 30 miles of single, double, and triple pedestrian fence in San Diego, California and Yuma, Arizona; vehicle fence in Arizona; and pedestrian fences at POE facilities throughout the southern border. In addition, 225 miles of fence are currently being planned and built in Texas, New Mexico, Arizona, and California.

***Past Actions.*** Past actions are those within the cumulative effects analysis areas that have occurred prior to the development of this ESP. The effects of these past actions are generally described throughout the previous sections. For example, extensive farming use in the areas surrounding the CV-1A segment has contributed to the existing environmental conditions of the area.

***Present Actions.*** Present actions include current or funded construction projects, USBP or other agency actions in close proximity to the planned vehicle fence locations 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:

- Construction of Primary Fence - The FY 2007 DHS Appropriations Act provided \$1.2 billion for the installation of fencing, infrastructure, and technology along the border (CRS 2006). By December 31, 2008 CBP will have constructed up to 225 miles of primary fence and up to 300 miles of vehicle fence in all southwest border Sectors except Laredo.
- Secure Border Initiative Projects – The Secure Border Initiative (SBI) is a comprehensive multi-year plan established by DHS to secure America’s borders and reduce illegal migration. *SBI<sub>net</sub>* is responsible for the development, installation and integration of technology solutions, and SBI TI develops and installs physical components designed to secure the border consisting of the following major components: pedestrian fence, vehicle fence, roads, lights, and vegetation control. *SBI<sub>net</sub>* will improve deterrence, detection, and apprehension of illegal aliens into the U.S. When fully implemented, *SBI<sub>net</sub>* and SBI TI will improve ability of CBP personnel to rapidly and effectively respond to illegal cross border activity and help DHS and CBP to manage, control, and secure the Nation’s borders. SBI TI 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 completed in FY 2008.
- CBP Enforcement Zone – CBP is currently constructing a 9-mile enforcement zone near San Luis, Arizona (20 acres). The enforcement zone includes primary and secondary fence, all-weather road, safety fence, and permanent lighting. The enforcement zone should be completed in FY 2009.

***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<sub>net</sub> Projects - Potential future *SBI<sub>net</sub>* 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<sub>net</sub>* is planning to construct approximately 16 towers in Yuma and Imperial counties in FY 2009.

Other CBP Projects:

- USBP Facilities – CBP is also planning to construct a new USBP station in Wellton, Arizona (43 acres).
- Primary Pedestrian Fence – CBP is planning to construct primary pedestrian fence within the USBP El Centro Sector. This fence will start at the western end of the C-1 segment of the current Project corridor and

extend westward in six different segments that total 44.6 miles. CBP recently constructed 14 miles of primary pedestrian fence within the USBP Yuma Sector and are planning or constructing approximately 25 miles of primary pedestrian fence within the USBP Tucson Sector.

- Vegetation Clearing along the Colorado River – USBP is cooperating with BLM and the Cocopah and Quechan Indian Nations to remove invasive plants and trees along the Colorado River. The entire area to be cleared is approximately 3,000 acres and current plans are to replant the area with native vegetation.
- Lighting Projects – USBP plans to install permanent lights along the U.S./Mexico border within Imperial County and other areas within Yuma County where the need for additional security is identified.

In addition, CBP 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 cross border violators.

ADOT and the Yuma Metropolitan Planning Organization (YMPO) planned improvements for Yuma County through 2009 are:

- The establishment of a new port of entry (POE) at the U.S./Mexico international border which will be a new "commercial vehicles only" crossing, approximately 5 miles east of the existing port of entry south of San Luis, AZ (YMPO 2008a)
- ADOT also plans to construct the Area Service Highway, 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 (YMPO 2008b, ADOT 2008a).
- ADOT is currently constructing the new State Route 195 (ADOT 2008b). Construction on the first segment that will connect 40th Street to I-8 along Araby Road is scheduled to conclude mid-summer 2008.

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 (Bureau of Reclamation 2006).

The following is a list of projects other agencies or organizations are conducting or planning within the ROI:

- The Barry M. Goldwater Range currently has numerous projects that are in the planning stages, including conservation activities, new facilities, and enhanced training opportunities.
- USFWS released the comprehensive conservation plan and Environmental Impact Statement (EIS) for the Cabeza Prieta National Wildlife Refuge in August 2006.
- A new commercial POE is being proposed by the Greater Yuma Port Authority (GYPA) 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 Port Authority.
- 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.
- Western Area Power Administration (WAPA) is currently proposing to build a 500-kilovolt transmission system within the U.S. that would total approximately 25 miles—20 miles from the U.S./Mexico border to their Gila Substation and 5 miles from the Gila Substation to a North Gila Substation. The proposed project would originate in Mexico, cross the U.S./Mexico border, and then parallel the BMGR western boundary. WAPA filed a Notice of Intent to prepare an EIS in 2006.
- Arizona Clean Fuel Yuma, Limited Liability Company is currently planning on installing a refinery near Wellton as well as constructing a pipeline across the BMGR. The location of the pipeline is not known at this time. The refinery would encompass a 1,400-acre site near I-8 south of Wellton, Arizona.
- The development of 100,000 acres of fallow agricultural land at Paloma Ranch west of Gila Bend, Arizona, is currently being planned. This development would consist of residential or light and heavy industrial uses.
- 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.

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.

## **5.2 AIR QUALITY**

The emissions generated during and after the construction of the vehicle fence will be short-term and minor. Although maintenance of the fence and construction road will result in cumulative impacts on the region's airshed, these impacts will be considered negligible, even when combined with the other proposed developments in the border region. BMPs designed to reduce fugitive dust have been and will continue to be standard operating procedure for CBP construction projects. Deterrence of and improved response time to cross border violators due to the construction of the fence and road has reduced the need for off-road enforcement actions by USBP agents.

## **5.3 LAND USE AND AESTHETICS**

The Project will only permanently affect about 25 acres that are under BLM management. Reclamation will still be capable of managing the Salinity Canal and nearby levees; thus, only minor direct or cumulative impacts on the region's land use will occur. The other projects identified previously will also occur primarily within developed lands and along existing ROWs. Some agricultural lands could be converted, especially for private housing developments or commercial enterprises. However, given the vast amount of agricultural lands Yuma County, this conversion will result in negligible cumulative impacts on the region's land uses.

The Project will have no major impact on visual resources, due in part to the surrounding development, agricultural operations, illegal trails and trash, and existing border TI. Lighting projects and vegetation management projects could have substantial cumulative impacts, depending upon the extent, final designs, and temporal relationship with the Project. Construction and maintenance of the vehicle fence; however, when considered with existing and proposed developments in the surrounding area, will have a minor cumulative negative impact on the visual quality of the region. Areas east of the border will experience beneficial, indirect cumulative impacts through the reduction of trash, soil erosion, and wildfires produced by IAs.

## **5.4 SOILS**

The Project and other USBP actions have not substantially reduced prime farmland soils or agricultural production.

## **5.5 WATER RESOURCES**

As a result of the Project when combined with other USBP projects, increased temporary erosion during construction will occur; however, increased sediment and turbidity will have minimal cumulative impacts on water quality. Limited and short-term withdrawal from the regional groundwater basins will not affect long-term water supplies or groundwater quality. The volume of water withdrawn will not affect 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 will have minimal beneficial and adverse cumulative impacts on surface water quality.

## **5.6 BIOLOGICAL RESOURCES**

Since no extensive native vegetation communities occur within the Project corridor, there will be negligible direct or cumulative adverse impact on native vegetation communities when the Project is implemented. Other USBP projects, including the vegetation clearing and additional lighting, will result in minor to moderate cumulative adverse impacts; however, BMPs will be developed, which include the restoration of temporarily impacted areas to offset these potential impacts. Additionally, the reduction of illegal traffic east of the planned and proposed TI would have beneficial cumulative impacts on vegetation communities in the region.

The planned and proposed TI would have negligible cumulative impacts on fish or other aquatic species because the construction activities would not take place in flowing or standing water. Construction in or near drainage crossings would use BMPs and follow the SWPPP to reduce potential impacts downstream. The vehicle fence will not impede animal movement or 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 the vehicle fence will not impede the movement of wildlife species, the long-term viability of species and communities in the project region will not be threatened. In addition, prior to construction, site surveys for migratory species, if applicable, will be considered and appropriate mitigation measures will be implemented. The loss, when combined with other ground-disturbing or development projects in the project region, will result in moderate to major cumulative negative impacts on the region's biological resources.

CBP has maintained close coordination with 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 on protected species are minimized.

## **5.7 CULTURAL RESOURCES**

The Project will have no effect on any known cultural resources sites within the APE. Therefore, this action, when combined with other existing and proposed projects in the region, will have no adverse effects on historic properties. Beneficial cumulative effects will occur from the protection afforded to previously discovered and any undiscovered cultural resources east of the planned and proposed TI components.

## **5.8 SOCIOECONOMICS**

The planned and proposed TI in the ROI would have negligible cumulative impacts on the local employment or income, would not induce a permanent in-migration of people nor would there be additional permanent employees. Therefore, there would be no cumulative increase in demand for housing. However, the proposed Project when considered with other TI projects in the region will have a beneficial cumulative affect on socioeconomics as a result of deterring illegal activities along the southwest border.

## **5.9 HAZARDOUS MATERIALS**

Only minor increases in the use of hazardous substances (e.g., POL) will occur as a result of the construction and maintenance of the vehicle fence. No health or safety risks will be created by the Project. When combined with other ongoing and proposed projects in the region, the Project will have a negligible cumulative impact.

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***SECTION 6.0***  
***REFERENCES***





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*APPENDIX A*  
*DHS April 2008 Border Waiver*

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**FOR FURTHER INFORMATION CONTACT:** Ken Hunt, Executive Director, 245 Murray Lane, Mail Stop 0550, Washington, DC 20528, 703-235-0780 and 703-235-0442, [privacycommittee@dhs.gov](mailto:privacycommittee@dhs.gov).

*Purpose and Objective:* Under the authority of 6 U.S.C. section 451, this charter establishes the Data Privacy and Integrity Advisory Committee, which shall operate in accordance with the provisions of the Federal Advisory Committee Act (FACA) (5 U.S.C. App).

The Committee will provide advice at the request of the Secretary of DHS and the Chief Privacy Officer of DHS on programmatic, policy, operational, administrative, and technological issues within the DHS that relate to personally identifiable information (PII), as well as data integrity and other privacy-related matters.

*Duration:* The committee's charter is effective March 25, 2008, and expires March 25, 2010.

*Responsible DHS Officials:* Hugo Teufel III, Chief Privacy Officer and Ken Hunt, Executive Director, 245 Murray Drive, Mail Stop 0550, Washington, DC 20528, [privacycommittee@dhs.gov](mailto:privacycommittee@dhs.gov), 703-235-0780.

Dated: April 1, 2008.

**Hugo Teufel III,**

*Chief Privacy Officer.*

[FR Doc. E8-7277 Filed 4-7-08; 8:45 am]

**BILLING CODE 4410-10-P**

## DEPARTMENT OF HOMELAND SECURITY

### Office of the Secretary

#### Determination Pursuant to Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, as Amended

**AGENCY:** Office of the Secretary, Department of Homeland Security.

**ACTION:** Notice of determination; correction.

**SUMMARY:** The Secretary of Homeland Security has determined, pursuant to law, that it is necessary to waive certain laws, regulations and other legal requirements in order to ensure the expeditious construction of barriers and roads in the vicinity of the international land border of the United States. The notice of determination was published in the **Federal Register** on April 3, 2008. Due to a publication error, the Project Area description was inadvertently omitted from the April 3 publication. For clarification purposes, this document is a republication of the April 3 document including the omitted Project Area description.

**DATES:** This Notice is effective on April 8, 2008.

#### Determination and Waiver

The Department of Homeland Security has a mandate to achieve and maintain operational control of the borders of the United States. Public Law 109-367, 2, 120 Stat. 2638, 8 U.S.C. 1701 note. Congress has provided the Secretary of Homeland Security with a number of authorities necessary to accomplish this mandate. One of these authorities is found at section 102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 ("IIRIRA"). Public Law 104-208, Div. C, 110 Stat. 3009-546, 3009-554 (Sept. 30, 1996) (8 U.S.C 1103 note), as amended by the REAL ID Act of 2005, Public Law 109-13, Div. B, 119 Stat. 231, 302, 306 (May 11, 2005) (8 U.S.C. 1103 note), as amended by the Secure Fence Act of 2006, Public Law 109-367, 3, 120 Stat. 2638 (Oct. 26, 2006) (8 U.S.C. 1103 note), as amended by the Department of Homeland Security Appropriations Act, 2008, Public Law 110-161, Div. E, Title V, 564, 121 Stat. 2090 (Dec. 26, 2007). In Section 102(a) of the IIRIRA, Congress provided that the Secretary of Homeland Security shall take such actions as may be necessary to install additional physical barriers and roads (including the removal of obstacles to detection of illegal entrants) in the vicinity of the United States border to deter illegal crossings in areas of high illegal entry into the United States. In Section 102(b) of the IIRIRA, Congress has called for the installation of fencing, barriers, roads, lighting, cameras, and sensors on not less than 700 miles of the southwest border, including priority miles of fencing that must be completed by December of 2008. Finally, in section 102(c) of the IIRIRA, Congress granted to me the authority to waive all legal requirements that I, in my sole discretion, determine necessary to ensure the expeditious construction of barriers and roads authorized by section 102 of the IIRIRA.

I determine that the following area of Hidalgo County, Texas, in the vicinity of the United States border, hereinafter the Project Area, is an area of high illegal entry:

- Starting approximately at the intersection of Military Road and an unnamed road (i.e. beginning at the western end of the International Boundary Waters Commission (IBWC) levee in Hidalgo County) and runs east in proximity to the IBWC levee for approximately 4.5 miles.
- Starting approximately at the intersection of Levee Road and 5494 Wing Road and runs east in proximity

to the IBWC levee for approximately 1.8 miles.

- Starting approximately 0.2 mile north from the intersection of S. Depot Road and 23rd Street and runs south in proximity to the IBWC levee to the Hidalgo POE and then east in proximity to the new proposed IBWC levee and the existing IBWC levee to approximately South 15th Street for a total length of approximately 4.0 miles.

- Starting adjacent to Levee Road and approximately 0.1 miles east of the intersection of Levee Road and Valley View Road and runs east in proximity to the IBWC levee for approximately 1.0 mile then crosses the Irrigation District Hidalgo County #1 Canal and will tie into the future New Donna POE fence.

- Starting approximately 0.1 mile east of the intersection of County Road 556 and County Road 1554 and runs east in proximity to the IBWC levee for approximately 3.4 miles.

- Starting approximately 0.1 mile east of the Bensten Groves road and runs east in proximity to the IBWC levee to the Progreso POE for approximately 3.4 miles.

- Starting approximately at the Progreso POE and runs east in proximity to the IBWC levee for approximately 2.5 miles.

In order to deter illegal crossings in the Project Area, there is presently a need to construct fixed and mobile barriers and roads in conjunction with improvements to an existing levee system in the vicinity of the border of the United States as a joint effort with Hidalgo County, Texas. In order to ensure the expeditious construction of the barriers and roads that Congress prescribed in the IIRIRA in the Project Area, which is an area of high illegal entry into the United States, I have determined that it is necessary that I exercise the authority that is vested in me by section 102(c) of the IIRIRA as amended. Accordingly, I hereby waive in their entirety, with respect to the construction of roads and fixed and mobile barriers (including, but not limited to, accessing the project area, creating and using staging areas, the conduct of earthwork, excavation, fill, and site preparation, and installation and upkeep of fences, roads, supporting elements, drainage, erosion controls, safety features, surveillance, communication, and detection equipment of all types, radar and radio towers, and lighting) in the Project Area, all federal, state, or other laws, regulations and legal requirements of, deriving from, or related to the subject of, the following laws, as amended: The National Environmental Policy Act (Pub. L. 91-190, 83 Stat. 852 (Jan. 1,

1970) (42 U.S.C. 4321 *et seq.*), the Endangered Species Act (Pub. L. 93–205, 87 Stat. 884) (Dec. 28, 1973) (16 U.S.C. 1531 *et seq.*), the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act) (33 U.S.C. 1251 *et seq.*), the National Historic Preservation Act (Pub. L. 89–665, 80 Stat. 915 (Oct. 15, 1966) (16 U.S.C. 470 *et seq.*), the Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), the Clean Air Act (42 U.S.C. 7401 *et seq.*), the Archeological Resources Protection Act (Pub. L. 96–95, 16 U.S.C. 470aa *et seq.*), the Safe Drinking Water Act (42 U.S.C. 300f *et seq.*), the Noise Control Act (42 U.S.C. 4901 *et seq.*), the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*), the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 *et seq.*), the Archeological and Historic Preservation Act (Pub. L. 86–523, 16 U.S.C. 469 *et seq.*), the Antiquities Act (16 U.S.C. 431 *et seq.*), the Historic Sites, Buildings, and Antiquities Act (16 U.S.C. 461 *et seq.*), the Farmland Protection Policy Act (7 U.S.C. 4201 *et seq.*), the Coastal Zone Management Act (Pub. L. 92–583, 16 U.S.C. 1451 *et seq.*), the Federal Land Policy and Management Act (Pub. L. 94–579, 43 U.S.C. 1701 *et seq.*), the National Wildlife Refuge System Administration Act (Pub. L. 89–669, 16 U.S.C. 668dd–668ee), the Fish and Wildlife Act of 1956 (Pub. L. 84–1024, 16 U.S.C. 742a, *et seq.*), the Fish and Wildlife Coordination Act (Pub. L. 73–121, 16 U.S.C. 661 *et seq.*), the Administrative Procedure Act (5 U.S.C. 551 *et seq.*), the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the Eagle Protection Act (16 U.S.C. 668 *et seq.*), the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 *et seq.*), the American Indian Religious Freedom Act (42 U.S.C. 1996), the Religious Freedom Restoration Act (42 U.S.C. 2000bb), and the Federal Grant and Cooperative Agreement Act of 1977 (31 U.S.C. 6303–05).

I reserve the authority to make further waivers from time to time as I may determine to be necessary to accomplish the provisions of section 102 of the IIRIRA, as amended.

**Michael Chertoff,**

*Secretary.*

[FR Doc. E8–7450 Filed 4–7–08; 8:45 am]

**BILLING CODE 4410–10–P**

## DEPARTMENT OF HOMELAND SECURITY

### Office of the Secretary

#### Determination Pursuant to Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, as Amended

**AGENCY:** Office of the Secretary, Department of Homeland Security.

**ACTION:** Notice of determination; correction.

**SUMMARY:** The Secretary of Homeland Security has determined, pursuant to law, that it is necessary to waive certain laws, regulations and other legal requirements in order to ensure the expeditious construction of barriers and roads in the vicinity of the international land border of the United States. The notice of determination was published in the **Federal Register** on April 3, 2008. Due to a publication error, the description of the Project Areas was inadvertently omitted from the April 3 publication. For clarification purposes, this document is a republication of the April 3 document including the omitted description of the Project Areas.

