



**Final**

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT  
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING  
AND A BORDER INFRASTRUCTURE SYSTEM  
OFFICE OF BORDER PATROL  
YUMA SECTOR, ARIZONA**

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



**January 2010**

BW1 FOIA CBP 004901



**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING  
AND A BORDER INFRASTRUCTURE SYSTEM  
OFFICE OF BORDER PATROL  
YUMA SECTOR, ARIZONA**

**PROJECT HISTORY:** United States (U.S.) Border Patrol (USBP) is an organizational element of U.S. Customs and Border Protection (CBP) which is a component of Department of Homeland Security (DHS). The mission of CBP is to prevent terrorists and terrorist weapons from entering the U.S., while also facilitating the flow of legitimate trade and travel. In supporting CBP's mission, USBP is charged with establishing and maintaining effective control of the Nation's international border between the Ports of Entry (POEs). In December 2004, CBP completed the *Final Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona*. Then, in March 2007, CBP completed the *Final Supplemental Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona*. The infrastructure proposed in the original Environmental Assessment (EA) involved the construction of a border infrastructure system (BIS), which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence, and extension of the primary border fence along the U.S.-Mexico border. The 2007 Supplemental Environmental Assessment (SEA) proposed the installation of three pre-manufactured bridges, the trimming and maintenance of brush for three camera lanes, the relocation of the security lighting originally planned for the area north of the waste water treatment plant near San Luis, Arizona to the area along the Bypass Drain, the establishment of a BIS to parallel the lights, and the re-clearing and maintenance of an approximately 199-acre enforcement zone between the San Luis Port of Entry and the Colorado River.

Since the completion of these two documents and the commencement of construction of much of the BIS, CBP has determined that an additional connection to the existing commercial electrical grid is necessary at the junction of Avenue D and the BIS. This SEA will discuss the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road along a 15-foot wide power line right of way (ROW) west of Avenue D. This SEA updates the 2004 Final EA and 2007 SEA, and was prepared in accordance with the National Environmental Policy Act (NEPA), and analyzes the project alternatives and potential impacts on the human and natural environment from these alternatives.

**PROJECT LOCATION:** The proposed project is located near the U.S./Mexico border in Yuma County, Arizona. Specifically, the proposed project generally parallels Avenue D from County 25<sup>th</sup> Street south to the existing BIS east of the town of San Luis, Arizona. The Proposed Action would occur within the USBP Yuma Station Area of Operation.

**PURPOSE AND NEED:** The purpose of this Proposed Action is to supply reliable electrical power to the lights within the BIS. The need for the Proposed Action is to

enhance the safety of USBP agents, BLM, U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need of this SEA is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights now are susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences. Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and eliminate air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

**PROPOSED ACTION:** The Proposed Action includes the installation of power poles and service lines from the existing power lines along County 25<sup>th</sup> Street south to the BIS. The proposed power line would be installed west of Avenue D within a 15-foot wide right of way (ROW) starting at County 25<sup>th</sup> Street, running southward for approximately 2,302 feet. The power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS. A 12-foot wide construction access road would be established within the ROW. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing system via subsurface conduit. Arizona Public Service would install the proposed power line.

**ALTERNATIVES:** Two alternatives are addressed in this SEA, the No Action Alternative and the Proposed Action described above. Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations.

**ENVIRONMENTAL CONSEQUENCES:** The Proposed Action would result in disturbance to a total of 1.32 acres. The power line ROW and construction access road

would not significantly impact vegetation, wildlife, soils, water resources, land use, or air quality. No significant impacts to protected species would occur as a result of the Proposed Action. No cultural resources sites would be adversely impacted by the proposed activities.

**MITIGATION MEASURES:** Although no significant impacts have been identified, CBP would implement mitigation measures, many of which are standard operating procedures, to further reduce potentially adverse effects. The mitigation measures are presented for each resource category that could be affected. The proposed measures would be coordinated through the appropriate agencies and land managers/administrators prior to initiation of construction.

**SOILS:** Vehicular traffic associated with the construction activities and operational support activities will remain on established roads to the maximum extent practicable. Erosion control techniques, such as, straw bales, aggregate materials, and wetting compounds will be incorporated with the design of the Proposed Action. In addition, other erosion control measures, as required and promulgated through the SWPPP, will be implemented before and after construction activities.

**WILDLIFE:** Construction of the access road and installation of the power line would occur outside of the neotropical migratory bird nesting season (early May to early to mid September). If this is not possible, CBP would follow the requirements of the Migratory Bird Treaty Act. CBP will coordinate with the U.S. Fish and Wildlife Service (USFWS) if a construction activity will result in the take of a migratory bird. Surveys of suitable habitat will be performed prior to construction to identify active nests. If construction activities will result in the take of a migratory bird, then consultation with the USFWS and Arizona Game and Fish Department will be conducted prior to construction or clearing activities. Bird surveys will not be required if construction/installation activities occur outside of the nesting season.

**PROTECTED SPECIES:** If western burrowing owls (*Athene cunicularia*) are observed within the project ROW, on-site mitigation will consist of passive relocation. This entails encouraging owls to move from occupied burrows within the project area to alternative locations in suitable habitat beyond 150 feet from the project disturbance. The use of one-way doors on burrows should keep owls from returning to the burrows within the project area. Relocation will only be attempted during the non-breeding season (September 1 through March 1).

Pre-construction surveys and construction monitoring would occur for mitigation for potential impacts to the flat-tailed horned lizard (*Phrynosoma mcallii*). All surveys and monitoring would be conducted according to the protocols identified in the *Flat-tailed Horned Lizard Rangewide Management Strategy: An Arizona-California Conservation Strategy*.

**CULTURAL RESOURCES:** If any cultural material is discovered during the construction efforts, then all activities will halt until a qualified archeologist can be brought in to assess the cultural remains.

**WATER RESOURCES:** Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material. A Storm Water Pollution Prevention Plan will be prepared and implemented prior to the start of any construction activities.

**AIR QUALITY:** Mitigation measures will be incorporated to assure that Particulate Matter of 10 micrometers or less emission levels do not rise above the minimum threshold of 100 tons per year as required per 40 CFR 51.853(b)(1). Measures will include dust suppression methods to minimize airborne particulate matter that will be created during construction activities. Standard construction practices such as routine watering of the construction site will be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

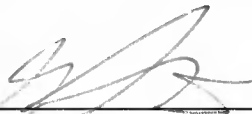
**FINDING:** Based upon the results of the analysis presented in this SEA, the Proposed Action Alternative (*i.e.*, Preferred Alternative) would not have a significant effect on the environment. Therefore, no additional National Environmental Policy Act documentation (*i.e.*, Environmental Impact Statement) is warranted.