**DATES:** This Notice is effective on April 8, 2008.

#### Determination and Waiver

I have a mandate to achieve and maintain operational control of the borders of the United States. Public Law 109–367, 2, 120 Stat. 2638, 8 U.S.C. 1701 note. Congress has provided me with a number of authorities necessary to accomplish this mandate. One of these authorities is found at section 102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (“IIRIRA”). Public Law 104–208, Div. C, 110 Stat. 3009–546, 3009–554 (Sept. 30, 1996) (8 U.S.C. 1103 note), as amended by the REAL ID Act of 2005, Public Law 109–13, Div. B, 119 Stat. 231, 302, 306 (May 11, 2005) (8 U.S.C. 1103 note), as amended by the Secure Fence Act of 2006, Public Law 109–367, 3, 120 Stat. 2638 (Oct. 26, 2006) (8 U.S.C. 1103 note), as amended by the Department of Homeland Security Appropriations Act, 2008, Public Law 110–161, Div. E, Title V, 564, 121 Stat. 2090 (Dec. 26, 2007). In Section 102(a) of IIRIRA, Congress provided that the Secretary of Homeland Security shall take such actions as may be necessary to install additional physical barriers and roads (including the removal of obstacles to detection of illegal entrants) in the vicinity of the United States border to deter illegal crossings in areas of high illegal entry into the United

States. In Section 102(b) of IIRIRA, Congress has called for the installation of fencing, barriers, roads, lighting, cameras, and sensors on not less than 700 miles of the southwest border, including priority miles of fencing that must be completed by December 2008. Finally, in section 102(c) of the IIRIRA, Congress granted to me the authority to waive all legal requirements that I, in my sole discretion, determine necessary to ensure the expeditious construction of barriers and roads authorized by section 102 of IIRIRA.

I determine that the following areas in the vicinity of the United States border, located in the States of California, Arizona, New Mexico, and Texas are areas of high illegal entry (collectively “Project Areas”):

#### California

- Starting approximately 1.5 mile east of Border Monument (BM) 251 and ends approximately at BM 250.
- Starting approximately 1.1 miles west of BM 245 and runs east for approximately 0.8 mile.
- Starting approximately 0.2 mile west of BM 243 and runs east along the border for approximately 0.5 mile.
- Starting approximately 0.7 mile east of BM 243 and runs east along the border for approximately 0.9 mile.
- Starting approximately 1.0 mile east of BM 243 and runs east along the border for approximately 0.9 mile.
- Starting approximately 0.7 mile west of BM 242 and stops approximately 0.4 mile west of BM 242.
- Starting approximately 0.8 mile east of BM 242 and runs east along the border for approximately 1.1 miles.
- Starting approximately 0.4 mile east of BM 239 and runs east for approximately 0.4 mile along the border.
- Starting approximately 1.2 miles east of BM 239 and runs east for approximately 0.2 mile along the border.
- Starting approximately 0.5 mile west of BM 235 and runs east along the border for approximately 1.1 miles.
- Starting approximately 0.8 mile east of BM 235 and runs east along the border for approximately 0.1 mile.
- Starting approximately 0.6 mile east of BM 234 and runs east for approximately 1.7 miles along the border.
- Starting approximately 0.4 mile east of BM 233 and runs east for approximately 2.1 miles along the border.
- Starting approximately 0.05 mile west of BM 232 and runs east for approximately 0.1 mile along the border.

- Starting approximately 0.2 mile east of BM 232 and runs east for approximately 1.5 miles along the border.
- Starting 0.6 mile east of Border Monument 229 heading east along the border for approximately 11.3 miles to BM 225.
- Starting approximately 0.1 mile east of BM 224 and runs east along the border for approximately 2.5 miles.
- Starting approximately 2.3 miles east of BM 220 and runs east along the border to BM 207.

#### Arizona

- Starting approximately 1.0 mile south of BM 206 and runs south along the Colorado River for approximately 13.3 miles.
- Starting approximately 0.1 mile north of County 18th Street running south along the border for approximately 3.8 miles.
- Starting at the Eastern edge of BMGR and runs east along the border to approximately 1.3 miles west of BM 174.
- Starting approximately 0.5 mile west of BM 168 and runs east along the border for approximately 5.3 miles.
- Starting approximately 1 mile east of BM 160 and runs east for approximately 1.6 miles.
- Starting approximately 1.3 miles east of BM 159 and runs east along the border to approximately 0.3 mile east of BM 140.
- Starting approximately 2.2 miles west of BM 138 and runs east along the border for approximately 2.5 miles.
- Starting approximately 0.2 miles east of BM 136 and runs east along the border to approximately 0.2 mile west of BM 102.
- Starting approximately 3 miles west of BM 99 and runs east along the border approximately 6.5 miles.
- Starting approximately at BM 97 and runs east along the border approximately 6.9 miles.
- Starting approximately at BM 91 and runs east along the border to approximately 0.7 miles east of BM 89.
- Starting approximately 1.7 miles west of BM 86 and runs east along the border to approximately 0.7 mile west of BM 86.
- Starting approximately 0.2 mile west of BM 83 and runs east along the border to approximately 0.2 mile east of BM 73.

#### New Mexico

- Starting approximately 0.8 mile west of BM 69 and runs east along the border to approximately 1.5 miles west of BM 65.

- Starting approximately 2.3 miles east of BM 65 and runs east along the border for approximately 6.0 miles.
- Starting approximately 0.5 mile east of BM 61 and runs east along the border until approximately 1.0 mile west of BM 59.
- Starting approximately 0.1 miles east of BM 39 and runs east along the border to approximately 0.3 mile east of BM 33.
- Starting approximately 0.25 mile east of BM 31 and runs east along the border for approximately 14.2 miles.
- Starting approximately at BM 22 and runs east along the border to approximately 1.0 mile west BM 16.
- Starting at approximately 1.0 mile west of BM 16 and runs east along the border to approximately BM 3.

#### Texas

- Starting approximately 0.4 miles southeast of BM 1 and runs southeast along the border for approximately 3.0 miles.
- Starting approximately 1 Mi E of the intersection of Interstate 54 and Border Highway and runs southeast approximately 57 miles in proximity to the IBWC levee to 3.7 miles east of the Ft Hancock POE.
- Starting approximately 1.6 miles west of the intersection of Esperanza and Quitman Pass Roads and runs along the IBWC levee east for approximately 4.6 miles.
- Starting at the Presidio POE and runs west along the border to approximately 3.2 miles west of the POE.
- Starting at the Presidio POE and runs east along the border to approximately 3.4 miles east of the POE.
- Starting approximately 1.8 miles west of Del Rio POE and runs east along the border for approximately 2.5 miles.
- Starting approximately 1.3 Mi north of the Eagle Pass POE and runs south approximately 0.8 miles south of the POE.
- Starting approximately 2.1 miles west of Roma POE and runs east approximately 1.8 miles east of the Roma POE.
- Starting approximately 3.5 miles west of Rio Grande City POE and runs east in proximity to the Rio Grande river for approximately 9 miles.
- Starting approximately 0.9 miles west of County Road 41 and runs east approximately 1.2 miles and then north for approximately 0.8 miles.
- Starting approximately 0.5 mile west of the end of River Dr and runs east in proximity to the IBWC levee for approximately 2.5 miles.
- Starting approximately 0.6 miles east of the intersection of Benson Rd

and Cannon Rd and runs east in proximity to the IBWC levee for approximately 1 mile.

- Starting at the Los Indios POE and runs west in proximity to the IBWC levee for approximately 1.7 miles.
  - Starting at the Los Indios POE and runs east in proximity to the IBWC levee for approximately 3.6 miles.
  - Starting approximately 0.5 mile west of Main St and J Padilla St intersection and runs east in proximity to the IBWC levee for approximately 2.0 miles.
  - Starting approximately 1.2 miles west of the Intersection of U.S. HWY 281 and Los Ranchitos Rd and runs east in proximity to the IBWC levee for approximately 2.4 miles.
  - Starting approx 0.5 miles southwest of the intersection of U.S. 281 and San Pedro Rd and runs east in proximity to the IBWC levee for approximately 1.8 miles.
  - Starting approximately 0.1 miles southwest of the Intersection of Villanueva St and Torres Rd and runs east in proximity to the IBWC levee for approximately 3.6 miles.
  - Starting approximately south of Palm Blvd and runs east in proximity to the City of Brownsville's levee to approximately the Gateway-Brownsville POE where it continues south and then east in proximity to the IBWC levee for a total length of approximately 3.5 miles.
  - Starting at the North Eastern Edge of Ft Brown Golf Course and runs east in proximity to the IBWC levee for approximately 1 mile.
  - Starting approximately 0.3 miles east of Los Tomates-Brownsville POE and runs east and then north in proximity to the IBWC levee for approximately 13 miles.
- In order to deter illegal crossings in the Project Areas, there is presently a need to construct fixed and mobile barriers (such as fencing, vehicle barriers, towers, sensors, cameras, and other surveillance, communication, and detection equipment) and roads in the vicinity of the border of the United States. In order to ensure the expeditious construction of the barriers and roads that Congress prescribed in the IIRIRA in the Project Areas, which are areas of high illegal entry into the United States, I have determined that it is necessary that I exercise the authority that is vested in me by section 102(c) of the IIRIRA as amended.
- Accordingly, I hereby waive in their entirety, with respect to the construction of roads and fixed and mobile barriers (including, but not limited to, accessing the project area, creating and using staging areas, the

conduct of earthwork, excavation, fill, and site preparation, and installation and upkeep of fences, roads, supporting elements, drainage, erosion controls, safety features, surveillance, communication, and detection equipment of all types, radar and radio towers, and lighting) in the Project Areas, all federal, state, or other laws, regulations and legal requirements of, deriving from, or related to the subject of, the following laws, as amended: The National Environmental Policy Act (Pub. L. 91-190, 83 Stat. 852 (Jan. 1, 1970) (42 U.S.C. 4321 *et seq.*)), the Endangered Species Act (Pub. L. 93-205, 87 Stat. 884 (Dec. 28, 1973) (16 U.S.C. 1531 *et seq.*)), the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act) (33 U.S.C. 1251 *et seq.*)), the National Historic Preservation Act (Pub. L. 89-665, 80 Stat. 915 (Oct. 15, 1966) (16 U.S.C. 470 *et seq.*)), the Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), the Clean Air Act (42 U.S.C. 7401 *et seq.*), the Archeological Resources Protection Act (Pub. L. 96-95, 16 U.S.C. 470aa *et seq.*), the Safe Drinking Water Act (42 U.S.C. 300f *et seq.*), the Noise Control Act (42 U.S.C. 4901 *et seq.*), the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*), the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 *et seq.*), the Archeological and Historic Preservation Act (Pub. L. 86-523, 16 U.S.C. 469 *et seq.*), the Antiquities Act (16 U.S.C. 431 *et seq.*), the Historic Sites, Buildings, and Antiquities Act (16 U.S.C. 461 *et seq.*), the Wild and Scenic Rivers Act (Pub. L. 90-542, 16 U.S.C. 1281 *et seq.*), the Farmland Protection Policy Act (7 U.S.C. 4201 *et seq.*), the Coastal Zone Management Act (Pub. L. 92-583, 16 U.S.C. 1451 *et seq.*), the Wilderness Act (Pub. L. 88-577, 16 U.S.C. 1131 *et seq.*), the Federal Land Policy and Management Act (Pub. L. 94-579, 43 U.S.C. 1701 *et seq.*), the National Wildlife Refuge System Administration Act (Pub. L. 89-669, 16 U.S.C. 668dd-668ee), the Fish and Wildlife Act of 1956 (Pub. L. 84-1024, 16 U.S.C. 742a, *et seq.*), the Fish and Wildlife Coordination Act (Pub. L. 73-121, 16 U.S.C. 661 *et seq.*), the Administrative Procedure Act (5 U.S.C. 551 *et seq.*), the Otay Mountain Wilderness Act of 1999 (Pub. L. 106-145), Sections 102(29) and 103 of Title I of the California Desert Protection Act (Pub. L. 103-433), 50 Stat. 1827, the National Park Service Organic Act (Pub. L. 64-235, 16 U.S.C. 1, 2-4), the National Park Service General

Authorities Act (Pub. L. 91-383, 16 U.S.C. 1a-1 *et seq.*), Sections 401(7), 403, and 404 of the National Parks and Recreation Act of 1978 (Pub. L. 95-625), Sections 301(a)-(f) of the Arizona Desert Wilderness Act (Pub. L. 101-628), the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the Eagle Protection Act (16 U.S.C. 668 *et seq.*), the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 *et seq.*), the American Indian Religious Freedom Act (42 U.S.C. 1996), the Religious Freedom Restoration Act (42 U.S.C. 2000bb), the National Forest Management Act of 1976 (16 U.S.C. 1600 *et seq.*), and the Multiple Use and Sustained Yield Act of 1960 (16 U.S.C. 528-531).

This waiver does not supersede, supplement, or in any way modify the previous waivers published in the **Federal Register** on September 22, 2005 (70 FR 55622), January 19, 2007 (72 FR 2535), and October 26, 2007 (72 FR 60870).

I reserve the authority to make further waivers from time to time as I may determine to be necessary to accomplish the provisions of section 102 of the IIRIRA, as amended.

**Michael Chertoff,**

*Secretary.*

[FR Doc. E8-7451 Filed 4-7-08; 8:45 am]

**BILLING CODE 4410-10-P**

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

[USCG-2008-0202]

#### Information Collection Request to Office of Management and Budget; OMB Control Numbers: 1625-0044, 1625-0045, and 1625-0060

**AGENCY:** Coast Guard, DHS.

**ACTION:** Sixty-day notice requesting comments.

**SUMMARY:** In compliance with the Paperwork Reduction Act of 1995, the U.S. Coast Guard intends to submit Information Collection Requests (ICRs) and Analyses to the Office of Management and Budget (OMB) requesting an extension of their approval for the following collections of information: (1) 1625-0044, Outer Continental Shelf Activities—Title 33 CFR Subchapter N; (2) 1625-0045, Adequacy Certification for Reception Facilities and Advance Notice—33 CFR part 158; and (3) 1625-0060, Vapor Control Systems for Facilities and Tank Vessels. Before submitting these ICRs to OMB, the Coast Guard is inviting comments as described below.

**DATES:** Comments must reach the Coast Guard on or before June 9, 2008.

**ADDRESSES:** To avoid duplicate submissions to the docket [USCG-2008-0202], please submit them by only one of the following means:

(1) *Online:* <http://www.regulations.gov>.

(2) *Mail:* Docket Management Facility (DMF) (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

(3) *Hand delivery:* DMF between the hours of 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

(4) *Fax:* 202-493-2251.

The DMF maintains the public docket for this notice. Comments and material received from the public, as well as documents mentioned in this notice as being available in the docket, will become part of this docket and will be available for inspection or copying at room W12-140 on the West Building Ground Floor, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also find this docket on the Internet at <http://www.regulations.gov>.

A copy of the complete ICR is available through this docket on the Internet at <http://www.regulations.gov>. Additionally, copies are available from Commandant (CG-611), U.S. Coast Guard Headquarters (Attn: Mr. Arthur Requina), 2100 2nd Street, SW., Washington, DC 20593-0001. The telephone number is 202-475-3523.

**FOR FURTHER INFORMATION CONTACT:** Mr. Arthur Requina, Office of Information Management, telephone 202-475-3523, or fax 202-475-3929, for questions on these documents. Contact Ms. Renee V. Wright, Program Manager, Docket Operations, 202-366-9826, for questions on the docket.

#### **SUPPLEMENTARY INFORMATION:**

##### **Public Participation and Request for Comments**

The Coast Guard invites comments on whether this information collection request should be granted based on it being necessary for the proper performance of Departmental functions. In particular, the Coast Guard would appreciate comments addressing: (1) The practical utility of the collections; (2) the accuracy of the estimated burden of the collections; (3) ways to enhance the quality, utility, and clarity of information subject to the collections; and (4) ways to minimize the burden of

***APPENDIX B***  
***Biological Resources Plan***





**BIOLOGICAL RESOURCES PLAN**  
**FOR**  
**VEHICLE FENCE AND SUPPORTING INFRASTRUCTURE**  
**FOR**  
**YUMA SECTOR, ARIZONA**  
  
**YUMA AND WELLTON STATIONS**



**U.S. DEPARTMENT OF HOMELAND SECURITY**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**U.S. BORDER PATROL YUMA SECTOR**

**Prepared by**



**DECEMBER 2008**

## ABBREVIATIONS AND ACRONYMS

AOR	Area of Responsibility
BMGR	Barry M. Goldwater Range
BMP	Best Management Practice
BRP	Biological Resources Plan
CBP	U.S. Customs and Border Protection
CFR	Code of Federal Regulations
cm	centimeter
CPNWR	Cabeza Prieta National Wildlife Refuge
dBA	Decibel (A-weighted)
DHS	U.S. Department of Homeland Security
GIS	Geographic Information System
GPS	Global Positioning System
IIRIRA	Illegal Immigration Reform and Immigrant Responsibility Act
km	kilometers
LWC	low water crossing
mph	miles per hour
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol
USFWS	U.S. Fish and Wildlife Service

## EXECUTIVE SUMMARY

The U.S. Department of Homeland Security (DHS), Customs and Border Protection (CBP), U.S. Border Patrol (USBP) plans to construct, operate, and maintain approximately 5 miles of tactical infrastructure on federally owned lands in Section CV-1A and approximately 9 miles of tactical infrastructure in four discrete sections within Section CV-2 in the USBP Yuma Sector. Tactical infrastructure consists of primary vehicle fence, and access roads along the U.S./Mexico international border in Yuma County, Arizona. Nine federally listed species are known to occur, or could occur, within or adjacent to the Project area (see **Table ES-1**).

On April 1, 2008, the Secretary of the 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 along the U.S./Mexico border. The tactical infrastructure described in Biological Resources Plan (BRP) is covered by the Secretary's April 1, 2008, waiver (*73 Federal Register* 65, pp. 18293-24). Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the laws that are included in the waiver, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP strongly supports this objective and remains committed to being a good steward of the environment. CBP will continue to work in a collaborative manner with local governments, 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 the installation of tactical infrastructure.

**Table ES-1. Federally Listed Species and Designated Critical Habitats Known to Occur or with Potential to Occur Within Proposed Project Area in Yuma County, Arizona, and the Determination of Effects**

Species	Project Segment	Listing Status, Critical Habitat	Effect Determination
<b>Fish</b>			
Razorback sucker, <i>Xyrauchen texanus</i>	CV-1A	Endangered	No effect
Razorback sucker Critical Habitat	CV-1A	Critical Habitat upstream of the Project area	No effect
<b>Reptiles</b>			
Flat-tailed horned lizard, <i>Phrynosoma mcallii</i>	CV-2	Conservation Agreement Species*	No effect
<b>Birds</b>			
Bald eagle (wintering population), <i>Haliaeetus leucocephalus</i>	CV-1A	Threatened**	No effect
California brown pelican, <i>Pelecanus occidentalis californicus</i>	CV-1A	Threatened, Proposed delisted	No effect
Southwestern willow flycatcher, <i>Empidonax traillii extimus</i>	CV-1A	Endangered	Not likely to adversely affect
Yellow-billed cuckoo, <i>Coccyzus americanus</i>	CV-1A	Candidate	Not likely to adversely affect
Yuma clapper rail, <i>Rallus longirostris yumanensis</i>	CV-1A	Endangered	No effect
<b>Mammals</b>			
Lesser long-nosed bat, <i>Leptonycteris curasoae</i>	CV-2	Endangered	Not likely to adversely affect
Sonoran pronghorn, <i>Antilocapra americana sonoriensis</i>	CV-2	Endangered	Not likely to adversely affect

Source: USFWS 2008

Notes:

\* This species is not federally-listed; however, the USFWS participates in the Flat-tailed Horned Lizard Rangelwide Management Strategy which has been prepared to provide guidance for the conservation and management of sufficient habitat to maintain extant populations of flat-tailed horned lizards.

\*\*Once endangered, this species was downlisted to threatened on August 11, 1995, and delisted August 8, 2007. Threatened status was reinstated for desert nesting bald eagles.

**BIOLOGICAL RESOURCES PLAN  
YUMA SECTOR  
YUMA AND WELLTON STATIONS**

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## 1. PROJECT DESCRIPTION

The U.S. Department of Homeland Security (DHS), Customs and Border Protection (CBP), U.S. Border Patrol (USBP) will construct, operate, and maintain 300 miles of vehicle fence (i.e., the VF 300 Project) along the U.S./Mexico international border, with construction expected to be completed by December 31, 2008.

On April 1, 2008, the Secretary of the 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 along the U.S./Mexico border. The tactical infrastructure described in Biological Resources Plan (BRP) is covered by the Secretary's April 1, 2008, waiver (73 *Federal Register* 65, pp. 18293-24). Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the laws that are included in the waiver, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP strongly supports this objective and remains committed to being a good steward of the environment. CBP will continue to work in a collaborative manner with local governments, 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 the installation of tactical infrastructure.

### 1.1 LOCATION

CBP will construct and maintain vehicle fence, and construct, maintain, and operate access roads and patrol roads along the U.S./Mexico border in the USBP Yuma Sector, Arizona. Section CV-1A includes 5 miles of tactical infrastructure on federally owned lands in the USBP Yuma Station Area of Responsibility (AOR). Section CV-2 includes approximately 9 miles of tactical infrastructure in four discrete sections within the USBP Wellton Station AOR (see **Figure 1-1**). Tactical infrastructure consists of vehicle fence and access roads along the U.S./Mexico international border in Yuma County, Arizona. Vehicle fence includes post-on-rail-style fence (Fence Type VF-1) and Normandy-style fence (Fence Type VF-2) (see **Figures 1-2** and **1-3**).

**Section CV-1A.** The Section CV-1A vehicle fence will be constructed in one section approximately 5 miles in length along the U.S./Mexico international border within USBP's Yuma Sector in Yuma County, Arizona. Section CV-1A, which roughly parallels the Colorado River, is presented in **Figure 1-4**. Section CV-1A will extend approximately 50 feet east from Morelos Dam. At this point, Section CV-1A will extend approximately 5 miles south to West County 13th Street, approximately 0.4 miles east of the U.S./Mexico border in southern Yuma County, Arizona.

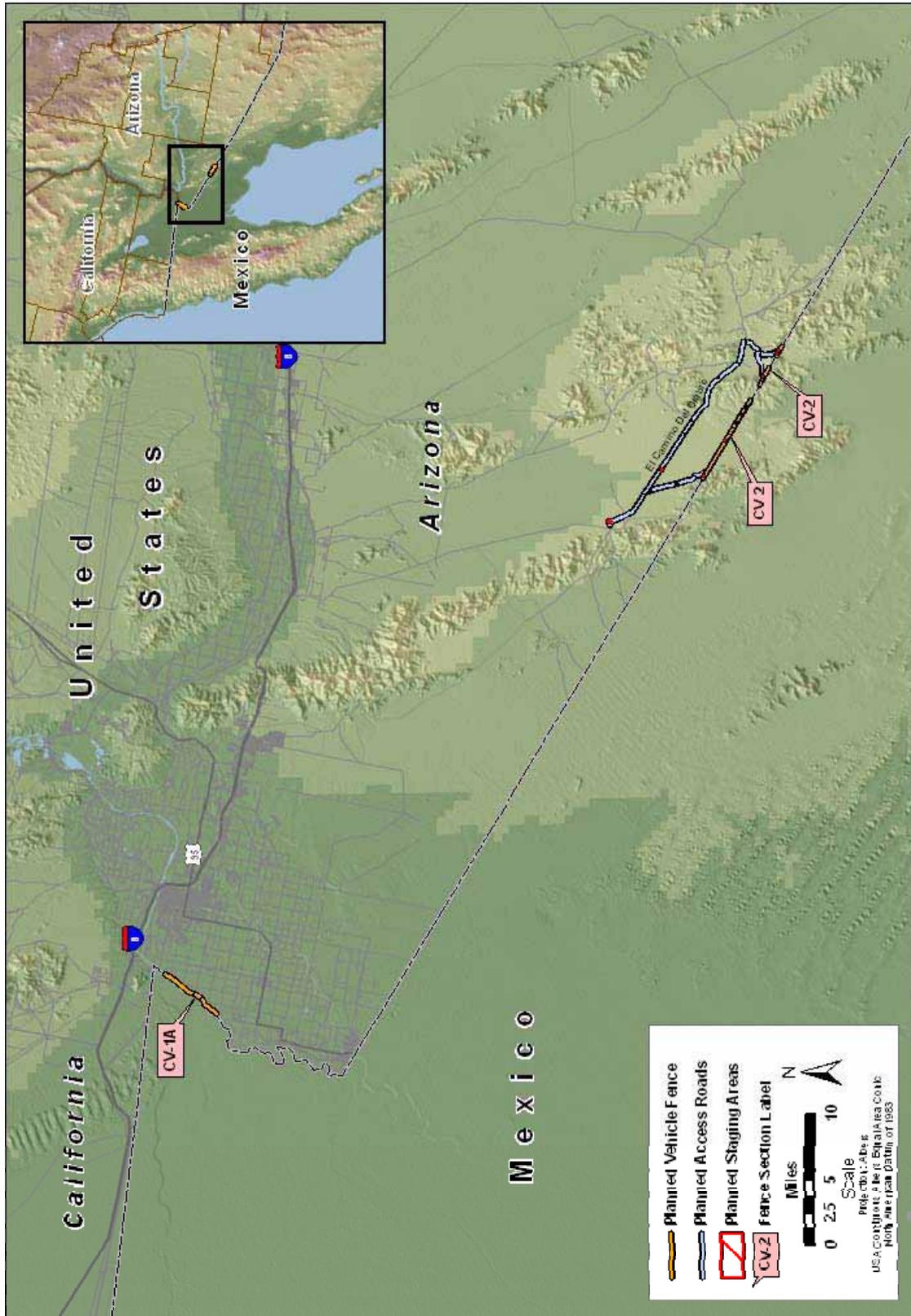


Figure 1-1. General Location of the Project in Yuma County, Arizona



**Figure 1-2. Post-on-Rail-Style Vehicle Fence (Fence Type VF-1)**



**Figure 1-3. Normandy-Style Vehicle Fence (Fence Type VF-2)**

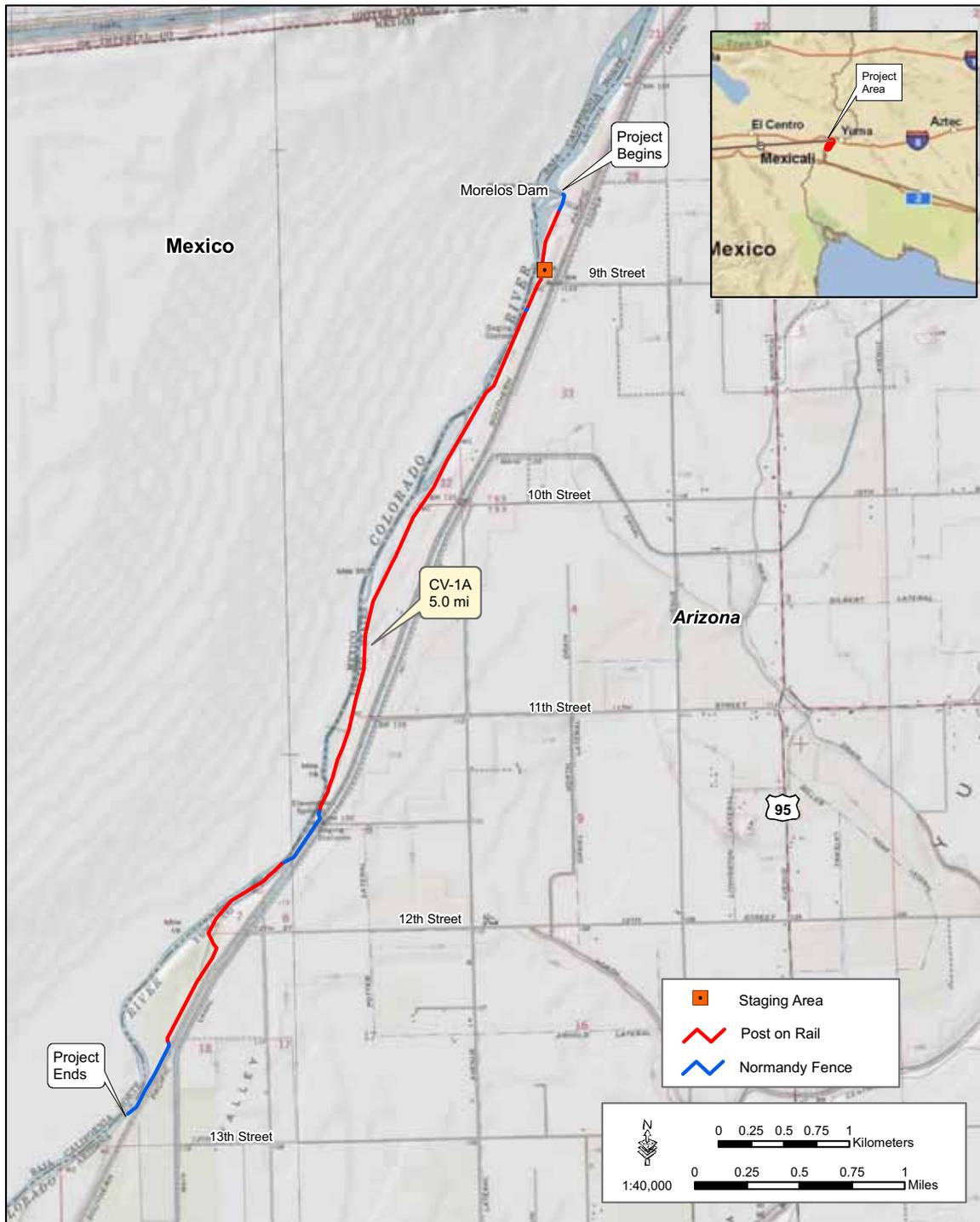


Figure 1-4. Map of the Section CV-1A Project Area, Yuma County, Arizona

**Section CV-2.** The Section CV-2 vehicle fence will be constructed in four distinct sections that total approximately 9 miles along the U.S./Mexico international border within USBP Yuma Sector in Yuma County, Arizona. These four sections of vehicle fence range from approximately 0.17 miles to 6.92 miles in length and are collectively designated as Section CV-2 in **Figure 1-5**.

All four sections of the Section CV-2 vehicle fence are wholly contained within the Roosevelt Reservation and Cabeza Prieta National Wildlife Refuge (CPNWR). The Roosevelt Reservation is an area of land President Theodore Roosevelt reserved from entry in 1907 and set apart as a public reservation all public lands within 60 feet of the international boundary between the United States and Mexico within the State of California and the Territories of Arizona and New Mexico. This land withdrawal was found “necessary for the public welfare...as a protection against the smuggling of goods.” The proclamation excepted from the reservation all lands, which, as of its date, were (1) embraced in any legal entry; (2) covered by any lawful filing, selection, or rights-of-way duly recorded in the proper U.S. Land Office; (3) validly settled pursuant to law; or (4) within any withdrawal or reservation for any use or purpose inconsistent with its purposes (CRS 2006).

Access to the construction area will require the improvement or construction of access roads on refuge lands designated as Wilderness. Additional access will also be provided from the western north-south access road on the adjacent Barry M. Goldwater Range (BMGR) property to the west. Staging areas will be placed within the BMGR and CPNWR properties. Additional detail on the Roosevelt Reservation, CPNWR, and BMGR is provided in **Section 3.4.2 of the ESP**. Consistent with Federal mandates, USBP has identified these areas of the border as locations where vehicle fence will contribute significantly to its priority homeland security mission.

## **1.2 CONSTRUCTION, OPERATION, AND MAINTENANCE**

The Project will consist of the following components: (1) installing, operating, and maintaining a vehicle fence; (2) improving existing roads to improve access for construction; (3) developing temporary construction staging areas; and (4) constructing new access roads. Construction of the tactical infrastructure will begin in October 2008 and continue through December 2008.

The Project corridors will include vehicle fences and construction access roads. Access roads to the fence construction corridor will be narrow to minimize impacts on designated wilderness, and construction staging areas will be placed in previously disturbed areas to the extent possible.

The alignment of the vehicle fences and roads for the Project was identified by the USBP Yuma Sector as meeting its operational requirements and was developed through coordination with Federal and state agencies, and tribes. The alignment continues to meet current operational requirements and will be

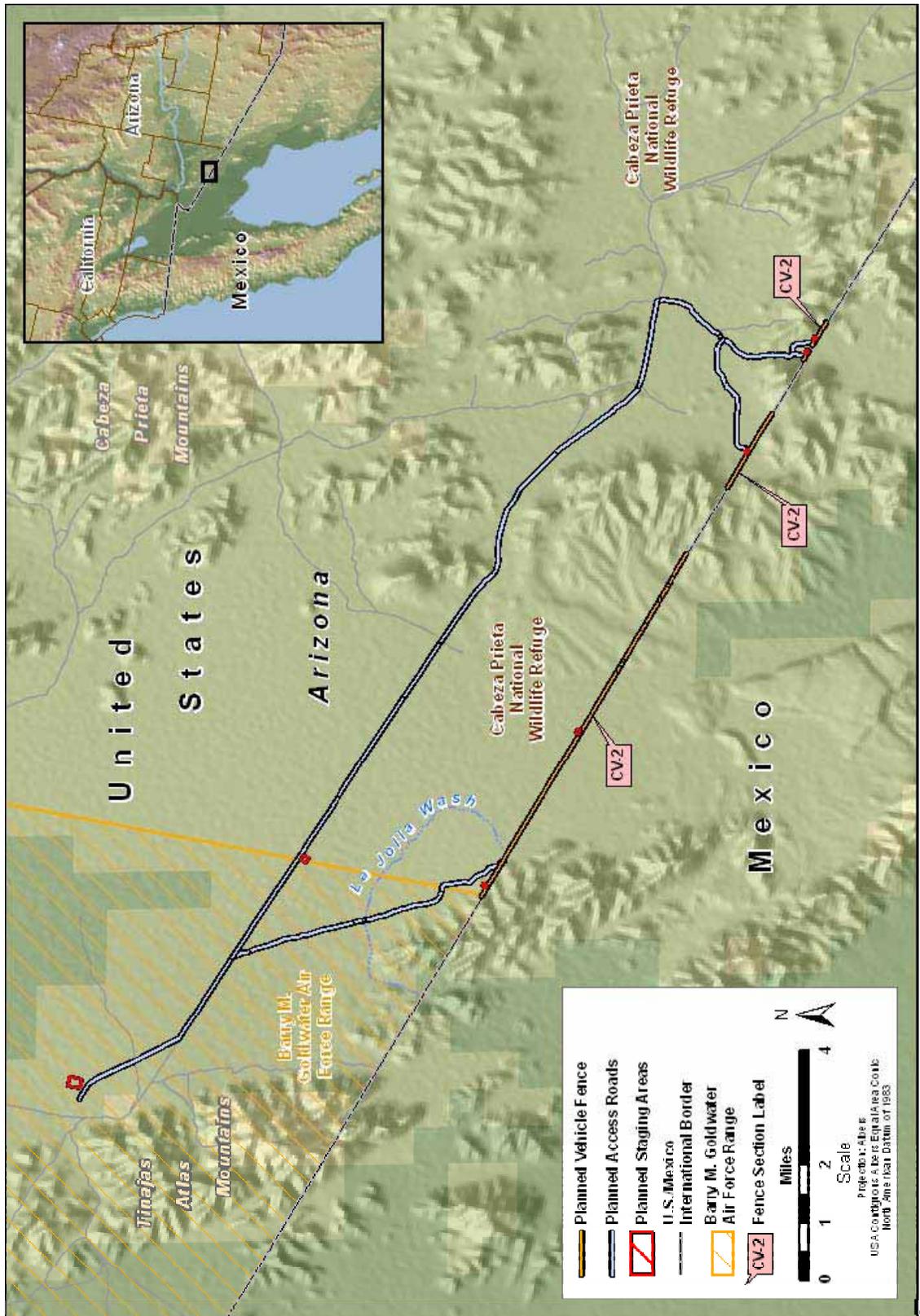


Figure 1-5. Map of the Section CV-2 Project Area, Yuma County, Arizona

constructed with the objective of having the least environmental impacts that are practicable.

**Section CV-1A.** In Section CV-1A the fence will be installed on the western edge of the existing levee/access road, where practicable; the corridor will vary as there is no Roosevelt Reservation in that area. **Figure 1-6** shows a typical schematic of temporary and permanent impact areas for vehicle fence and roads in Section CV-1A. A large portion of the Project will be built on the existing river trail. Riparian vegetation will be affected along the portion of the Project constructed along the river trail. Temporary barriers are proposed in some of the floodplain areas. The area permanently impacted during construction will be approximately 36 acres.

**Section CV-2.** **Figure 1-7** shows a typical schematic of the Project corridor for vehicle fence and roads in Section CV-2. The area permanently impacted during construction within the four sections will total approximately 275 acres. Due to the remote nature of the area and the travel time required to access the site, a campsite will be developed on CPNWR lands in coordination with CPNWR personnel. Vegetation will be cleared and grading would occur if needed. Permanent and temporary vegetative impacts associated with Section CV-2 are presented in **Table 1-1**. Wherever possible, existing roads will be used for construction access.

**Table 1-1. Permanent and Temporary Vegetative Impacts Associated with Section CV-2**

Vegetation Type	Permanent Impacts (acres)	Temporary Impacts (acres)
Grassland	30	1
Tall Shrubland	2	0
Short Shrubland	195	37
Wooded Shrubland	36	3
Unvegetated Desert Washes	2	1
<b>Total</b>	<b>265</b>	<b>42</b>

### 1.2.1 Fence Installation

It is anticipated that the vehicle fence that will be employed will be primarily post-on-rail-style fence (see **Figure 1-2**) for the majority of the length, with Normandy-style fence (see **Figure 1-3**) utilized in areas of washes and steeper grades in Sections CV-1A and CV-2.