Stephen S. Martin  
Acting Chief  
Strategic Planning, Policy, and Analysis Division  
Office of Border Patrol

1/26/10

Date



Gregory L. Giddens  
Executive Director  
Facilities Management and Engineering  
U.S. Customs and Border Protection

17 Feb 10

Date

**Final**

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT  
FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING  
AND A BORDER INFRASTRUCTURE SYSTEM  
OFFICE OF BORDER PATROL  
YUMA SECTOR, ARIZONA**

**January 2010**

---

Lead Agency: U.S. Department of Homeland Security  
U.S. Customs & Border Protection  
Office of Facilities Management and Engineering  
1301 Constitution Avenue N.W.  
EPA West, Suite B-155  
Washington, D.C. 20229

Point of Contact: Loren Flossman  
Program Manager  
Facilities Management and Engineering  
Tactical Infrastructure  
1301 Constitution Avenue, N.W.  
EPA West Suite B-155  
Washington, D.C. 20229





---

---

## EXECUTIVE SUMMARY

---

---

### BACKGROUND:

The U.S. Customs and Border Protection (CBP) released a Final Environmental Assessment (EA) in December 2004 for the construction of tactical infrastructure near San Luis, Arizona. A Supplemental EA (SEA) was completed in March 2007 for additional tactical infrastructure and to document changes to the designs from the original 2004 EA. The infrastructure proposed in the original EA involved the construction of a border infrastructure system (BIS), which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence, and extension of the primary border fence along the U.S./Mexico border. The 2007 SEA proposed the installation of three pre-manufactured bridges, the trimming and maintenance of brush for three camera lanes, the relocation of the security lighting originally planned for the area north of the wastewater treatment plant near San Luis, Arizona to the area along the Bypass Drain, the establishment of a BIS to parallel the lights, and the re-clearing and maintenance of an approximately 199-acre enforcement zone between the San Luis Port-of-Entry and the Colorado River.

Since the completion of these two documents and the commencement of construction of much of the BIS, CBP has determined that an additional connection to the existing commercial electrical grid is necessary at the junction of Avenue D and the BIS. This SEA will discuss the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road along a 15-foot wide power line right-of-way (ROW) west of Avenue D.

### PURPOSE AND NEED FOR THE PROPOSED PROJECT:

The purpose of the Proposed Action is to provide reliable electrical power to the lights within the BIS. The need for the Proposed Action is to enhance the safety of USBP agents, Bureau of Land Management (BLM), U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by

portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need of this Proposed Action is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights are now susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences. Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and eliminate air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

**PROPOSED ACTION:** The Proposed Action for this SEA includes the installation of power poles and service lines from the existing power lines along County 25<sup>th</sup> Street south to the BIS. The proposed power line would be installed west of Avenue D within a 15-foot wide ROW starting at County 25<sup>th</sup> Street, running southward for approximately 2,302 feet. The power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS. A 12-foot wide construction access road would be established within the ROW. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing system via subsurface conduit. Arizona Public Service would install the proposed power line.

**ALTERNATIVES TO  
THE PROPOSED  
ACTION:**

Two alternatives are addressed in this SEA, the No Action Alternative and the Proposed Action. Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations. Of the alternatives considered, the Proposed Action would be the most efficient and strategically effective approach to control cross border violations and terrorist activities, and to satisfy the stated purpose and need.

**ENVIRONMENTAL  
IMPACTS OF THE  
PROPOSED ACTION:**

The Proposed Action would result in disturbance to a total of 1.32 acres. The power line ROW and construction access road would not significantly impact vegetation, wildlife, soils, water resources, land use, or air quality. No significant impacts to protected species would occur as a result of the Proposed Action. No cultural resources sites would be adversely impacted by the proposed activities. There would also be no impacts to the region's socioeconomics nor would the project cause issues relating to Environmental Justice.

**CONCLUSIONS:**

Based upon the results of this SEA, it has been concluded that the Proposed Action would not have a significant adverse effect on the environment, and no additional National Environmental Policy Act (NEPA) documentation is warranted.

**THIS PAGE LEFT INTENTIONALLY BLANK**

---

---

**TABLE OF CONTENTS**

---

---

**EXECUTIVE SUMMARY ..... ES-1**

**1.0 INTRODUCTION AND PURPOSE AND NEED ..... 1-1**

1.1 INTRODUCTION ..... 1-1

1.2 BACKGROUND AND HISTORY ..... 1-1

1.3 LOCATION OF THE PROPOSED PROJECT ..... 1-9

1.4 PURPOSE AND NEED ..... 1-9

1.5 PUBLIC INVOLVEMENT ..... 1-11

    1.5.1 Agency Coordination ..... 1-11

    1.5.2 Public Review ..... 1-12

1.6 APPLICABLE ENVIRONMENTAL STATUTES AND REGULATIONS . 1-12

1.7 REPORT ORGANIZATION ..... 1-12

**2.0 ALTERNATIVES ..... 2-1**

2.1 NO ACTION ALTERNATIVE ..... 2-1

2.2 PROPOSED ACTION ..... 2-1

2.3 CONSTRUCTION PERSONNEL AND EQUIPMENT ..... 2-3

2.4 SUMMARY ..... 2-3

**3.0 ENVIRONMENTAL FEATURES AND CONSEQUENCES ..... 3-1**

3.1 PRELIMINARY IMPACT SCOPING ..... 3-1

3.2 LAND USE ..... 3-3

    3.2.1 Affected Environment ..... 3-3

    3.2.2 Environmental Consequences ..... 3-4

        3.2.2.1 Proposed Action ..... 3-4

        3.2.2.2 No Action Alternative ..... 3-4

3.3 SOILS ..... 3-4

    3.3.1 Affected Environment ..... 3-4

    3.3.2 Environmental Consequences ..... 3-4

        3.3.2.1 Proposed Action ..... 3-4

        3.3.2.2 No Action Alternative ..... 3-5

3.4 WATER RESOURCES ..... 3-5

    3.4.1 Affected Environment ..... 3-5

        3.4.1.1 Surface Water ..... 3-5

        3.4.1.2 Groundwater ..... 3-6

    3.4.2 Environmental Consequences ..... 3-6

        3.4.2.1 Proposed Action ..... 3-6

        3.4.2.2 No Action Alternative ..... 3-7

3.5 BIOLOGICAL RESOURCES ..... 3-8

    3.5.1 Affected Environment ..... 3-8

        3.5.1.1 Vegetation ..... 3-8

        3.5.1.2 Wildlife ..... 3-8

        3.5.1.3 Protected Species ..... 3-9

3.5.2	Environmental Consequences .....	3-11
3.5.2.1	Proposed Action .....	3-11
3.5.2.2	No Action Alternative .....	3-13
3.6	CULTURAL RESOURCES .....	3-14
3.6.1	Affected Environment.....	3-14
3.6.1.1	Previous Investigations.....	3-14
3.6.1.2	Current Investigations.....	3-16
3.6.2	Environmental Consequences .....	3-16
3.6.2.1	Proposed Action .....	3-16
3.6.2.2	No Action Alternative .....	3-17
3.7	AIR QUALITY .....	3-17
3.7.1	Affected Environment.....	3-17
3.7.2	Environmental Consequences .....	3-19
3.7.2.1	Proposed Action .....	3-19
3.7.2.2	No Action Alternative .....	3-21
3.8	HAZARDOUS MATERIALS .....	3-22
3.8.1	Affected Environment.....	3-22
3.8.2	Environmental Consequences .....	3-22
3.8.2.1	Proposed Action .....	3-22
3.8.2.2	No Action Alternative .....	3-23
3.9	UTILITIES.....	3-23
3.9.1	Affected Environment.....	3-23
3.9.2	Environmental Consequences .....	3-23
3.9.2.1	Proposed Action .....	3-23
3.9.2.2	No Action Alternative .....	3-23
<b>4.0</b>	<b>CUMULATIVE IMPACTS.....</b>	<b>4-1</b>
4.1	LAND USE.....	4-5
4.2	SOILS .....	4-5
4.3	WATER RESOURCES .....	4-6
4.4	BIOLOGICAL RESOURCES .....	4-6
4.5	CULTURAL RESOURCES .....	4-7
4.6	AIR QUALITY .....	4-7
4.7	HAZARDOUS MATERIALS .....	4-8
<b>5.0</b>	<b>ENVIRONMENTAL DESIGN MEASURES .....</b>	<b>5-1</b>
5.1	GENERAL CONSTRUCTION ACTIVITIES .....	5-1
5.2	SOILS .....	5-2
5.3	WILDLIFE .....	5-2
5.4	PROTECTED SPECIES .....	5-3
5.5	CULTURAL RESOURCES .....	5-3
5.6	WATER RESOURCES .....	5-3
5.7	AIR QUALITY .....	5-4
<b>6.0</b>	<b>REFERENCES.....</b>	<b>6-1</b>