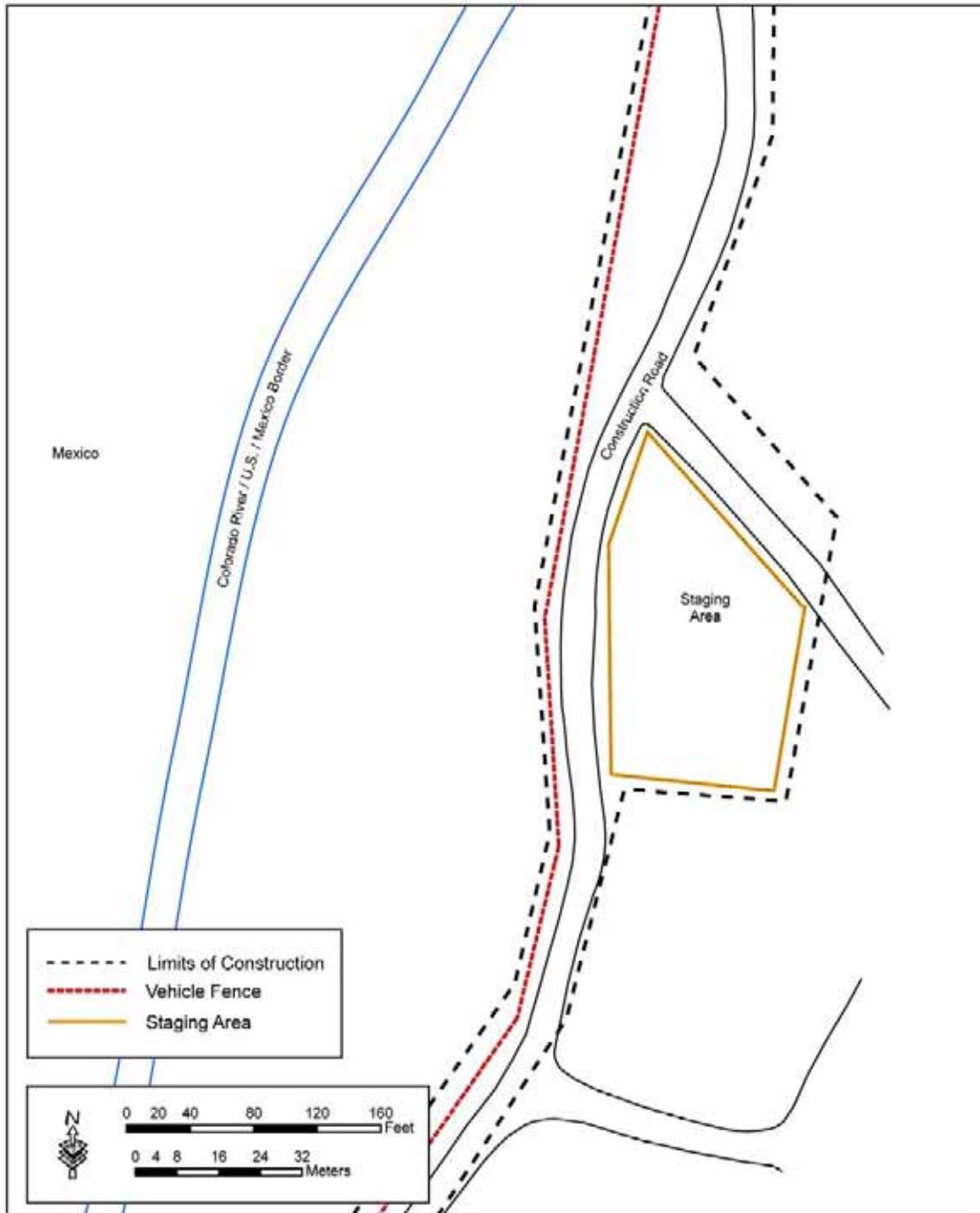


Figure 1-6. Schematic of the Section CV-1A Project Corridor

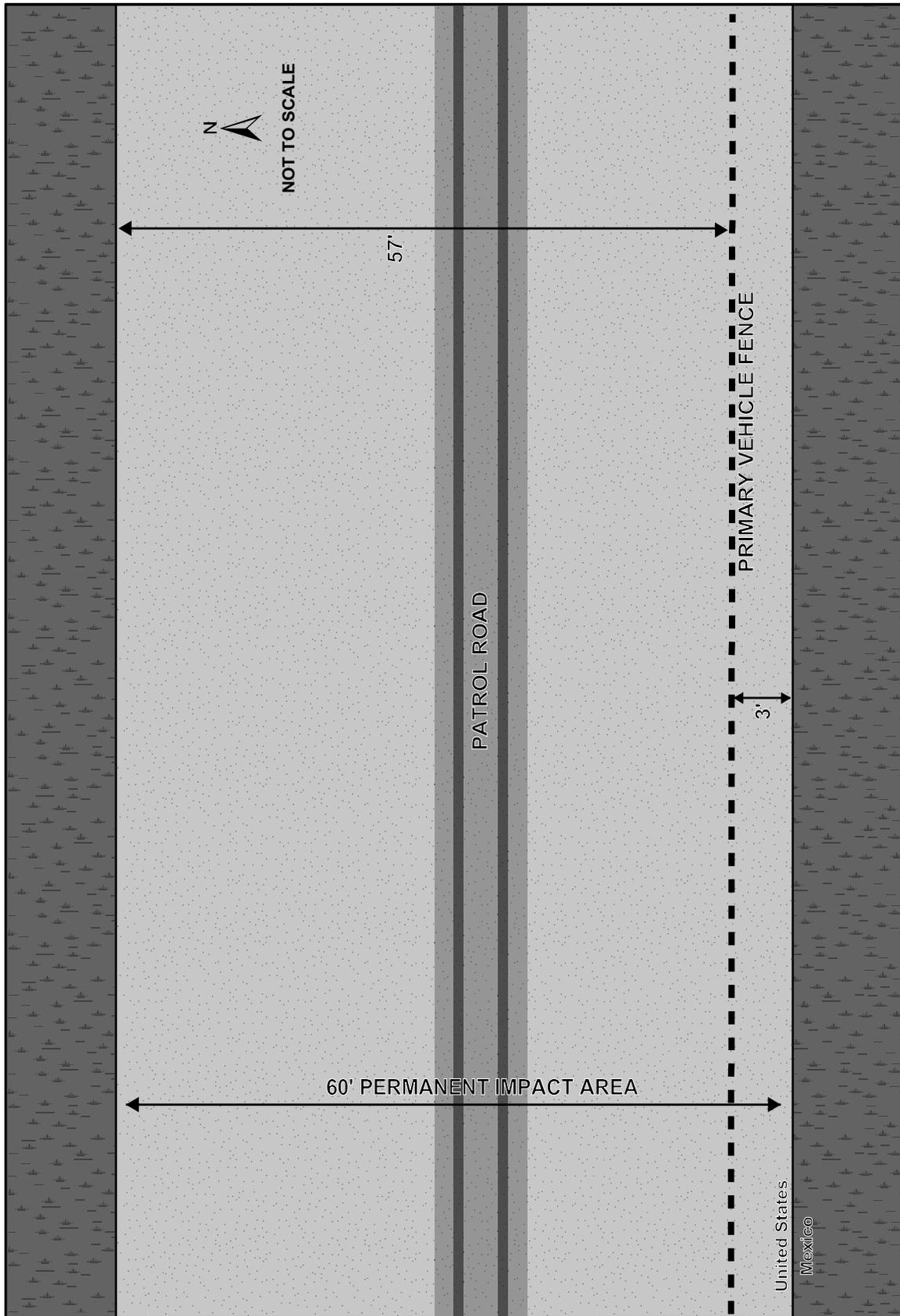


Figure 1-7. Schematic of the Section CV-2 Project Corridor

Vehicle fence will be transported to the site by small trucks with lowboy trailers. Depending on the soil type encountered, post-on-rail-style fence sections will be permanently installed using a small truck with an auger. No pile driving or trenching will be required for construction of either fence type.

In Section CV-1A, the fence will be installed on the western edge of the existing road, to the extent practicable. In Section CV-2, the fence will be installed a few feet north of the international border. The primary project corridor is the area where the majority of construction and maintenance activities will occur.

## 1.2.2 Roads

**Section CV-1A.** It is anticipated that 4.5 miles of existing access roads will be used to gain access to the CV-1A construction corridor. Additionally, four new road segments, totaling 0.5 miles will need to be constructed.

The construction roads will also include the construction of new drainage structures or low water crossings (LWCs), as appropriate. Drainage structures will consist of corrugated pipe or concrete box culverts, while LWCs will consist of concrete slabs designed with suitable approach angles. Culverts can also be incorporated into the design of LWCs, as appropriate. The size and number of culverts required will depend upon the width of the drainage and the expected flood flow volumes and velocities at each of the drainage crossings. Each drainage structure will be designed to ensure that flows are not impeded, thus avoiding creation of backwater areas.

**Section CV-2.** It is anticipated that approximately 28.7 miles of access road will be used to gain access to the border construction corridor, where an additional 8.82 miles of road will be constructed to support fence installation.

The primary access road will be an old historic route named the Camino del Diablo. This route runs west to east approximately 3.5 miles from, and parallel to, the U.S./Mexico international border. At both the west and east ends of the general Project area, ancillary access roads will branch from Camino del Diablo, south to the border. The western north-south access road will service the 6.7-mile fence and will be located mostly located on BMGR property, crossing into the CPNWR just north of the border. The eastern north-south road is entirely within the CPNWR, and will branch at two locations to service all three of the smaller fence sections. In all instances where access roads currently exist, improvements will be required to support construction equipment. Any necessary aggregate or fill material will be clean material obtained by construction contractors that will not pose an adverse impact on biological or cultural resources.

## 1.2.3 Staging Areas

Staging areas are needed to accommodate construction equipment and stockpile materials. All vegetation within these staging areas will be cleared. Following

completion of construction, staging areas will be restored to a vegetated state (see **Section 1.3**). Staging areas will be placed in previously disturbed areas to the extent practicable.

**Section CV-1A.** Section CV-1A includes one staging area, temporarily impacting 0.4 acres.

**Section CV-2.** Section CV-2 includes 4 staging areas, temporarily impacting 42 acres. Staging areas will be placed within the BMGR and CPNWR properties. Temporary impacts associated with Section CV-2 are presented in **Table 1-1**.

## 1.2.4 Operations and Maintenance

There will be no significant change in overall USBP Sector operations resulting from the Project.

The fences will be made from nonreflective steel. No painting will be required. Fence maintenance will include removing any accumulated debris on the fence after a rain. Sand that builds up against the fence and brush will also be removed as needed. Brush removal could include mowing, removal of small trees, and application of herbicide if needed. To the extent practicable, and as operational schedule permits, CBP personnel will report fence conditions requiring maintenance. Any destruction or breaches of the fence will be repaired, as needed.

## 1.3 BEST MANAGEMENT PRACTICES

### 1.3.1 Construction Best Management Practices

The following BMPs should be implemented to avoid or minimize impacts associated with the Project. These represent Project objectives for implementation to the extent practicable and will be incorporated into construction and monitoring contracts.

1. The perimeter of all areas to be disturbed during construction or maintenance activities will be clearly demarcated using flagging or temporary construction fence, and no disturbance outside that perimeter will be authorized. This includes designated access routes, vehicle turnaround locations, and staging areas.
2. CBP will develop (in coordination with the U.S. Fish and Wildlife Service [USFWS]) a training plan regarding Trust Resources for construction personnel. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, project features designed to reduce the impacts on these species and promote continued successful occupation of the Project area environments by the species. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the

photos will be posted in the office of the contractor and resident engineer, where they will remain throughout the duration of the project. The selected construction manager will be responsible for ensuring that employees are aware of the listed species. This BMP does not apply to Border Patrol operations.

3. Project Reports. For fence construction, within 3 months of project completion, a Project Report will be developed that details the BMPs that were implemented, identifies how well the BMPs worked, discusses ways that BMPs could be improved for either protection of species and habitats or implementation efficiency, and reports on any federally listed species observed at or near the Project site. If site restoration was included as part of the Project, the implementation of that restoration and any follow-up monitoring will be included. Annual reports could be required for some longer-term projects. The Project and any annual reports will be made available to the USFWS.
4. Biological surveys will be conducted prior to fence construction.
5. Relocation of individuals of federally listed plants found in the Project area is generally not a suitable activity. Relocation of aquatic species is not appropriate. Relocation of small cacti has not been very successful, and is not recommended. Survival rates of translocated plants are usually very low; however, translocation can be considered where there are no other alternatives. For particular actions, the USFWS will advise CBP regarding the relocation of plants.
6. Individual federally listed animals found in the Project area will be relocated by a qualified biologist to a nearby safe location in accordance with accepted species-handling protocols, if appropriate, and to the extent practicable. This includes flat-tailed horned lizards, but does not include Sonoran pronghorns (see species specific BMPs for Sonoran pronghorn below). All construction and maintenance projects in federally listed habitats should have a designated biological monitor on site during the work. The biological monitor should document implementation of construction-related BMPs as designed for the Project to reduce the potential for adverse effects on the species or their habitats. Reports from the biological monitor should be used for developing the Project Report.
7. Where, based on species location maps or results of surveys, individuals of a federally listed species could be present on or near the Project site, a designated biological monitor will be present during the activity to protect individual federally listed species from harm. Duties of the designated biological monitor will include ensuring that activities stay within designated Project areas, evaluating the response of individuals of federally listed species that come near the Project site, and ensuring implementation of the appropriate BMPs. The designated biological monitor will notify the construction manager of any activities that could harm or harass an individual of a federally listed species. Upon such

notification, the construction manager will temporarily suspend activities in the vicinity of the federally listed species and notify the Contracting Officer, the Administrative Contracting Officer, and the Contracting Officer's Representative of the suspension so that the key U.S. Army Corps of Engineers (USACE) personnel can be notified and apprised of the situation for resolution. CBP will ensure that the USFWS Tucson Field Office and the refuge manager at CPNWR is notified in the event any federally listed species may be directly impacted during construction activities and BMPs implemented to avoid or minimize the impact.

8. Where a project could be located within 1 mile of occupied species habitats but the individuals of the species are not likely to move into the project area, a biological monitor is not needed. However, the construction monitor will be aware of the species location and ensure that BMPs designed to minimize habitat impacts are implemented and maintained as planned. This category includes the following species: lesser long-nosed bat, Mexican long-nosed bat, and all aquatic threatened and endangered species.
9. Particular importance is given to proper design and location of roads so that the potential for road bed erosion into federally listed species habitat will be avoided or minimized.
10. Particular importance is given to proper design and location of roads so that the potential for entrapment of surface flows within the roadbed due to grading will be avoided or minimized. Depth of any pits created will be minimized so animals do not become trapped.
11. Particular importance is given to proper design and location of roads so that the widening of existing or created road bed beyond the design parameters due to improper maintenance and use will be avoided or minimized.
12. Particular importance is given to proper design and location of roads so that excessive use of unimproved roads for construction purposes that results in their deterioration that affects the surrounding federally listed species habitat areas will be minimized. Road construction and road use for construction will be monitored and documented in the Project Report.
13. Particular importance is given to proper design and location of roads so that the fewest roads needed for construction will be developed and that these are maintained to proper standards. Roads no longer needed by the government should be closed and restored to natural surface and topography using appropriate techniques. The Global Positioning System (GPS) coordinates of roads that are thus closed should be recorded and integrated into the CBP Geographic Information System (GIS) database. A record of acreage or miles of roads taken out of use, restored, and revegetated will be maintained.
14. The width of all roads that are created or maintained by CBP for construction purposes will be measured and recorded using GPS

- coordinates and integrated into the CBP GIS database. Maintenance actions should not increase the width of the road bed or the amount of disturbed area beyond the roadbed.
15. Construction equipment will be cleaned prior to entering and departing the Project corridor to minimize the spread and establishment of nonnative invasive plant species.
  16. Surface water from untreated sources, including water used for irrigation purposes, will not be used for construction or maintenance projects located within 1 mile of aquatic habitat for federally listed aquatic species. Groundwater or surface water from a treated municipal source will be used when close to such habitats. This is to prevent the transfer of invasive animals or disease pathogens between habitats if water on the construction site was to reach the federally listed species habitats.
  17. Materials such as gravel or topsoil will be obtained from existing developed or previously used sources, not from undisturbed areas adjacent to the project area.
  18. If new access is needed or existing access requires improvements to be usable for the Project, related road construction and maintenance BMPs will be incorporated into the access design and implementation.
  19. When available, areas already disturbed by past activities or those that will be used later in the construction period will be used for staging, parking, and equipment storage, where practicable.
  20. Within the designated disturbance area, grading or topsoil removal will be limited to areas where this activity is needed to provide the ground conditions needed for construction or maintenance activities. Minimizing disturbance to soils will enhance the ability to restore the disturbed area after the project is complete.
  21. Removal of trees and brush in habitats of federally listed species will be limited to the smallest amount needed to meet the objectives of the project. This type of clearing is likely to be a permanent impact on habitat.
  22. Water for construction use will be from wells or irrigation water sources at the discretion of the landowner (depending on water rights). If local groundwater pumping is determined by the biological monitor to be an adverse environmental effect on aquatic, marsh, or riparian dwelling federally protected species, treated water from outside the immediate area will be utilized by the Contractor.
  23. Surface water from aquatic or marsh habitats will not be used for construction purposes if that site supports aquatic federally protected species or if it contains nonnative invasive species or disease vectors and there is any opportunity to contaminate a federally protected species habitat through use of the water at the Project site.

24. Water tankers that convey untreated surface water will not discard unused water where it has the potential to enter any aquatic or marsh habitat.
25. Water storage on the Project area will be in closed on-ground containers located on upland areas, not in washes.
26. Pumps, hoses, tanks, and other water storage devices will be cleaned and disinfected with a 10 percent bleach solution at an appropriate facility before use at another site, if untreated surface water was used (this water is not to enter any surface water area). If a new water source is used that is not from a treated or groundwater source, the equipment will require additional cleaning. This is important to kill any residual disease organisms or early life stages of invasive species that could affect local populations of federally listed species.
27. CBP will develop and implement storm water management plans for every project.
28. All construction will follow DHS Management Directive 5110.1 for waste management.
29. A CBP-approved spill protection plan will be developed and implemented at construction and maintenance sites to ensure that any toxic substances are properly handled and that escape into the environment is prevented. Agency standard protocols will be used. Drip pans underneath equipment, containment zones used when refueling vehicles or equipment, and other measures are to be included.
30. Nonhazardous waste materials and other discarded materials, such as construction waste, will be contained until removed from the construction site. This will assist in keeping the Project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.
31. To prevent attracting predators of protected animals, all food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed daily from the Project site.
32. Waste water is water used for project purposes that is contaminated with construction materials, or was used for cleaning equipment and thus carries oils or other toxic materials or other contaminants in accordance with state regulations. Waste water will be stored in closed containers on site until removed for disposal. Concrete wash water will not be dumped on the ground, but is to be collected and moved offsite for disposal. This wash water is toxic to aquatic life.
33. If an individual of a federally listed species is found in the designated Project area, work will cease in the area of the species until either a qualified biological monitor can safely remove the individual, or it moves away on its own, to the extent practicable and construction schedule permitting. Such occurrences will be documented by the biological monitor.

34. Construction speed limits will not exceed 35 miles per hour (mph) on major unpaved roads (graded with ditches on both sides) and 25 mph on all other unpaved roads. Nighttime travel speeds will not exceed 25 mph and might be less based on visibility and other safety considerations. Construction at night will be minimized.
35. No pets owned or under the care of the construction contractor or construction workers will be permitted inside the Project's construction boundaries, adjacent native habitats, or other associated work areas. This BMP does not apply to any animals under service to the USBP (such as canine and horse patrols).
36. If construction or maintenance activities continue at night, all lights will be shielded to direct light only onto the area required for worker safety and productivity. The minimum wattage needed will be used and the number of lights will be minimized.
37. Light poles and other pole-like structures will be designed to discourage roosting by birds, particularly ravens or raptors that might use the poles for hunting perches.
38. Noise levels for day or night construction and maintenance will be minimized. All generators will be in baffle boxes (i.e., 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.
39. Materials used for onsite erosion control in uninfested native habitats will be free of nonnative plant seeds and other plant parts to limit potential for infestation. Since natural materials cannot be certified as completely weed-free, if such materials are used, there will be follow-up monitoring to document establishment of nonnative plants, and appropriate control measures will be implemented for a period of time to be determined in the site restoration plan.
40. Fill material brought in from outside the Project area will be identified by its source location and will be weed-free to the extent practicable.
41. For purpose of construction, infrastructure sites will only be accessed using designated roads. Parking will be in designated areas. This will limit the development of multiple trails to such sites and reduce the effects to federally listed habitats in the vicinity.
42. For temporarily disturbed areas (e.g., staging areas), appropriate techniques to restore the original grade, replace soils, and restore proper drainage will be implemented.
43. In temporarily disturbed areas, a site restoration plan for federally listed species and habitat will be developed during Project planning. The restoration plan pertains only to activities up to and including reseeding. If seeding with native plants is identified as appropriate, seeding will take place at the proper season and with seeds from nearby stocks, to the

extent practicable. It is understood that some sites cannot be restored, and the Project planning documents should acknowledge this.