**7.0 LIST OF PREPARERS ..... 7-1**

**8.0 ACRONYMS..... 8-1**

**LIST OF TABLES**

Table 2-1. Matrix of Purpose and Need and Project Alternatives ..... 2-4

Table 2-2. Summary Matrix ..... 2-5

Table 3-1. Summary of Impacts (Acres) of Project Components by Alternative ..... 3-3

Table 3-2. Federally Endangered or Threatened Species, Yuma County ..... 3-9

Table 3-3. Previous Investigations Within An Approximate 1-Mile Radius ..... 3-15

Table 3-4. National Ambient Air Quality Standards ..... 3-18

Table 3-5. Total Air Emissions (tons/year) from the Proposed Action  
Construction verses the *De minimis* Threshold Levels ..... 3-20

**LIST OF FIGURES**

Figure 1-1. Vicinity Map..... 1-2

Figure 1-2. 2004 EA Yuma Sector Border Infrastructure System Project Location  
Map – Phase 1 ..... 1-4

Figure 1-3. 2004 EA Yuma Sector Border Infrastructure System Project Location  
Map – Phase 2 ..... 1-5

Figure 1-4. 2004 EA Yuma Sector Border Infrastructure System Project Location  
Map – Phase 3 ..... 1-6

Figure 1-5. 2007 SEA Yuma Sector Border Infrastructure System Project  
Location Map..... 1-7

Figure 1-6. 2009 SEA Yuma Sector Border Infrastructure System Project  
Location Map..... 1-10

Figure 2-1. Schematic Drawing of Power Line ROW..... 2-2

**LIST OF PHOTOGRAPHS**

Photograph 2-1. Junction of Avenue D and Yuma County 25<sup>th</sup> Street, facing west ..... 2-3

Photograph 2-2. Junction of Avenue D and USBP BIS, facing east..... 2-3

Photograph 3-1. Typical Vegetation of the Sonoran Desertscrub Community found  
within the project corridor ..... 3-8

**LIST OF APPENDICES**

Appendix A. Arizona Protected Species for Yuma County

Appendix B. Air Quality Model Calculations

Appendix C. Correspondence

**THIS PAGE LEFT INTENTIONALLY BLANK**



***SECTION 1.0***  
***INTRODUCTION AND PURPOSE AND NEED***

---

---



---

---

## **1.0 INTRODUCTION AND PURPOSE AND NEED**

---

---

### **1.1 INTRODUCTION**

This Supplemental Environmental Assessment (SEA) addresses the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road within a 15-foot wide power line right-of-way (ROW) west of Avenue D near San Luis, Arizona (Figure 1-1) as additions to the previously approved United States (U.S.) Border Patrol (USBP) Border Infrastructure System (BIS). The BIS and other components were described in both the December 2004 *Final Environmental Assessment (EA) for the Installation of Permanent Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona* (U.S. Customs and Border Protection [CBP] 2004) and the March 2007 *Final Supplemental Environmental Assessment for the Installation of Permanent Security Lighting and a Border Infrastructure System, Office of Border Patrol, Yuma Sector, Arizona* (CBP 2007). The December 2004 EA was tiered from the *Supplemental Programmatic Environmental Impact Statement for Immigration Naturalization Service (INS) and Joint Task Force Six (JTF-6) Activities along the U.S./Mexico Border* (U.S. Army Corps of Engineers 2001). JTF-6 (now called Joint Task Force North [JTF-N]) also prepared two Final EAs in 1998 and 1999, which addressed the potential impacts of extending the primary border fence approximately 3.3 miles to the east, beginning at the terminus of the existing primary border fence, and the installation of permanent security lights (JTF-6 1998 and JTF-6 1999). These documents were also used as reference during the preparation of this SEA.

### **1.2 BACKGROUND AND HISTORY**

The background and history of CBP, USBP, Yuma Sector and Yuma Station, and regulatory authority of the CBP were described in detail in the December 2004 Final EA (CBP 2004) and are incorporated herein by reference.

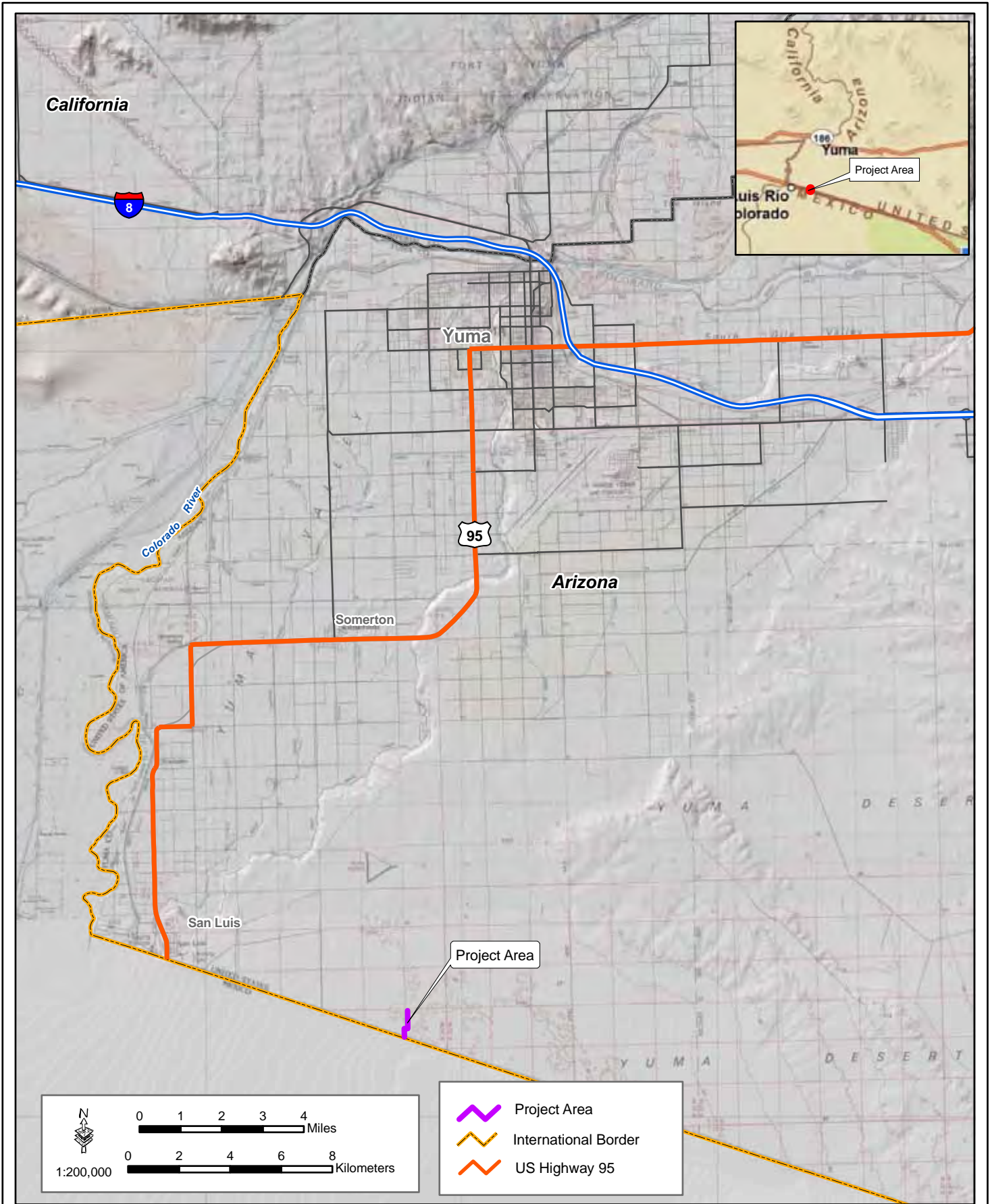


Figure 1-1: Vicinity Map



August 2009

BW1 FOIA CBP 004928

The Proposed Action described in the December 2004 Final EA involved the construction of a BIS, which included the installation of permanent security lights, a secondary fence, all-weather patrol road, maintenance road, security fence and extension of the primary border fence. The BIS would create a 150-foot enforcement zone north of the U.S./Mexico border, except where the enforcement zone deviates to the north to avoid existing canals west of Friendship Park in San Luis, Arizona (Figures 1-2, 1-3, and 1-4). The Proposed Action was divided into three phases that encompassed approximately 13 miles. Phases I and II included the installation of permanent security lights, all-weather patrol road, secondary fence, maintenance road and security fence near San Luis, Arizona. Phase I also included the construction of approximately 1 mile of permanent lights north of the San Luis wastewater treatment plant. Phase II included extending the primary border fence approximately 3.5 miles east to Avenue C. Phase III only included the installation of permanent security lights near the town of Gadsden, Arizona. Each phase was expected to be constructed independently of the others as funding became available.

The 2007 SEA proposed the installation of three pre-manufactured bridges within the original BIS along the southern border, the creation and maintenance of three camera lanes by trimming limbs and brush, the relocation of 1.0 mile of permanent security lights from north of the San Luis wastewater treatment plant to along the Bypass Drain, the extension of the BIS 1.5 miles north along the Bypass Drain near the Colorado River, and the selective clearing of the 199 acres, which was previously cleared by Bureau of Land Management (BLM), between the Bypass Drain and the Colorado River (Figure 1-5). Construction of these components is in various stages of completion.

This current SEA discusses the impacts of the installation of approximately 3,844 feet of power line as well as a 12-foot wide construction access road within a 15-foot wide power line ROW west of Avenue D. The proposed power line would be installed along the west side of Avenue D starting at County 25<sup>th</sup> Street, where there is an existing commercial power line, and extending southward for approximately 2,302 feet. The