44. Site restoration of temporarily disturbed areas such as staging areas and construction access routes will be monitored as appropriate.
45. In Section CV-2, during follow-up monitoring and during maintenance activities, invasive plants that appear on the site will be removed. Mechanical removal will be done in ways that eliminate the entire plant and remove all plant parts to a disposal area. All chemical applications on refuges must be used in coordination with the refuge or land manager. Herbicides will be used according to label directions. If herbicides are used, the treated plants will be left in place. The monitoring period will be defined in the site restoration plan. Training to identify nonnative invasive plants will be provided for CBP contractor personnel or contractors, as necessary.
46. Maintenance activities will not increase the existing disturbed areas. Use of existing roads and trails will be maximized in areas of suitable habitat for cactus and agaves. Protection of the cactus will be stressed in environmental education for contractors involved in construction or maintenance of facilities.
47. To prevent entrapment of wildlife species during the construction of the project, all excavated, steep-walled holes or trenches will either be covered at the close of each working day by plywood or provided with one or more escape ramps constructed of earth fill or wooden planks. The ramps will be located at no greater than 1,000-foot intervals and will be sloped less than 45 degrees. Each morning before the start of construction and before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Any animals so discovered will be allowed to escape voluntarily (by escape ramps or temporary structures), without harassment, before construction activities resume, or removed from the trench or hole by the biological monitor and allowed to escape unimpeded.
48. To prevent entrapment of wildlife species during the emplacement of vertical posts/bollards, all vertical fence posts/bollards that are hollow (i.e., those that will be filled with a reinforcing material such as concrete), will be covered so as to prevent wildlife from entrapment. Covers will be deployed from the time the posts or hollow bollards are erected to the time they are filled with reinforcing material.
49. All equipment maintenance, laydown, and dispensing of fuel, oil, or any other such activities, will occur in staging areas identified for use in the Project description. The designated staging areas will be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.
50. All access routes into and out of the Project disturbance area will be flagged, and no construction travel outside those areas will be authorized.

No off-road vehicle activity will occur outside of the Project footprint by the Project workers, and Project contractors.

### **1.3.2 Species-Specific BMPs**

#### **Southwestern Willow Flycatcher (Section CV-1A)**

1. Whenever practicable, road construction and maintenance will not improve or create new available access to flycatcher habitats.
2. In planning for roads and fences that will require land clearing, placement of these facilities in riparian vegetation communities will be avoided to the extent practicable. Since these areas could also be in flood-prone areas, this avoidance might also contribute to reduced maintenance requirements.
3. Removal of dense understory or midstory vegetation from breeding or migration habitat will be avoided to the extent practicable. Removal compromises the ability of the habitat to support flycatcher use.
4. Actions will be taken to avoid transporting salt cedar leaf beetles (biocontrols used to eradicate salt cedar in some areas) to areas occupied by flycatchers. Actions will include inspection of vehicles and equipment and subsequent beetle removal, or equipment cleaning if the equipment was used in areas where leaf beetles have been released to eradicate salt cedar.
5. Maintenance activities for facilities can occur at any time; however, for major work on roads or fences where significant amount of equipment will be required, the October to April period is preferred.

#### **Lesser Long-Nosed Bat (Section CV-2)**

1. Activities should be planned to avoid areas containing columnar cacti (saguaro, organ pipe) or agaves that provide the forage base for the bat. If they cannot be avoided, appropriate mitigation will be performed for any columnar cacti and agaves that are affected. Any restoration (e.g., planting of cacti or agaves raised off-site or purchased) will be a compensation measure (see Compensation below).

#### **Sonoran Pronghorn (Section CV-2)**

1. To the extent practicable, the number of vehicle trips related to construction per day to and from the Project site should be minimized to reduce the likelihood of disturbing pronghorn in the area or injuring an animal on the road. The use of vehicle convoys, multi-passenger vehicles, and other methods are appropriate.
2. During fence construction, if a pronghorn is seen within 1 mile of the activity, any construction work that could disturb the pronghorn should cease. For vehicle operations, this should entail stopping the vehicle until

the pronghorn moves away. Vehicles may continue on at reduced speeds (10 to 15 miles per hour) once the pronghorn has moved away. The biological monitor should request that work cease until the pronghorn moves out of the area. As the schedule permits, construction crews will wait up to 3 hours from the initial sighting for the pronghorn to move beyond 1 mile away from the Project activity or vehicle. Should the pronghorn not leave, project personnel may retreat from the area in the direction from which they came. During maintenance activities and to the extent practicable, appropriately trained staff will suspend maintenance activities until the pronghorn move away.

3. During the fawning season (March 1 to July 15), it is especially important to avoid disturbance to females and fawns. Vehicle activity related to construction should be restricted to the extent practicable during those times in areas where there are fawns present.
4. During construction and maintenance, the minimum amount of personnel and equipment should be used to reduce the amount of activity. This may be adjusted if additional personnel and equipment will complete the work faster and thus reduce the time the disturbance is in effect.

### 1.3.3 Compensation and Mitigation

It is CBP’s policy to reduce impacts through the sequence of avoidance, minimization, mitigation, and, finally, compensation, if appropriate. Current estimates of impacts for each habitat type are presented in **Table 1-2**. Using funds contributed to the compensation pool by CBP, USFWS may offset permanent direct and indirect impacts on habitat used by federally listed species. USFWS may use these monies to fund conservation actions benefitting these species.

**Table 1-2. Summary of Permanent Impacts of the Project on Habitat**

Habitat Type	Section	Estimated Acres of Permanent Impact
Colorado River Riparian (habitat for southwestern willow flycatcher and includes approximately 1 acre of overlapping yellow-billed cuckoo habitat)	CV-1A	14
Saguaro / Creosotebush – White Bursage Wooded Shrubland (habitat for lesser long-nosed bat)	CV-2	9
<b>Total =</b>		<b>23 acres</b>

#### Southwestern Willow Flycatcher (Section CV-1A)

1. Using funds from the mitigation pool established by CBP, USFWS may undertake restoration of riparian areas at the site of the disturbance to

restore the acreage lost. If this is not possible, funding from the mitigation pool may be used to replace riparian areas in a protected area or to restore and manage flycatcher habitat within the planning unit.

**Lesser Long-Nosed Bat (Section CV-2)**

1. If columnar cacti (saguaro and organ pipe) and agaves cannot be avoided, CBP will conduct appropriate mitigation. USFWS or relevant land management agencies may use funds from the mitigation pool established by CBP to conduct restoration for columnar cacti and agaves. Planting should be done in accordance with a restoration plan that includes success criteria and monitoring.

## 2. DESCRIPTION OF SPECIES AND THEIR HABITAT

This section summarizes information regarding species and habitats that may be affected by the Project. Some listed species are not included here because they do not occur in the project area or the implementation of the agreed-upon BMPs and conservation measures are anticipated to provide conditions that avoid adverse effect. For more complete information and supporting citations regarding species' descriptions, distribution and abundance, habitat needs, life history, and population ecology, the local USFWS office can be contacted.

### 2.1 SOUTHWESTERN WILLOW FLYCATCHER

The southwestern willow flycatcher (*Empidonax traillii extimus*) was listed as Endangered on February 27, 1995 (60 *Federal Register* 10694) with critical habitat designated in 50 Code of Federal Regulations [CFR] 60886 on October 19, 2005.

Critical habitat was finalized and designated in southern California, southwestern Utah, Arizona, and New Mexico on October 19, 2005.

#### 2.1.1 Species description

The southwestern willow flycatcher is a migratory bird about 15 centimeters (cm) (6 inches) long, with grayish-green back and wings, a white throat, a light gray-olive breast, and a pale yellowish belly. Two wingbars are visible and the eye ring is faint or absent. The species is best identified by vocalizations. While perched, it characteristically flicks its tail slightly upward (USFWS 2004).

#### 2.1.2 Distribution and Abundance

The historical range includes southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and extreme northwestern Mexico (USFWS 2004).

As of the end of the 2005 breeding season, slightly more than 1,200 breeding territories were estimated to occur across its range. Since listing, breeding territories have been detected in all states of its historical range, with the exception of western Texas. In Arizona, since listing, breeding territories have been detected on the Agua Fria, Gila, Little Colorado, Salt, San Pedro, Colorado, San Francisco, Hassayampa, Verde, Big Sandy, Santa Maria, Virgin and Bill Williams rivers, and Pinal, Tonto and Cienega creeks. Most birds likely winter in Mexico, Central America, and possibly northern South America (USFWS 2004).

#### 2.1.3 Habitat

The species nests and forages in dense riparian habitats along streams, rivers, lakesides, and other wetlands. Some of the more common plant species used

for nesting are willow, boxelder, tamarisk, Russian olive, buttonbush, cottonwood, and mesquite. Nests are found in dense thickets of these and other plant species that are about 4 to 7 meters (13 to 23 feet) in height. Migration habitat is believed to primarily occur along riparian corridors. Habitat occurs at elevations below 8,500 feet (2,590 meters) (USFWS 2004).

#### **2.1.4 Threats**

The species is endangered primarily due to riparian habitat reduction, degradation, and elimination as a result of agricultural and urban development. Other naturally occurring reasons for the decline/vulnerability of the flycatcher include the fragmented distribution and low numbers of the current population; predation; brood parasitism by cowbirds; and other events (e.g., fires and floods) that are more frequent and intensified by exotic vegetation and degraded watersheds (USFWS 2004).

### **2.2 YELLOW-BILLED CUCKOO**

USFWS announced a 12-month finding for a petition to list the yellow-billed cuckoo (*Coccyzus americanus*) in the western continental United States on July 25, 2001 (50 CFR 38611).

#### **2.2.1 Species description**

The yellow-billed cuckoo is a medium-sized bird with a slender, long-tailed profile, and a slightly down-curved bill, which is blue-black with yellow on the lower half. Plumage is grayish-brown above and white below, with rufous primary flight feathers (USFWS 2007).

#### **2.2.2 Distribution and Abundance**

Yellow-billed cuckoos are a neotropical migrant, wintering primarily in South America and breeding primarily in the United States (but also in southern Canada and northern Mexico). As a migrant it is rarely detected, but can occur outside of riparian areas. Cuckoos are found nesting statewide in Arizona below 7,000 feet in elevation, but are mostly found below 5,000 feet in central, western, and southeastern Arizona. Nesting cuckoos are associated with relatively dense wooded streamside riparian habitat, with varying combinations of Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk. Some cuckoos have also been detected nesting in velvet mesquite, netleaf hackberry, Arizona sycamore, Arizona alder, and some exotic neighborhood shade trees (USFWS 2007).

#### **2.2.3 Habitat**

Habitat consists of large blocks of riparian woodlands (e.g., cottonwood, willow, or tamarisk galleries).

Western cuckoos breed in large blocks of riparian habitats (particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.), while eastern cuckoos breed in a wider range of habitats, including deciduous woodlands and parks. Dense understory foliage appears to be an important factor in nest site selection, while cottonwood trees are an important foraging habitat in areas where the species has been studied in California (USFWS 2007).

The lower Colorado River, on the California-Arizona border, supported an estimated 180 to 240 pairs in 1976 to 1977, a number that had declined by an estimated 80 to 90 percent in 1986. Arizona probably contains the largest remaining cuckoo population among states west of the Rocky Mountains. The species was historically widespread and locally common. Losses of riparian habitats from historic levels have been substantial in Arizona (USFWS 2007).

Losses have been greatest at lower elevations (below about 3,000 feet) along the Lower Colorado River and its major tributaries, which have been strongly affected by upstream dams, flow alterations, channel modification, and clearing of land for agriculture. Recent surveys for the species in Arizona along the Gila and Salt rivers near Phoenix found yellow-billed cuckoos only in areas which had dense willow and cottonwood cover, and some areas where yellow-billed cuckoos have been found in the past had no detections. Other surveys in the Prescott National Forest, north of Phoenix, were only able to confirm a single nesting pair of yellow-billed cuckoo (USFWS 2007).

A total of 168 cuckoo pairs and 80 single birds were located in Arizona in 1999, based on preliminary results from a statewide survey which covered 265 miles (426 kilometers (km)) of river and creek bottoms. From these results, it is evident that cuckoo numbers in 1999 are substantially less than some previous estimates for Arizona, including a 1976 estimate of 846 pairs for the lower Colorado River and five major tributaries 1976 (USFWS 2007).

#### **2.2.4 Threats**

The primary threat to yellow-billed cuckoos is alteration of its nesting and foraging habitat. Principal causes of riparian habitat losses are conversion to agricultural and other uses, dams and river flow management, stream channelization and stabilization, and livestock grazing. Available breeding habitats for cuckoos have also been substantially reduced in area and quality by groundwater pumping and the replacement of native riparian habitats by invasive nonnative plants, particularly tamarisk (USFWS 2007).

### **2.3 LESSER LONG-NOSED BAT**

The lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) was listed as endangered on September 30, 1988 (53 *Federal Register* 38456) without critical habitat.

### **2.3.1 Species Description**

The lesser long-nosed bat is a yellow-brown or cinnamon-gray bat, with a total head and body measurement of approximately 3 inches (7.62 cm). It is distinguished by its elongated muzzle, small noseleaf, long tongue, and minute tail that appears to be missing. Known to roost in caves and abandoned tunnels below 6,000 feet (1,830 meters) above mean sea level, it forages at night on nectar, pollen, and fruit of agaves and columnar cacti.

### **2.3.2 Distribution and Abundance**

The species historically ranged from central Arizona and southwestern New Mexico through much of Mexico to El Salvador. Records exist for occurrences in the southern Peloncillo Mountains of New Mexico.

The current range is similar to its historic range; however, the number of occupied roost sites and the number of individuals per colony have recently declined drastically. These bats are seasonal (April to September) residents of southeastern Arizona, and possibly extreme western Arizona (i.e., Cochise, Pima, Santa Cruz, Graham, Pinal and Maricopa counties, Arizona).

A single young is born in mid-May. When the young are able to fly, adults and young move to higher elevations to feed on agave nectar. Although there is controversy among bat experts, the recovery plan suggests there may be as many as 60,000 individuals that reside and feed in the southwestern United States, primarily in Arizona and New Mexico (USFWS 2006).

The maternity roost at CPNWR is one of three known major maternity roosts in the United States. The refuge installed a steel fence ranging from 2.5 to 3 meters (8 to 10 feet) high around the roost entrance to discourage human entry. CPNWR staff periodically monitors the entrance to the roost to assess bat use and document damage caused by unauthorized human use. A few lesser long-nosed bats have also been found inhabiting smaller roost sites at the CPNWR (USFWS 2006).

The lesser long-nosed bat appears to use two migration routes. An early spring route connects maternity colonies in coastal Sonora and southwestern Arizona and Jalisco via the west coast of Mexico. The route used later in the season connects transitory roosts in southeastern Arizona with winter range via a path along the foothills of the Sierra Madre (USFWS 2006).

### **2.3.3 Habitat**

Habitat for the species includes mainly desert scrub habitat in the U.S. portion of its range. After breeding in the desert, lesser long-nosed bats move east into the mountains and valleys of southeastern Arizona, which are a combination of forested lands, grasslands, and desert scrub. In Mexico, the species occurs up

into high elevation pine-oak and ponderosa pine forests. Altitudinal range is from 1,600 to 11,500 feet (480 to 3,450 meters) above mean sea level.

Critical resources include suitable day roost sites and nearby extensive populations of columnar cacti and agaves. Roosting occurs in caves, abandoned mines, and unoccupied buildings at the base of mountains where agave, saguaro, and organ pipe cacti are present. Criteria for suitable maternity roosts have not been identified as the conditions vary. Maternity roosts are usually warm and poorly ventilated (USFWS 2006).

The species is highly mobile. It forages long distances for up to 6 hours a night and can visit more than 100 flowers per night. Lesser long-nosed bats are the major pollinators of columnar cacti and paniculate agaves and a potential seed disperser of columnar cacti, which are distinctive elements of the flora of the Sonoran Desert (USFWS 2006).

### **2.3.4 Threats**

Considerable evidence exists for the interdependence of *Leptonycteris* bat species and certain agaves and cacti. Excess harvest of agaves in Mexico, the collection of cacti in the United States, and the conversion of habitat for agricultural uses, livestock grazing, wood-cutting, and other development could contribute to the decline of long-nosed bat populations. These bats are particularly vulnerable due to many individuals using only a small number of communal roosts.

## **2.4 SONORAN PRONGHORN**

The Sonoran pronghorn (*Antilocapra americana sonoriensis*) was listed as endangered on March 11, 1967 (32 *Federal Register* 4001) without critical habitat.

### **2.4.1 Species Description**

Pronghorn are long-legged, small-bodied artiodactyls (i.e., hooved mammals with an even number of toes on each foot). Upper parts are tan; the underpart, rump, and two bands across the neck are white. The male has two black cheek patches. Both sexes have horns, although they are larger in males. Males weigh 100 to 130 pounds, while females weigh 75 to 100 pounds (USFWS 2002a).

The five recognized subspecies are American pronghorn (*A.a.americana*), Oregon pronghorn (*A.a.oregona*), Mexican pronghorn (*A.a.mexicana*), Sonoran pronghorn (*A.a.sonoriensis*), and peninsular pronghorn (*A.a.peninsularis*). The Sonoran pronghorn is the smallest and palest subspecies of *Antilocapra americana* (USFWS 2002a).

## 2.4.2 Distribution and Abundance

The U.S. subpopulation currently occupies approximately 2,500 square miles (6,500 square km) of Federal lands in southwestern Arizona, including portions of the BMGR, CPNWR, Organ Pipe Cactus National Monument, and a small area of Bureau of Land Management lands east of the CPNWR and west of Highway 85. The CPNWR lies at the heart of the Sonoran pronghorn range in Arizona and connects locations used on the BMGR and Organ Pipe Cactus National Monument (USFWS 2006). Although Section CV-2 will occupy part of the historical range for Sonoran pronghorn, the Project is outside the current range of the species.

In 2004, the population estimate was 58 individuals and the trend has generally been downward since 1992. In 2002, extreme drought resulted in the loss of 85 percent of the U.S. Sonoran pronghorn herd.

## 2.4.3 Habitat

All Sonoran pronghorn populations occur in Sonoran desert scrub vegetation communities. Creosote (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) compose the major vegetation in the Lower Colorado River Valley subdivision. Plant species along major water courses include ironwood (*Olneya tesota*), blue palo verde (*Parkinsonia floridum*), and mesquite (*Prosopis velutina* and *P. glandulosa*). Species in the Arizona Upland include foothill palo verde (*Parkinsonia microphyllum*), catclaw acacia (*Acacia greggii*), chain fruit cholla, teddy bear cholla (*Cylindropuntia bigelovii*), buckhorn cholla (*C. acanthocarpa*), and staghorn cholla (*C. versicolor*). Typical habitat ranges in elevation from 2,000 to 4,000 feet (610 to 1,219 meters) above mean sea level (USFWS 2002a).