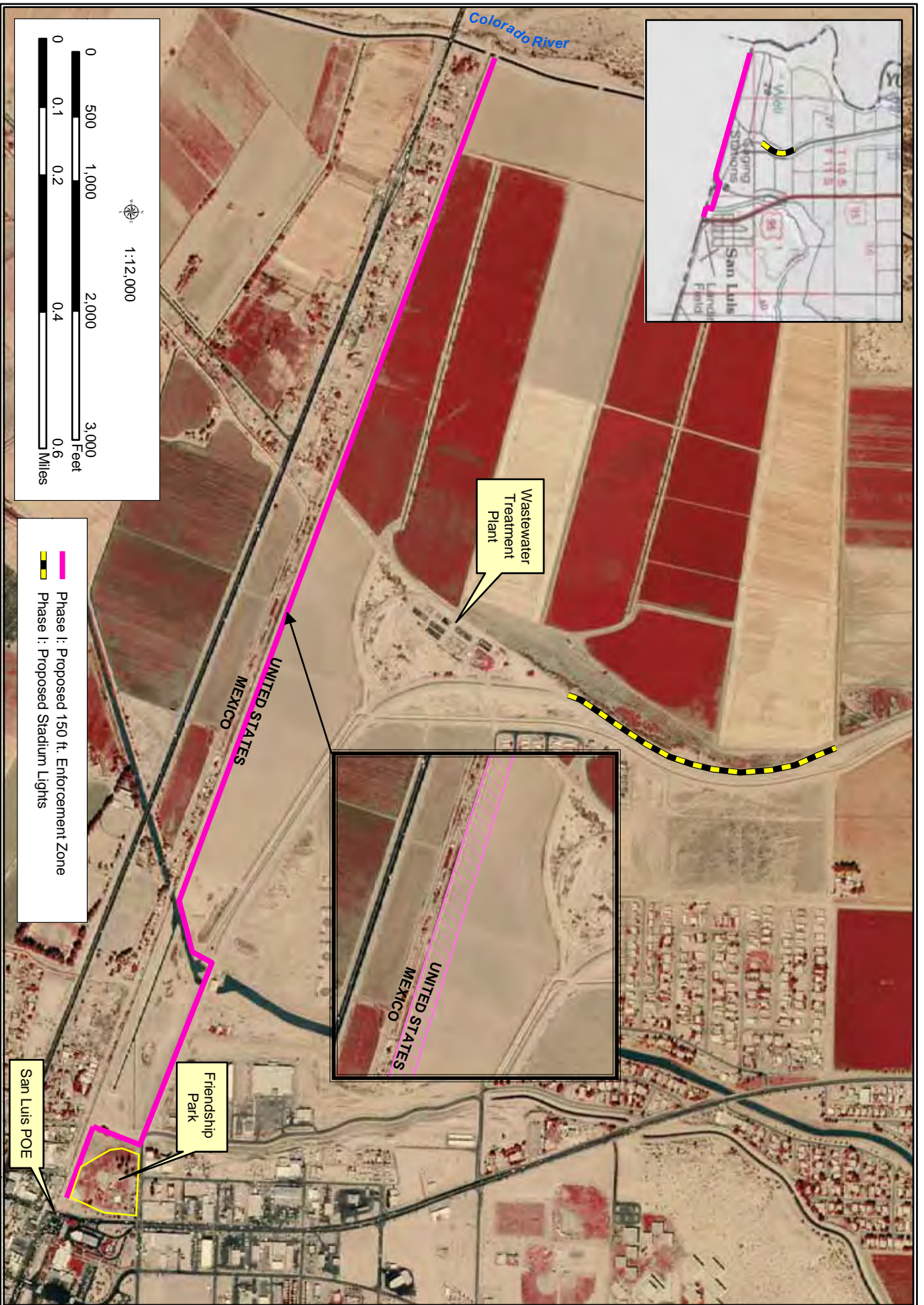


Figure 1-2: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 1

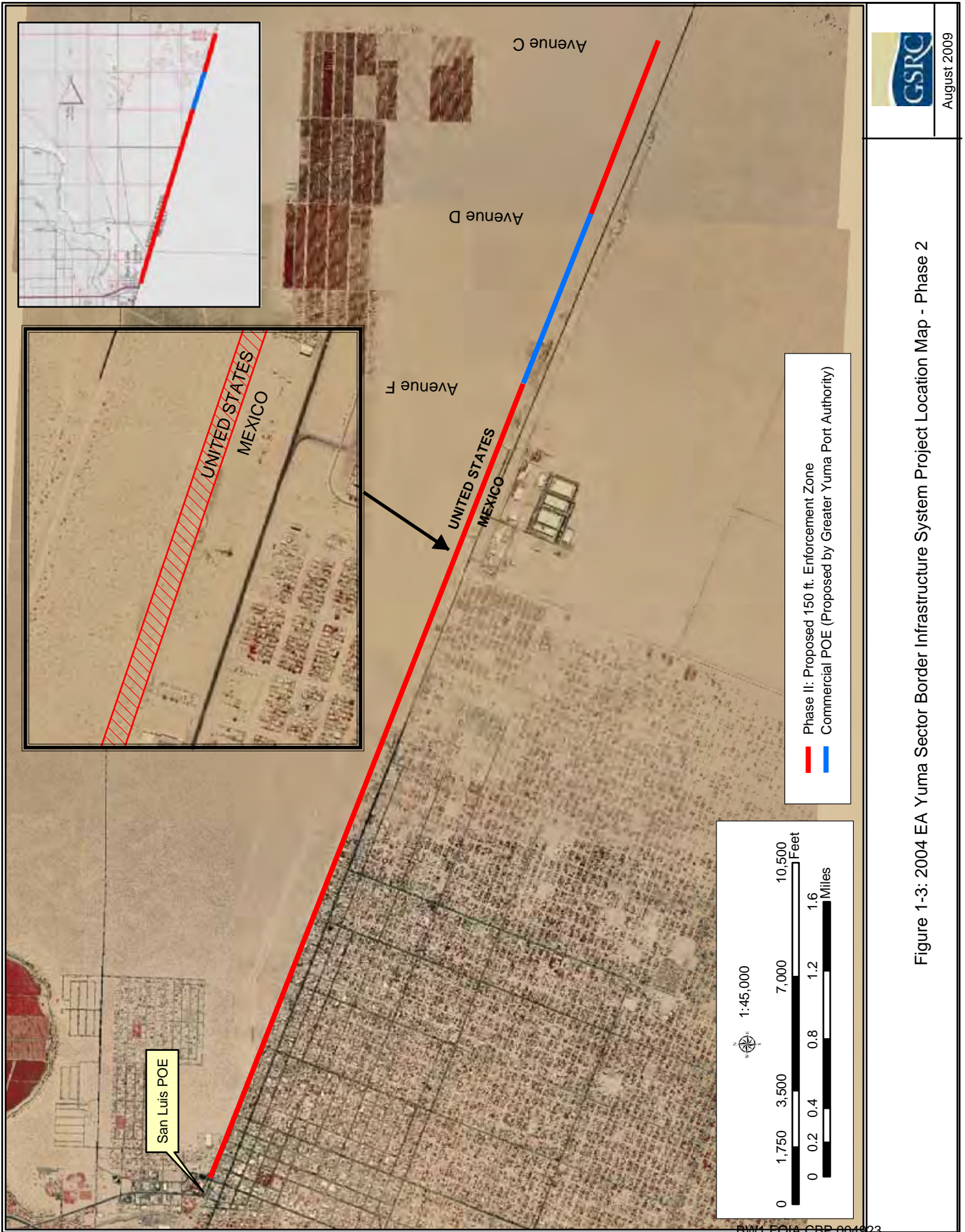
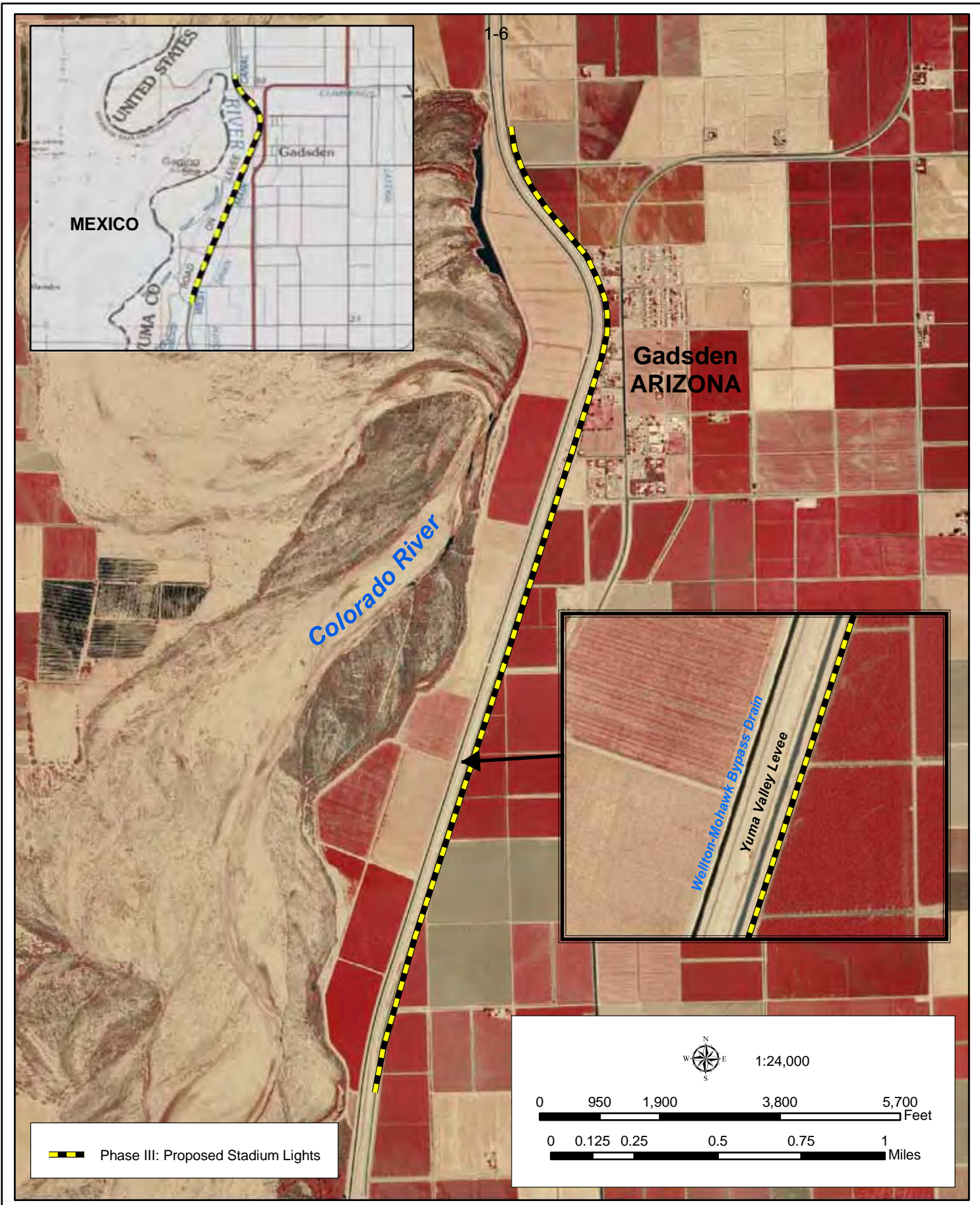