Sonoran pronghorns inhabit sites with good visibility and escape opportunities (e.g., the alluvial fans and plains) but will use higher elevation alluvial fans and hills with less visibility where vegetation is more abundant. Their preferred forage is annual forbs, but they also use the shrubs and trees of desert washes and hills as the forbs dry. Vegetation associated with desert washes provide important thermal cover. Sonoran pronghorns use free-standing water when it is available and also rely on moisture from vegetation in addition to metabolic water (e<sup>2</sup>M 2008).

## 2.4.4 Threats

The lack of newborns entering the population, insufficient forage or water, drought coupled with predation, barriers to movement, illegal hunting, habitat degradation from livestock grazing, diminishing size and loss of access to the Gila and Sonoita rivers, and human encroachment are considered contributing factors in the population decline of Sonoran pronghorn (USFWS 2006). Conversion of habitat to other uses and barriers to movement caused by roads,

canals, train tracks, and fences are the primary causes of the decline of the Sonoran pronghorn (USFWS 2002a).

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### **3. ACTION AREA**

The action area consists of those lands that will be directly and indirectly impacted by the Project and are known to be occupied or potentially occupied by federally listed species. The action area is defined by a corridor that extends approximately 300 feet from construction access routes, staging areas, and construction sites. This is the area directly affected by the Project. The extension of 300 feet represents the approximate distance that Project-related noise is estimated to attenuate from approximately 80 A-weighted decibels (dBA) to approximately ambient noise levels of around 55 dBA. The action area includes primary vehicle fence and access road construction activities, construction access roads, and construction staging areas.

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## 4. EFFECTS OF THE PROJECT

The following is an analysis of the effects of the Project. Implementation of the Project may affect, but is not likely to adversely affect, the southwestern willow flycatcher (*Empidonax traillii extimus*) and yellow-billed cuckoo (*Coccyzus americanus*) in CV-1A. The Project may affect, but is not likely to adversely affect, the Sonoran pronghorn (*Antilocapra americana sonoriensis*) and the lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) in Section CV-2. Potentially suitable habitat exists within the Project corridor for the species listed above. The vegetation alliances that will be impacted by construction activities in Section CV-2 and the species with habitat in those vegetation alliances are presented in **Table 4-1**. Implementing general and species-specific BMPs will help to avoid impacts on these species and their habitats (see **Section 1.3**).

### 4.1 SOUTHWESTERN WILLOW FLYCATCHER

The Project may affect, but is not likely to adversely affect, the southwestern willow flycatcher throughout the impact areas in Sections CV-1A. NatureServe data indicate that the southwestern willow flycatcher occurs immediately west of the Section CV-1A Project corridor (NatureServe 2008). Southwestern willow flycatchers are only expected to occur in the Project area from April until mid-September (USFWS 2002b). Because construction will occur from October through December 2008, southwestern willow flycatchers are not expected to be present during construction. The Project will result in the loss of approximately 14 acres of suitable willow flycatcher habitat. The impact of this loss will be negligible compared to the available habitat in the Project area and along the Colorado River. Additionally, the Project corridor is disturbed and is in close proximity to agricultural development, further reducing the effects associated with loss of habitat. However, BMPs will help to reduce or avoid these impacts (see **Section 1.3**).

### 4.2 YELLOW-BILLED CUCKOO

The Project may affect, but is not likely to adversely affect, the yellow-billed cuckoo throughout the impact areas in Sections CV-1A. NatureServe data indicate that yellow-billed cuckoo occurs in Section CV-1A within the Project corridor (NatureServe 2008). Yellow-billed cuckoos are only expected to occur in the Project area from late May until late August (Wiggins 2005). Because construction will occur from October through December 2008, yellow-billed cuckoos are not expected to be present during construction. The Project will result in the loss of approximately 1 acre of yellow-billed cuckoo habitat. The impact of this loss will be negligible compared to the available habitat in the Project area and along the Colorado River. Additionally, the Project corridor is disturbed and is in close proximity to agricultural development, further reducing the effects associated with loss of habitat. However, BMPs will help to reduce or avoid these impacts (see **Section 1.3**).

**Table 4-1. Vegetation Alliances Impacted by Construction Activities in Section CV-2**

<b>Vegetation Alliance</b>	<b>Access Road (acres)</b>	<b>Fence Corridor (acres)</b>	<b>Staging Areas (acres)</b>	<b>Species with Habitat in Vegetation Alliance</b>
<b>Grassland</b>				
Annual Herbaceous Vegetation/ Barrens	24.81	5.56	0.82	--
<b>Total Herbaceous</b>	<b>24.81</b>	<b>5.56</b>	<b>0.82</b>	
<b>Tall Shrubland</b>				
Smoketree – Catclaw Acacia Desert Wash Shrubland	1.3	0.5	--	--
<b>Total Tall Shrubland</b>	<b>1.3</b>	<b>0.5</b>	--	--
<b>Short Shrubland</b>				
Brittlebush – Creosotebush Volcanic Cobble Shrubland	--	0.48	--	--
Creosotebush / Annual Herbaceous Vegetation Shrubland	5.67	--	5.47	--
Creosotebush – Brittlebush – Teddy Bear Cholla Volcanic Cobble Shrubland	3.46	3.58	--	--
Creosotebush – Brittlebush – White Bursage Shrubland	38.52	2.39	20.26	--
Creosotebush – Limberbush – White Bursage Shrubland	8.34	4.58	5.53	--
Creosotebush – Ocotillo Volcanic Cobble Shrubland	0.27	13.17	0.47	--
Creosotebush – White Bursage Shrubland	80.3	20.98	5.33	--
Creosotebush – White Bursage Volcanic Cobble Shrubland	0.98	3.09	--	--
Creosotebush – White Bursage – Four-wing Saltbush Shrubland	5.16	0.19	--	--
Four-wing Saltbush – Catclaw Acacia Desert Wash Shrubland	3.41	--	--	--
Rock Outcrop Sparse Shrubland	0.25	--	--	--
<b>Total Short Shrubland</b>	<b>146.36</b>	<b>48.46</b>	<b>37.06</b>	--

Vegetation Alliance	Access Road (acres)	Fence Corridor (acres)	Staging Areas (acres)	Species with Habitat in Vegetation Alliance
<b>Wooded Shrubland</b>				
Ironwood / Brittlebush Desert Wash Wooded Shrubland	4.07	0.3	2.19	--
Paloverde – Ironwood / Mixed Shrub Desert Wash Wooded Shrubland	5.11	5.77		--
Honey Mesquite / Mixed Shrubs Riparian Wooded Shrubland	5.08	0.71	0.28	--
Saguaro / Creosotebush – White Bursage Wooded Shrubland	8.73	--	--	Lesser long-nosed bat
Paloverde – Ocotillo – Creosotebush Mountain Slope Wooded Shrubland	1.7	4.32	0.1	--
<b>Total Wooded Shrubland</b>	<b>24.69</b>	<b>11.1</b>	<b>2.57</b>	
<b>Miscellaneous</b>				
Unvegetated Desert Wash Channels	0.93	0.62	0.31	--

### 4.3 LESSER LONG-NOSED BAT

The Project may affect, but is not likely to adversely affect, the lesser long-nosed bat in Section CV-2. Lesser long-nosed bats use roost sites within CPNWR, including one of three maternity roosts in the United States (e<sup>2</sup>M 2008). However, at its closest point the maternity roost is approximately 15 miles from the project corridor. There are no known occurrences of this species within or immediately adjacent to the Project corridor (NatureServe 2008). Effects could occur through the direct loss of forage habitat. Based on the known forage distances of up to 40 miles for lesser long-nosed bats, it is likely that this species forages throughout portions of the CPNWR, where flowers and fruit of saguaro, organ pipe, prickly pear, and agave are available (USFWS 2006, USFWS 2007).

A total of 8.73 acres of suitable lesser long-nosed bat forage habitat (saguaro/creosotebush – white bursage wooded shrubland) will be permanently impacted by construction of tactical infrastructure in Section CV-2. Approximately 260 saguaros occur in the Project corridor, which serve as a forage plant for lesser long-nosed bat. This potential loss of lesser long-nosed bat habitat is small compared to the suitable forage habitat available to the lesser long-nosed bat throughout the action area. Additionally, sensitive or protected plant species will be avoided when possible and when it is not possible to avoid saguaros, CBP will conduct appropriate mitigation to lessen the impact of the

Project. Therefore, the Project might affect, but is not likely to adversely affect, the lesser long-nosed bat.

#### 4.4 SONORAN PRONGHORN

The Project may affect, but is not likely to adversely affect the Sonoran pronghorn throughout the impact areas in Section CV-2. Sonoran pronghorns occur within the proposed project region within BMGR and CPNWR, with the CPNWR being central to its distributional range (USFWS 2006). Sonoran pronghorns most frequently use the valleys and hills of Pinta Sands, Mohawk Valley, San Cristobal Valley, and Growler Valley east of the proposed Project area (e<sup>2</sup>M 2008). Arizona Game and Fish Department documented an individual radiotagged Sonoran pronghorn that crossed the Section CV-2 project corridor and joined a herd in Mexico (Young 2008). This is perceived to be an extralimital occurrence, based on the species' current range and the fact that this was an individual pronghorn. Although Section CV-2 will occupy part of the historical range for Sonoran pronghorn, the Project is outside the current range of the species. Additionally, because of the lack of water sources, the Project area is considered only marginal seasonal habitat (e<sup>2</sup>M 2008). Therefore, no direct effect on Sonoran pronghorn or its habitat are expected.

As stated above threats to Sonoran pronghorn include barriers to movement caused by roads, canals, train tracks, and fences (USFWS 2002a). However, pronghorn (*Antilocapra americana*) have been documented to cross under barbed wire fences with a clearance of 22 inches, with a low aversion rate (Karhu and Anderson 2003) and post on rail type ("buck and pole") fences with a clearance of 18 inches (NDGFD 2006). The clearance under a post on rail fence associated with the Project is 36 inches high and the clearance under a Normandy style vehicle fence is 32.5 inches.

Improvements to the Camino del Diablo could increase vehicle and recreational use in Sonoran pronghorn habitat. However, these increases are likely to be negligible. Camino del Diablo is currently open to permitted four-wheel-drive traffic and this will not change as a result of the Project. Increased human disturbance of Sonoran pronghorn in adjacent habitat, associated with construction could occur. Increased human disturbance could result in physiological effects, such as elevated heart rate or the additional energy expended in moving away from perceived danger. Studies of captive pronghorn, other than the Sonoran subspecies, have shown that they are sensitive to disturbance such as human presence and vehicular noise. Human and vehicular traffic caused an increased heart-rate response in American pronghorn in half-acre holding pens. During times of drought, disturbances that cause pronghorns to startle and run energetically will have a more significant effect. Such expenditures of energy, particularly during times of stress, could lead to lower reproductive output or reduced survival for individual animals (USFWS 2006). However, impacts are expected to be negligible since construction will be focused outside the current range of the species.

A beneficial effect is anticipated from the Project is the reduction of illegal traffic and other illegal human activities on habitat for this species. In one area, illegal traffic has created a 38-mile road since 1999 that traverses pronghorn habitat. In addition, there are hundreds of additional miles of single vehicle tracks laid down across the otherwise undisturbed desert by cross-border violators. These activities undoubtedly result in adverse effects due to the reduction of habitat quantity and quality available to Sonoran pronghorns (USFWS 2006) and through direct disturbance of individuals. The expected reduction and potential cessation of these illegal activities in this area could result in short- and long-term, minor to major, beneficial effects on this species through improvement of the habitat north of the Project such that pronghorn might once again inhabit the area in the future.

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## 5. DETERMINATION OF EFFECT

**Table 5-1** summarizes the federally listed species and habitats that are known to occur within 25 miles of the U.S./Mexico international border in Yuma County.

There are nine federally listed species that are known to occur, or have the potential to occur, within or adjacent to the project area. Additionally, one of the listed species has designated critical habitat near the Project area. The Project may affect, but is not likely to adversely affect, the southwestern willow flycatcher (*Empidonax traillii extimus*) and yellow-billed cuckoo (*Coccyzus americanus*) in Section CV-1A. The Project may affect, but is not likely to adversely affect, the Sonoran pronghorn (*Antilocapra americana sonoriensis*) and the lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) in Section CV-2. The Project will have no effect on the razorback sucker (*Xyrauchen texanus*) or its critical habitat, the wintering population of bald eagle (*Haliaeetus leucocephalus*), California brown pelican (*Pelecanus occidentalis californicus*), and Yuma clapper rail (*Rallus longirostris yumanensis*) in CV-1A and flat-tailed horned lizard (*Phrynosoma mcallii*) in CV-2. The reasons for the no effect determinations are detailed below.

**Razorback Sucker.** There are no known occurrences of this species within or immediately adjacent to the Project corridor (NatureServe 2008). Additionally, the Project corridor does not contain suitable habitat for the razorback sucker (GSRC 2008). The only portion of the Section CV-1A that will occur within the floodplain of the Colorado River is a section of Normandy-style fence that will connect to the Morelos Dam. No changes to hydrology are expected as a result of the Project. Therefore, no impacts on the razorback sucker are anticipated.

**Razorback Sucker Critical Habitat.** Razorback sucker critical habitat does not occur within the Project corridor.

**Bald eagle.** Once endangered, the bald eagle was downlisted to threatened on August 11, 1995, and delisted August 8, 2007. Threatened status was reinstated for desert nesting bald eagles, and the species is being monitored in several counties by USFWS. However, Yuma County is not one of those counties, and no bald eagle nests are known in the area of the Project (Driscoll et al. 2006). There are no known occurrences of this species within or immediately adjacent to the project corridor (NatureServe 2008). Additionally, suitable nesting habitat, which is composed of large trees or cliffs near water (e.g., reservoirs, rivers, and streams) with abundant prey, does not exist within the Project corridor (USFWS 2008).

**California brown pelican.** This subspecies is found on the Pacific Coast and is an uncommon transient in Arizona on lakes and rivers. Individuals wander up from Mexico in summer and fall. There are no known occurrences of this species within or immediately adjacent to the project corridor (NatureServe 2008). There

**Table 5-1. Federally Listed Species and Designated Critical Habitats Known to Occur or with Potential to Occur Within Project Area in Yuma County, Arizona, and the Determination of Effects**

Species	Project Segment	Listing Status, Critical Habitat	Effect Determination
<b>Fish</b>			
Razorback sucker, <i>Xyrauchen texanus</i>	CV-1A	Endangered	No effect
Razorback sucker Critical Habitat	CV-1A	Critical Habitat upstream of the Project area	No effect
<b>Reptiles</b>			
Flat-tailed horned lizard, <i>Phrynosoma mcallii</i>	CV-2	Conservation Agreement Species*	No effect
<b>Birds</b>			
Bald eagle (wintering population), <i>Haliaeetus leucocephalus</i>	CV-1A	Threatened**	No effect
California brown pelican, <i>Pelecanus occidentalis californicus</i>	CV-1A	Threatened , Proposed delisted	No effect
Southwestern willow flycatcher, <i>Empidonax traillii extimus</i>	CV-1A	Endangered	Not likely to adversely affect
Yellow-billed cuckoo, <i>Coccyzus americanus</i>	CV-1A	Candidate	Not likely to adversely affect
Yuma clapper rail, <i>Rallus longirostris yumanensis</i>	CV-1A	Endangered	No effect
<b>Mammals</b>			
Lesser long-nosed bat, <i>Leptonycteris curasoae</i>	CV-2	Endangered	Not likely to adversely affect
Sonoran pronghorn, <i>Antilocapra americana sonoriensis</i>	CV-2	Endangered	Not likely to adversely affect

Source: USFWS 2008

Notes:

\* This species is not federally-listed; however, the USFWS participates in the Flat-tailed Horned Lizard Rangelwide Management Strategy which has been prepared to provide guidance for the conservation and management of sufficient habitat to maintain extant populations of flat-tailed horned lizards.

\*\*Once endangered, this species was downlisted to threatened on August 11, 1995, and delisted August 8, 2007. Threatened status was reinstated for desert nesting bald eagles.

are no breeding records of this species in Arizona. Suitable habitat, which is composed of coastal land and islands, and around Arizona lakes and rivers, does not exist within the Project corridor (USFWS 2008).

**Yuma clapper rail.** NatureServe data indicate that Yuma clapper rail occurs in Section CV-1A within the Project corridor (NatureServe 2008). Yuma clapper rail is associated with dense riparian and marsh vegetation. It requires a wet substrate, such as a mudflat, sandbar, or slough bottom, that supports cattail and bulrush stands of moderate to high density adjacent to shorelines (USFWS 2002c). However, suitable habitat for Yuma clapper rail will not be affected by the Project (GSRC 2008). Therefore, impacts on individuals associated with construction will not be expected.

**Flat-tailed Horned Lizard.** There are no known occurrences of this species within or immediately adjacent to the Project corridor (NatureServe 2008). The flat-tailed horned lizard is adapted to active sand dunes and flats and could occur in the Pinta Sands area east of the proposed Project corridor (USFWS 2006). Suitable habitat for the flat-tailed horned lizard does not occur within the Project corridor (e<sup>2</sup>M 2008).

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## 6. REFERENCES

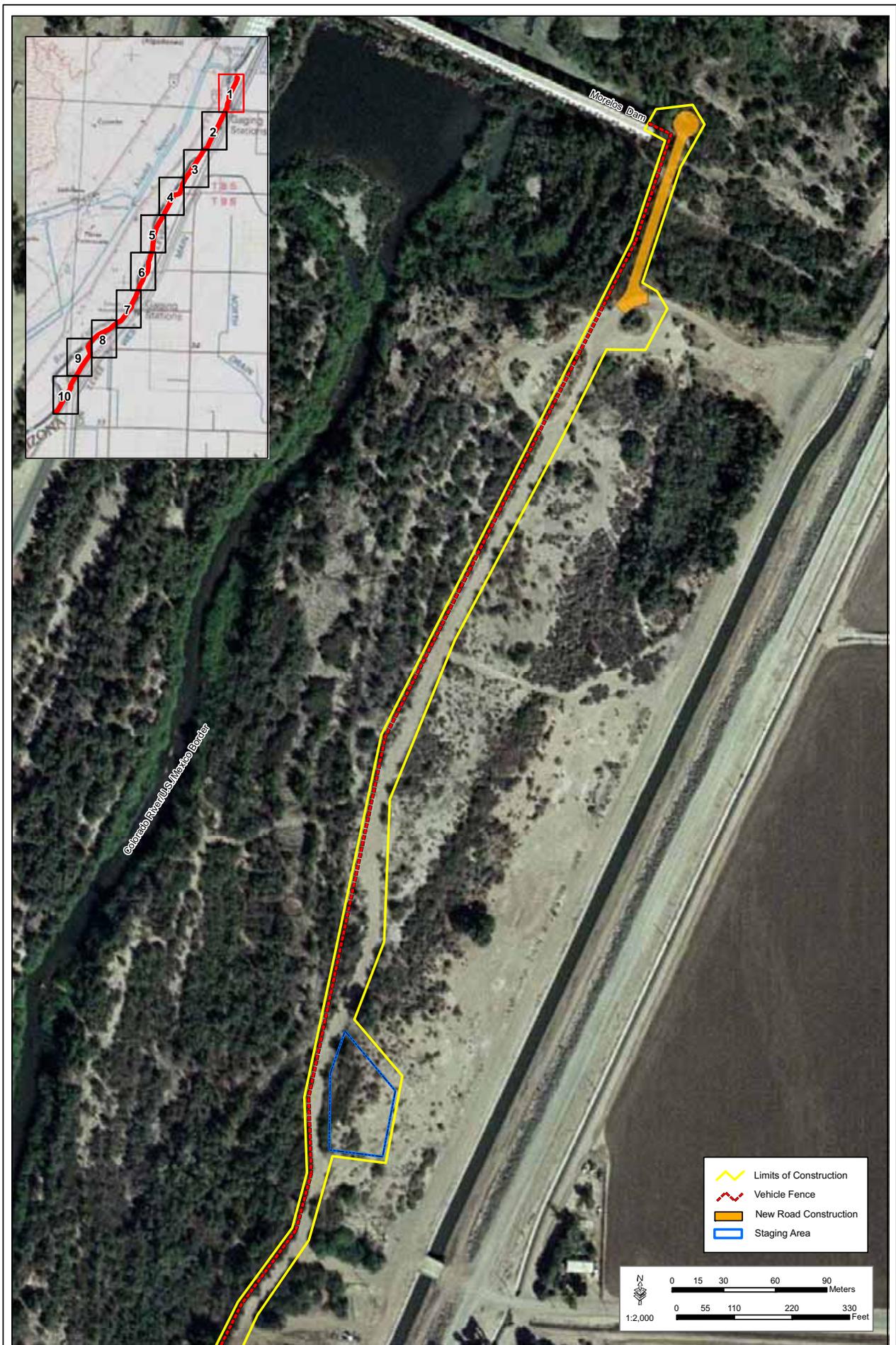
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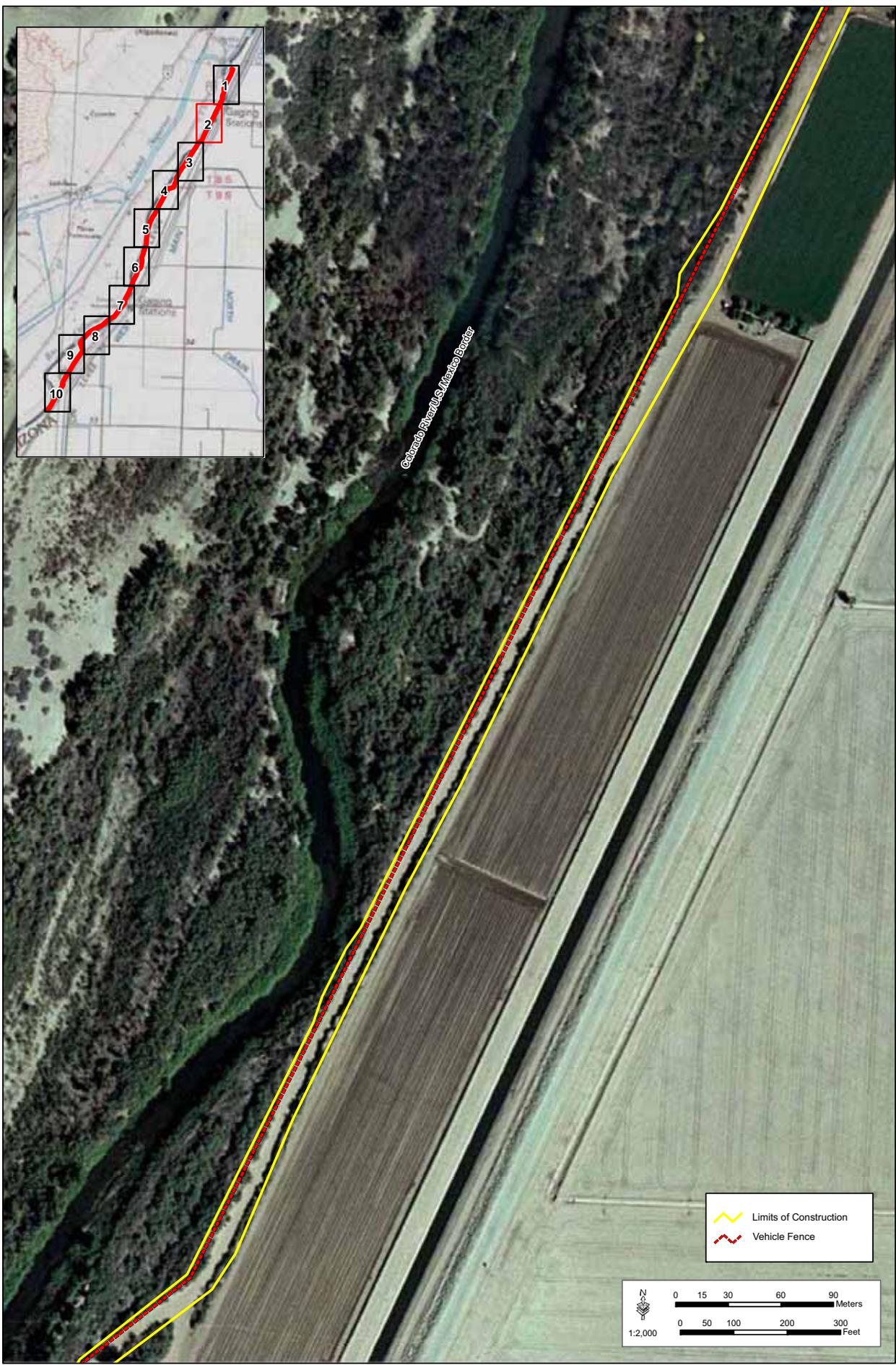
*APPENDIX C*  
*Corridor Maps*



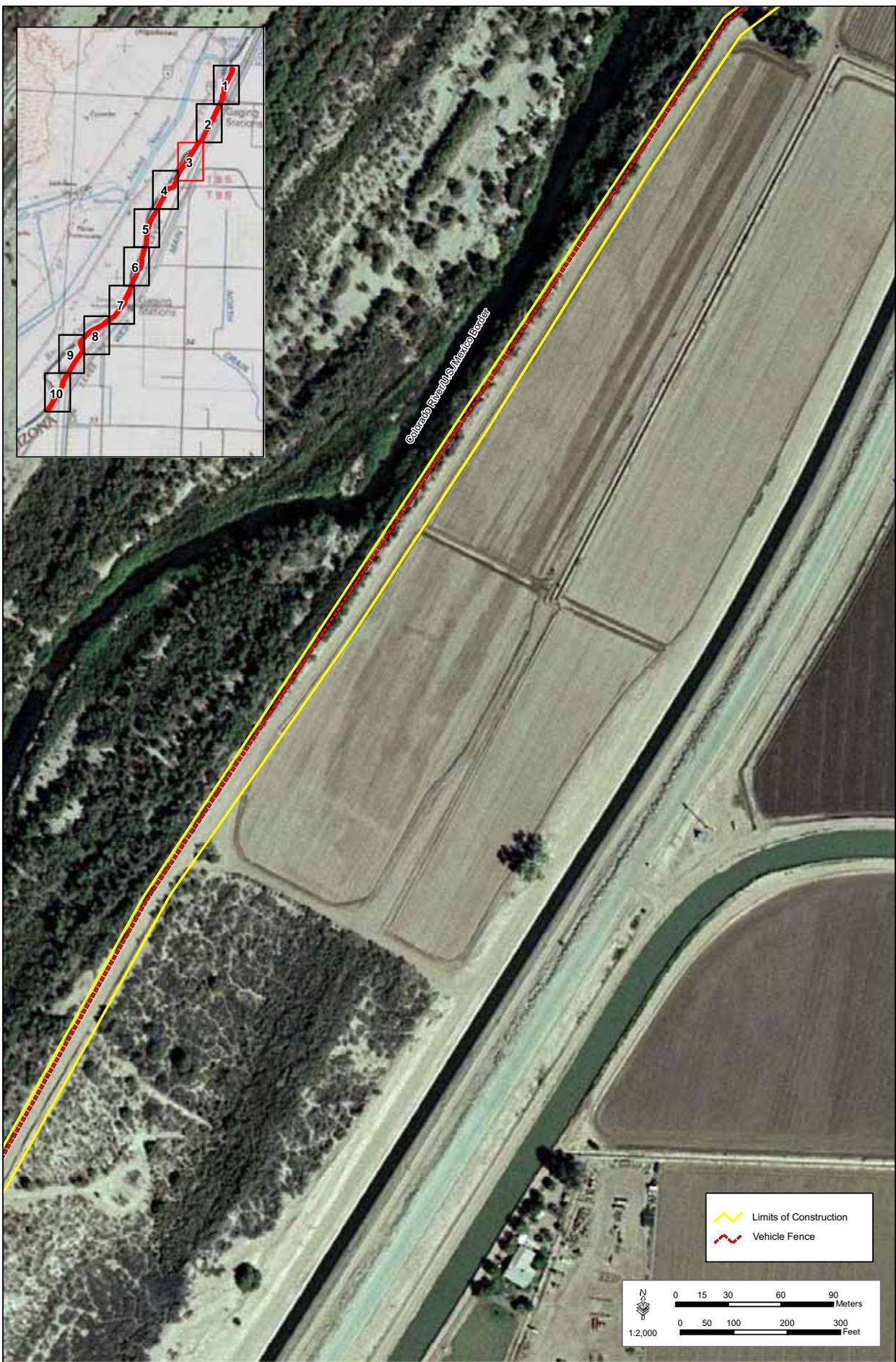




Corridor Map 1



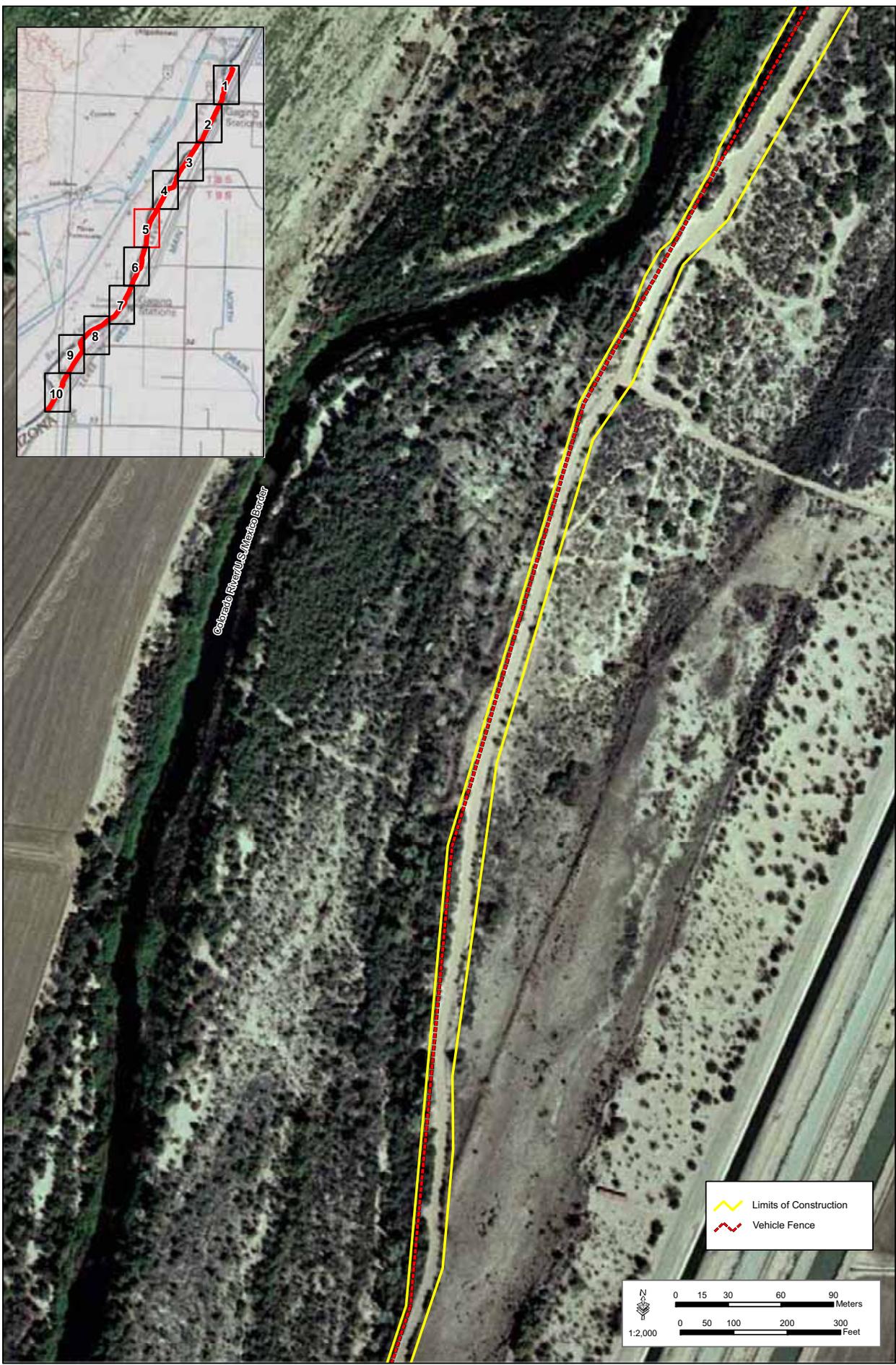
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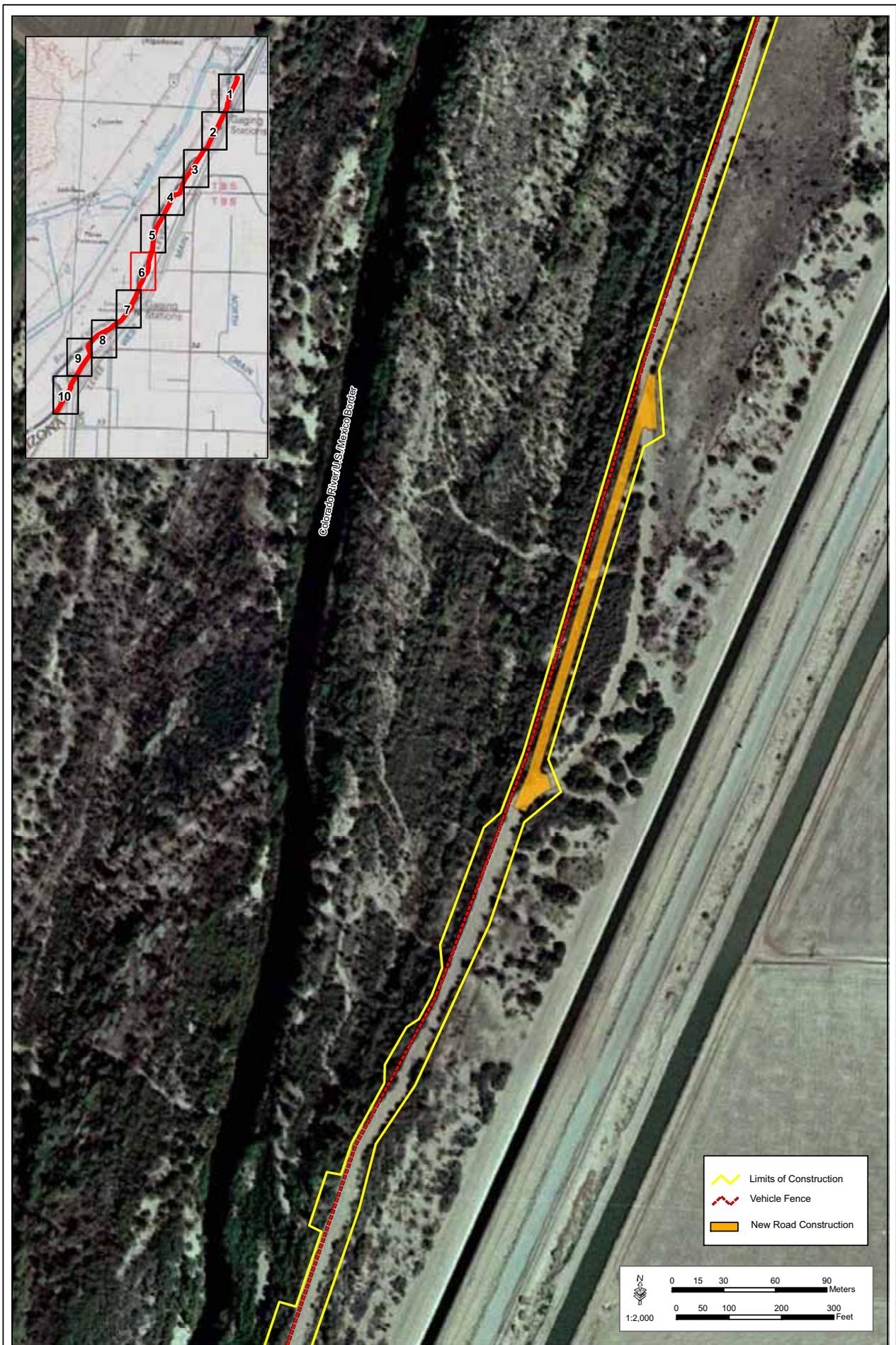