Figure 1-3: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 2



 Phase III: Proposed Stadium Lights

 1:24,000

0 950 1,900 3,800 5,700 Feet

0 0.125 0.25 0.5 0.75 1 Miles

Figure 1-4: 2004 EA Yuma Sector Border Infrastructure System Project Location Map - Phase 3





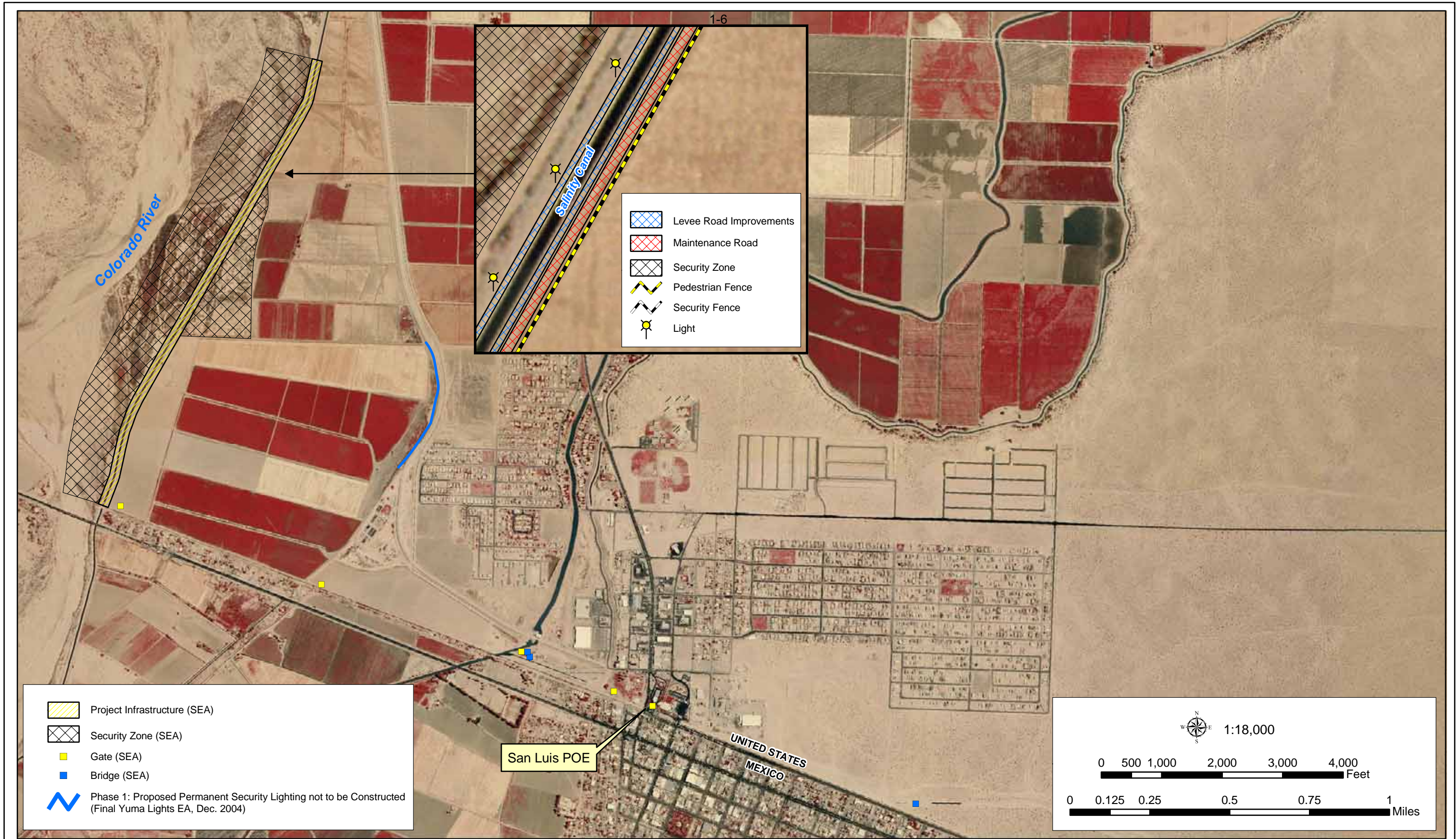


Figure 1-5: 2007 SEA Yuma Sector Border Infrastructure System Project Location Map



**THIS PAGE LEFT INTENTIONALLY BLANK**

power line ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS.

### **1.3 LOCATION OF THE PROPOSED PROJECT**

The general location of the proposed project was previously discussed in the December 2004 Final EA (CBP 2004) and is incorporated herein by reference. The proposed project corridor generally parallels Avenue D from County 25<sup>th</sup> Street south to the existing BIS at the U.S./Mexico border. The project corridor includes approximately 1.32 acres of land owned by the Greater Yuma Port Authority (GYPA) (Figure 1-6).

### **1.4 PURPOSE AND NEED**

The purpose of this Proposed Action is to provide reliable electrical power to the lights within the BIS. The need for the Proposed Action is to enhance the safety of USBP agents, BLM, U.S. Bureau of Reclamation (Reclamation), and other law enforcement agency personnel, as well as the general public.

Establishing a permanent connection between the BIS and the existing commercial electrical grid would provide a consistent, reliable power supply to the lights within the BIS. Currently, lights within the BIS are powered by portable diesel generators. Connecting the BIS to the electrical grid would assist USBP agents in the detection and deterrence of illegal traffic. The lights are essential for the safety of the USBP agents and the effective implementation of the border strategy. They are also integral to the success of the USBP's mandate to gain, maintain, and extend control of the border.

The need for this Proposed Action is similar to that of the December 2004 Final EA, which is hereby incorporated by reference. The portable generators used to power the lights now are susceptible to vandalism that reduces their effectiveness and increases the danger to USBP agents in a darkened area between the primary and secondary fences.

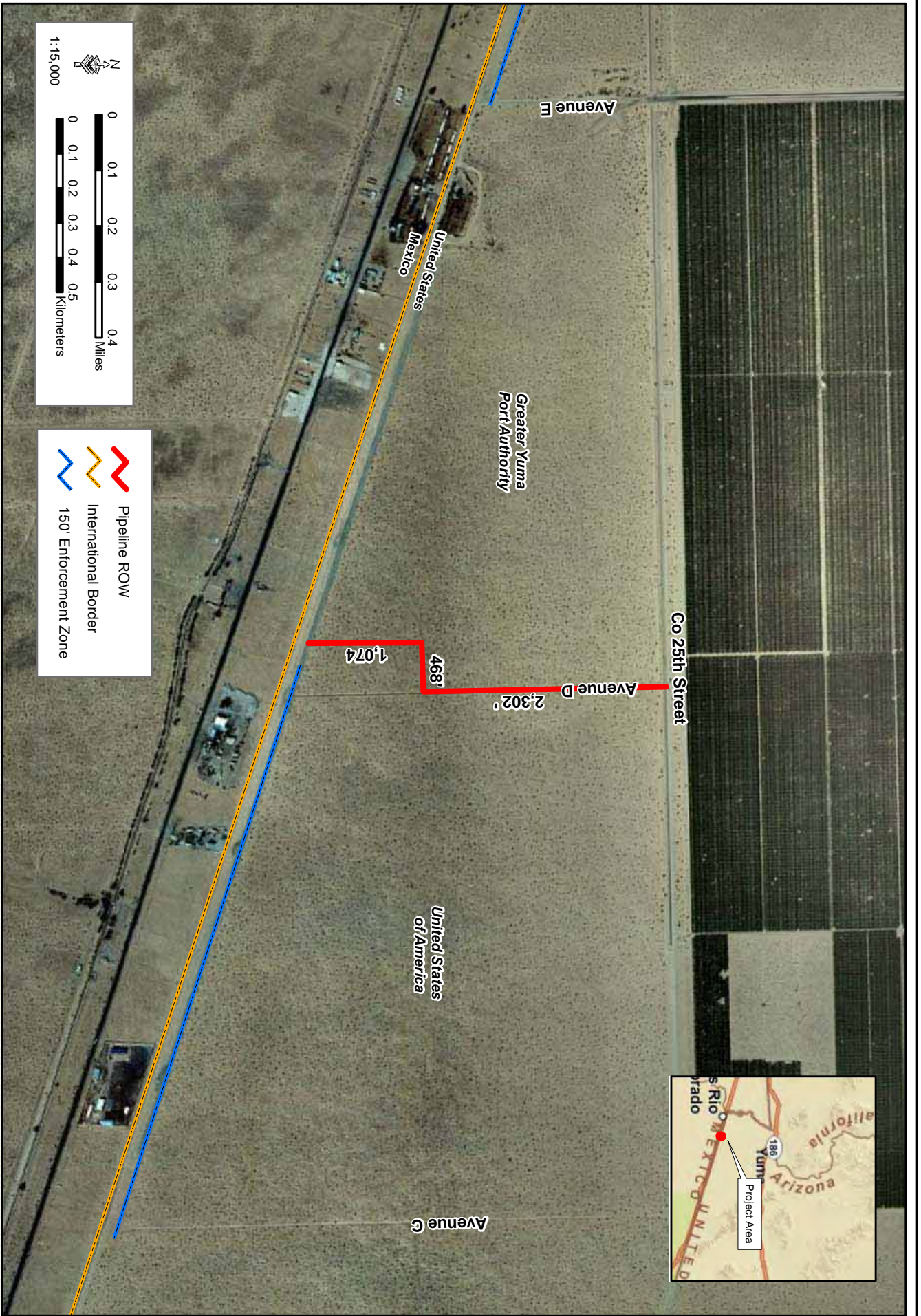


Figure 1-6: 2009 SEA Yuma Sector Border Infrastructure System Project Location Map

Furthermore the portable generators use fossil fuels and emit air pollutants. The need for this project is to install a permanent power line to energize the security lights within the BIS in order to enhance the security of USBP agents and reduce power interruptions due to vandalism. This project would also decrease fossil fuel consumption and reduce air emissions. The security lights would create a fully functional BIS, which would provide USBP agents the tactical infrastructure necessary to meet the purpose and need of this project.

## **1.5 PUBLIC INVOLVEMENT**

### **1.5.1 Agency Coordination**

This section discusses consultation and coordination that will and has occurred during preparation of this document (Appendix C). This includes contacts that are made during the development of the Proposed Action and writing of the SEA. Agency correspondence/consultation letters are included in Appendix C. Formal and informal coordination has been conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (EPA)
- U.S. Army Corps of Engineers (USACE)
- Natural Resource Conservation Service (NRCS)
- Arizona State Historic Preservation Office (SHPO)
- Arizona Department of Transportation (ADOT)
- Arizona Game and Fish Department (AGFD)
- Arizona Department of Environmental Quality (ADEQ)
- Arizona Department of Agriculture
- Arizona State Lands
- BLM
- GYPA
- Reclamation
- Bureau of Indian Affairs
- National Park Service
- Federally Recognized Tribes

### **1.5.2 Public Review**

The draft SEA was made available for public review for a period of 30 days, beginning on October 9, 2009, which was the day the Notice of Availability (NOA) was published in the *Yuma Sun* newspaper. Proof of publication of the NOA is included in Appendix C. One letter comment was received from the USACE Los Angeles District, Arizona-Nevada Area Office which requested clarification regarding the presence or absence of potentially jurisdictional Waters of the U.S. (WUS) or wetlands within the proposed project footprint. The absence of WUS and wetlands was clarified in Sections 3.1 and 3.4 of this Final SEA. A copy of the USACE letter is included in Appendix C.

A NOA will be published in the *Yuma Sun* newspaper to announce the availability of the Final SEA. The Final SEA and signed FONSI will be made available to the public at the Yuma County Library (Main Branch, 2951 South 21<sup>st</sup> Drive, Yuma, Arizona) and the Yuma County Library (San Luis Library, 1075 North 6<sup>th</sup> Avenue, San Luis, Arizona) and via the Internet at the following address: <http://ecso.swf.usace.army.mil>.

## **1.6 APPLICABLE ENVIRONMENTAL STATUTES AND REGULATIONS**

The applicable environmental statutes and regulations for this SEA are similar to those of the December 2004 Final EA (CBP 2004) and are hereby incorporated by reference. In addition, this SEA is in accordance with the National Environmental Policy Act of 1969 (NEPA) as amended (42 U.S. Code [U.S.C.]. 4321 *et seq.*), the Council on Environmental Quality's (CEQ) NEPA implementing regulations at 40 Code of Federal Regulations (CFR) Part 1500, and the Department of Homeland Security's (DHS) *Management Directive 023-01, Environmental Planning Program* (71 *Federal Register* [FR] 16790).

## **1.7 REPORT ORGANIZATION**

This report is organized into nine major sections including this introduction. Section 2.0 describes all alternatives considered for the project. Section 3.0 discusses the environmental features potentially affected by the project, while Section 4.0 discusses the

environmental consequences for each of the viable alternatives. Environmental design measures are discussed in Section 5.0, and public comments and the Notice of Availability (NOA) are presented in Section 6.0. Sections 7.0, 8.0, and 9.0 present a list of the references cited in the document, a list of the persons involved in the preparation of this document, and a list of acronyms and abbreviations. Appendix A is a list of the species considered threatened, endangered or candidates for listing by USFWS and AGFD. Appendix B includes the air quality model quantifications for determining impacts from this project. Appendix C includes the correspondence generated during the planning and preparation of this SEA.

**THIS PAGE LEFT INTENTIONALLY BLANK**



***SECTION 2.0***  
***ALTERNATIVES***





---

---

## **2.0 ALTERNATIVES**

---

---

Two alternatives were identified and considered during the planning stages of the proposed project: No Action Alternative and Proposed Action. The following paragraphs describe the alternatives considered.