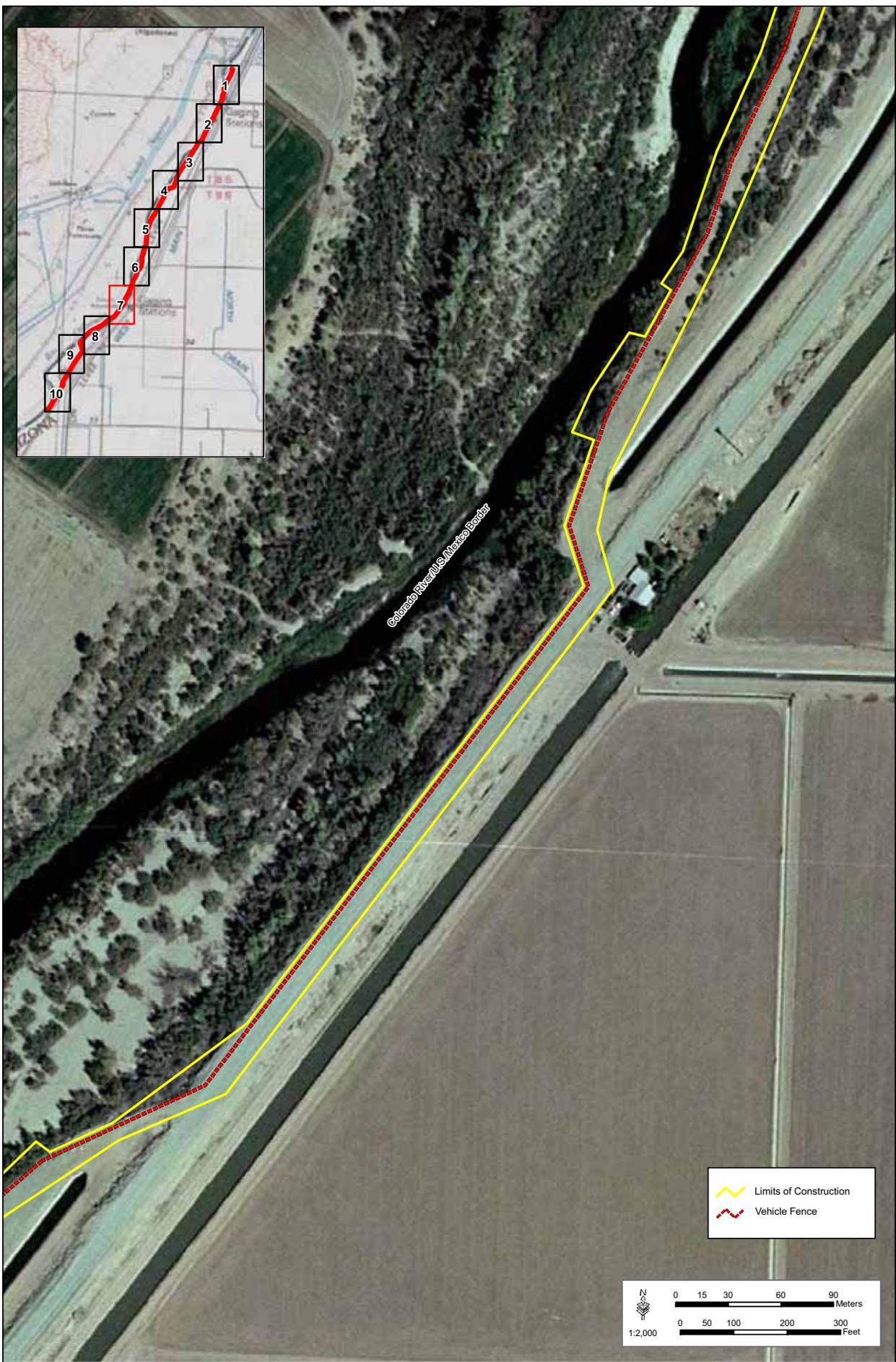
Corridor Map 3



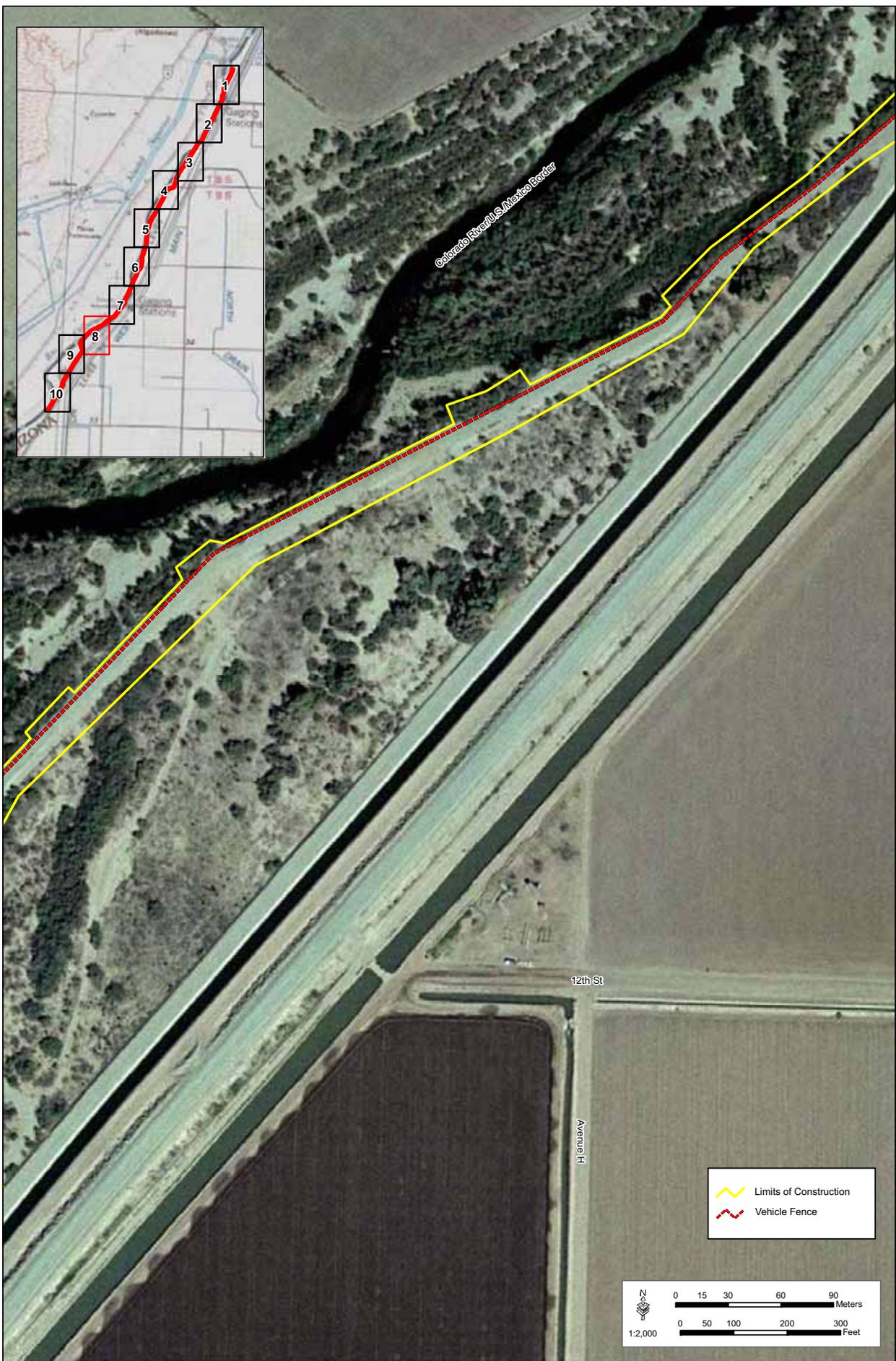
Corridor Map 4

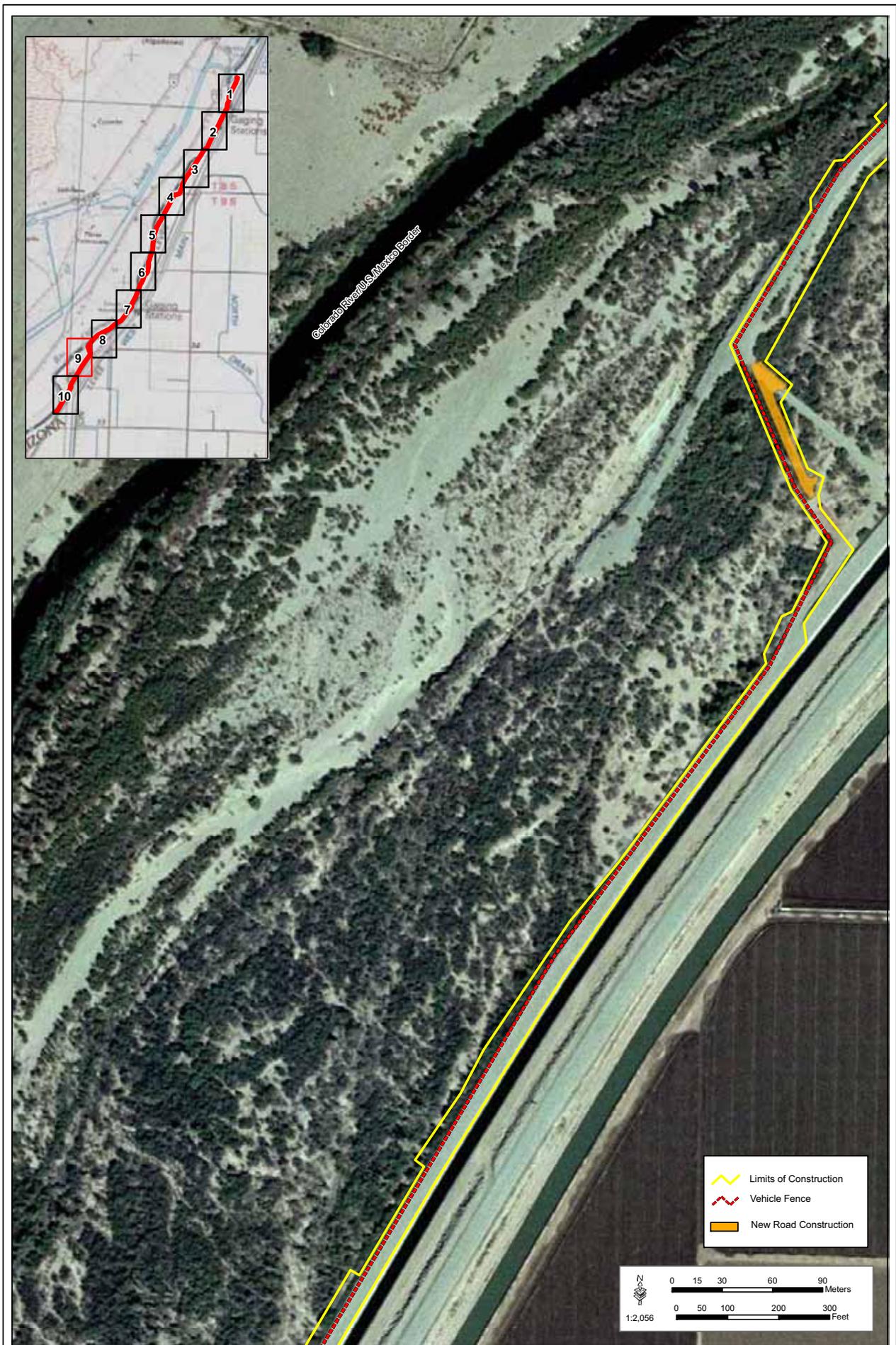


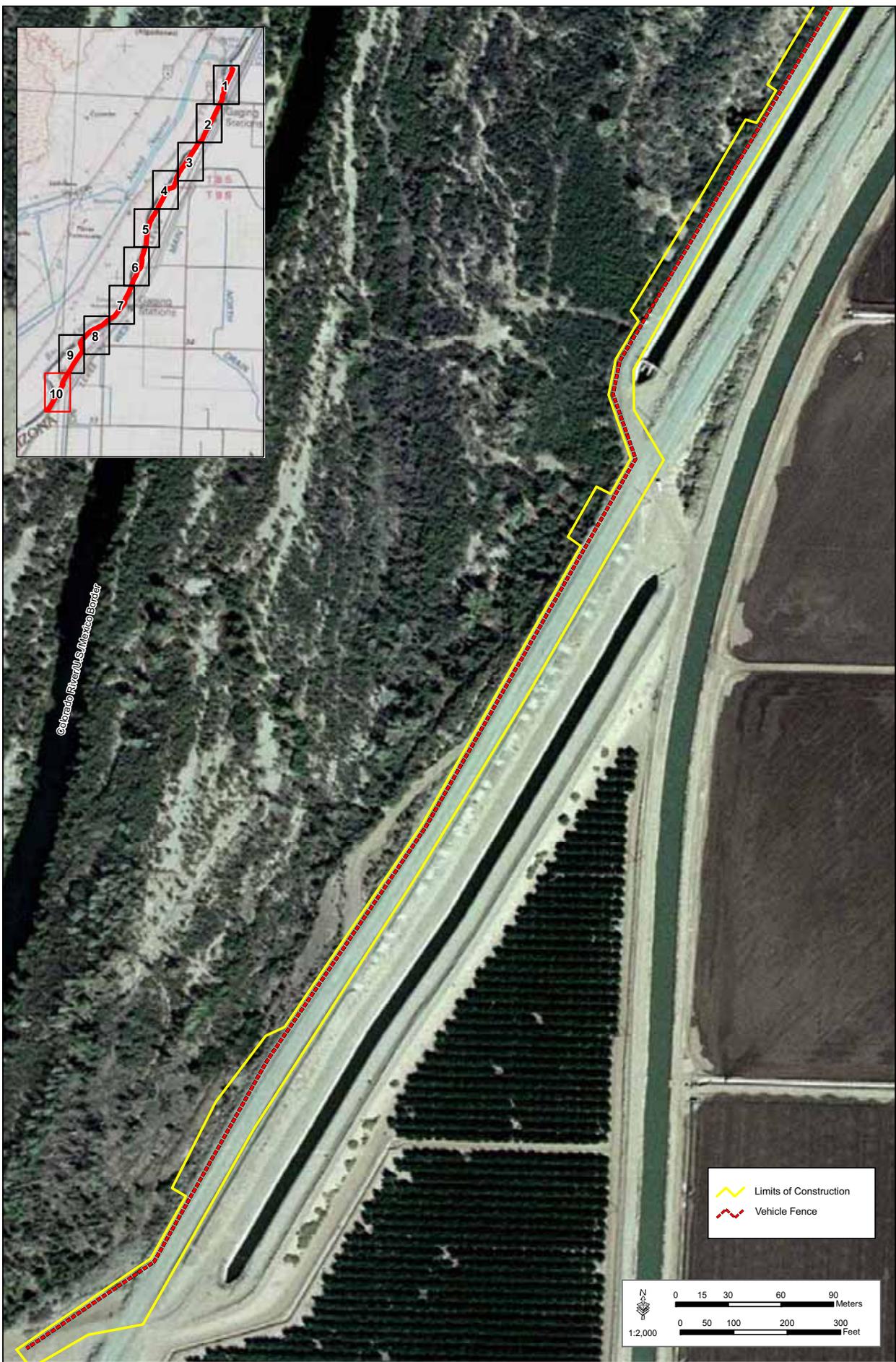




Corridor Map 7







*Colorado River U.S./Mexico Border*

*APPENDIX D*  
*Air Emissions Calculations*

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CALCULATION SHEET-COMBUSTABLE EMISSIONS-PLANNED ACTION - CV1A

Assumptions for Combustable Emissions						
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs	
Water Truck	2	300	12	120	864000	
Diesel Road Compactors	2	100	12	120	288000	
Diesel Dump Truck	3	300	12	120	1296000	
Diesel Excavator	2	300	12	120	864000	
Diesel Hole Cleaners/Trenchers	0	175	12	120	0	
Diesel Bore/Drill Rigs	0	300	12	120	0	
Diesel Cement & Mortar Mixers	0	300	12	120	0	
Diesel Cranes	3	175	12	120	756000	
Diesel Graders	2	300	12	120	864000	
Diesel Tractors/Loaders/Backhoes	2	100	12	120	288000	
Diesel Bull Dozers	2	300	12	120	864000	
Diesel Front End Loaders	2	300	12	120	864000	
Diesel Fork Lifts	4	100	12	120	576000	
Diesel Generator Set	10	40	12	120	576000	

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-PLANNED ACTION - CV1A

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	0.117	0.470	1.555	0.108	0.105	0.235	170.177		
Diesel Dump Truck	0.628	2.956	7.841	0.586	0.571	1.057	765.511		
Diesel Excavator	0.324	1.238	4.380	0.305	0.295	0.705	510.626		
Diesel Hole Cleaners/Trenchers	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Bore/Drill Rigs	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Cement & Mortar Mixers	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Cranes	0.367	1.083	4.765	0.283	0.275	0.608	441.716		
Diesel Graders	0.333	1.295	4.504	0.314	0.305	0.705	510.626		
Diesel Tractors/Loaders/Backhoes	0.587	2.606	2.291	0.435	0.422	0.302	219.339		
Diesel Bull Dozers	0.343	1.314	4.532	0.314	0.305	0.705	510.626		
Diesel Front End Loaders	0.362	1.476	4.761	0.333	0.324	0.705	510.531		
Diesel Aerial Lifts	1.257	4.926	5.433	0.882	0.857	0.603	438.487		
Diesel Generator Set	0.768	2.387	3.789	0.463	0.451	0.514	372.790		
<b>Total Emissions</b>	<b>5.505</b>	<b>21.720</b>	<b>49.079</b>	<b>4.414</b>	<b>4.290</b>	<b>6.841</b>	<b>4960.769</b>		

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-TRANSPORTATION COMBUSTABLE EMISSIONS-PLANNED ACTION-CV1A

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	60	120	20	20	0.22	0.26	0.47
CO	12.4	15.7	60	120	20	20	1.97	2.49	4.46
NOx	0.95	1.22	60	120	20	20	0.15	0.19	0.34
PM-10	0.0052	0.0065	60	120	20	20	0.00	0.00	0.00
PM 2.5	0.0049	0.006	60	120	20	20	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	120	2	2	0.00	0.01	0.01
CO	1.32	3.21	60	120	2	2	0.02	0.05	0.07
NOx	4.97	12.6	60	120	2	2	0.08	0.20	0.28
PM-10	0.12	0.33	60	120	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	120	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

**Construction Fugitive Dust Emissions**

**Construction Fugitive Dust Emission Factors**

General Construction Activities	Emission Factor	Units	Source
New Road Construction	0.19 ton PM10/acre-month	PM10/acre-month	MRI 1996; EPA 2001; EPA 2006
	0.42 ton PM10/acre-month	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**

Vehicle Fence (0.19 ton PM10/acre-month)	Conversion Factors
Duration of Construction Project	0.000022957 acres per foot
Length	5280 feet per mile
Length (converted)	
Width	
Area	

**Fence and New Road Construction (0.42 ton PM10/acre-month)**

Duration of Construction Project	3 months
Length	5 miles
Length (converted)	26400 feet
Width	60 feet
Area	36.36 acres

	Project Emissions (tons/year)	
	PM10 uncontrolled	PM2.5 uncontrolled
Vehicle Fence (0.19 ton PM10/acre-month)	0.00	0.00
Fence and New Road Construction (0.42 ton PM10/acre-month)	45.82	4.58
<b>Total</b>	<b>45.82</b>	<b>4.58</b>

**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.

## VF 300 Fugitive Dust Emissions Model

### General Construction Activities Emission Factors

#### 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 EP

### 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.

### 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-PLANNED ACTION-CV1A

Proposed Action Construction Emissions for Criteria Pollutants (tons per year)							
Emission source	VOC	CO	NOx	PM-10	PM-2.5	SO <sub>2</sub>	
Combustible Emissions	5.50	21.72	49.08	4.41	4.29	6.84	
Construction Site-fugitive PM-10	NA	NA	NA	22.91	4.58	NA	
Construction Workers Commuter & Trucking	0.48	4.53	0.62	0.01	0.01	NA	
Total emissions	5.99	26.25	49.70	27.33	8.88	6.84	
De minimis threshold	NA	NA	NA	100.00	NA	NA	

*APPENDIX E*  
*Threatened and Endangered Species List*

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**U.S. Fish & Wildlife Service**

**Endangered Species List**

[Back to Start](#)

**List of species by county for Arizona:**

Counties Selected: Yuma

Select one or more counties from the following list to view a county list:

- Apache
- Cochise
- Coconino
- Gila
- Graham

[View County List](#)

**Yuma County**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Species Group</u>	<u>Listing Status</u>	<u>Species Image</u>	<u>Species Distribution Map</u>	<u>Critical Habitat</u>	<u>More Info</u>
bald eagle	<i>Haliaeetus leucocephalus</i>	Birds	DM				<a href="#">P</a>
brown pelican	<i>Pelecanus occidentalis</i>	Birds	DM, E				<a href="#">P</a>
razorback sucker	<i>Xyrauchen texanus</i>	Fishes	E			<a href="#">Final</a>	<a href="#">P</a>
Sonoran pronghorn	<i>Antilocapra americana sonoriensis</i>	Mammals	E				<a href="#">P</a>
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Birds	E				<a href="#">P</a>
yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Birds	C				<a href="#">P</a>
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	Birds	E				<a href="#">P</a>



→ *continued from from cover*

NRHP	National Register of Historic Places
O <sub>3</sub>	ozone
OBP	Office of Border Patrol
OSHA	Occupational Safety and Health Administration
PCPI	per capita personal income
PM 2.5	Particulate <2.5 micrometers
PM-10	Particulate <10 micrometers
POE	Port of Entry
POL	petroleum, oil, and lubricants
ROI	region of influence
SBI	Secure Border Initiative
SHPO	State Historic Preservation Office
SO <sub>2</sub>	silicon dioxide
SPCCP	Spill Prevention, Control, and Countermeasures Plan
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
TI	Tactical Infrastructure
U.S.	United States
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USIBWC	United States Section, International Boundary Water Commission
WAPA	Western Area Power Administration
WUS	Waters of the U.S.