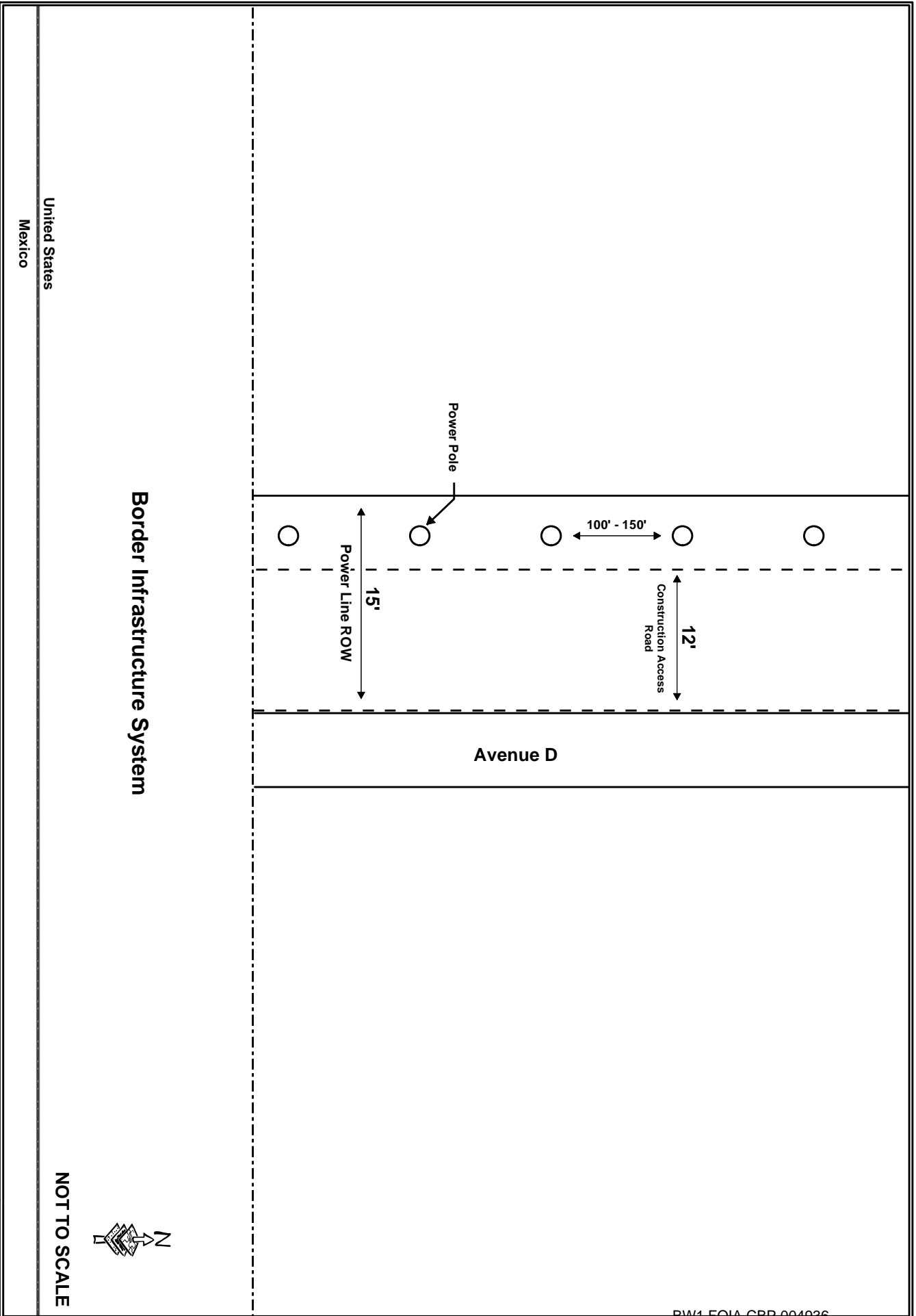
### **2.1 NO ACTION ALTERNATIVE**

Under the No Action Alternative, the USBP would continue the construction of the enforcement zone as proposed in the December 2004 Final EA (CBP 2004) and the March 2007 SEA (CBP 2007). However, the power line and construction access road as proposed in this SEA would not be constructed. The No Action Alternative has been carried forward for analysis, as required by CEQ regulations.

### **2.2 PROPOSED ACTION**

The Proposed Action consists of the installation of approximately 3,844 feet of power line and a construction access road within the 15-foot wide power line ROW (Figure 2-1). The power poles and service line would run from the existing power lines along County 25<sup>th</sup> Street south to the BIS (see Figure 1-6).

The proposed power line would be installed immediately west of the Avenue D ROW starting at County 25<sup>th</sup> Street (Photograph 2-1) running southward for approximately 2,302 feet. The ROW would then extend westward for approximately 468 feet, before continuing southward for the remaining 1,074 feet to the existing BIS (Photograph 2-2). The westward deviation of the ROW from adjacent to Avenue D is necessary for the entire ROW to remain within GYPA property lines. Power poles would be placed every 100 to 150 feet within the 15-foot ROW. Within the BIS, power lines would be installed in an underground trench and connected with the existing lighting system via subsurface conduit.



**Border Infrastructure System**

United States  
Mexico

NOT TO SCALE



Figure 2-1: Schematic Drawing of Power Line ROW



August 2009



Photograph 2-1. Junction of Avenue D and Yuma County 25<sup>th</sup> Street, facing west.



Photograph 2-2. Junction of Avenue D and USBP BIS, facing east.

A 12-foot wide construction access road would be established within the 15-foot wide ROW by blading and compacting the *in situ* material. The construction access road would allow for the delivery of poles and spools of electrical lines to the project site. The construction access road would extend the entire length of the power line installation.

## 2.3 CONSTRUCTION PERSONNEL AND EQUIPMENT

Arizona Public Service (APS) would complete the proposed installation of the power line and construction access road. Equipment staging would be located within previously disturbed areas to minimize potential effects to the environment. The equipment anticipated to be used during the construction includes a road grader, backhoe, trencher, auger, crane, bulldozer, front-end loader, flatbed truck, water truck and roller/compactor.

## 2.4 SUMMARY

The two viable alternatives carried forward for analysis are the No Action Alternative and Proposed Action. An alternative matrix (Table 2-1) shows how each of the two alternatives carried forward for analysis and the one alternative eliminated satisfies or

does not satisfy the purpose and need. Table 2-2 presents a summary matrix of the impacts from the two alternatives analyzed and how they affect the environmental resources in the Region of Influence (ROI). The ROI for this project is Yuma County.

**Table 2-1. Matrix of Purpose and Need and Project Alternatives**

<b>Requirements</b>	<b>No Action Alternative</b>	<b>Proposed Action</b>
Decrease the current OBP enforcement footprint	PARTIALLY	YES
Detect, deter, and apprehend cross-border violators (CBV) as close to the international border as possible	PARTIALLY	YES
Enhance the safety of OBP agents as well as the general public	PARTIALLY	YES

**Table 2-2. Summary Matrix**

<b>Affected Environment</b>	<b>Proposed Action</b>	<b>No Action Alternative</b>
Land Use	The impacts to land use as a result of the Proposed Action would be negligible as the GYPA has agreed to the use of 1.32 acres for a power line ROW. No significant impacts would occur to land use regionally or locally if this alternative was implemented.	No additional impacts to land use would be expected as the power line and construction access road would not be installed.
Soils	The Proposed Action would directly impact approximately 1.32 acres of Rositas Sand soils. These soils are common both locally and regionally, and the disturbance to 1.32 acres of Rositas Sands would not result in significant impacts to soils.	No additional impacts are expected.
Water Resources	<p>Direct impacts to surface water resources under the Proposed Action would be insignificant. BMPs would be used during construction to minimize adverse impacts to the water quality of the Colorado River, its riparian areas, and the irrigation canals within the project area.</p> <p>Approximately 0.36 acre-feet (118,615 gallons) of water would be required for the proposed project. These withdrawals would occur over the entire construction period, which is expected to be 1 to 2 months.</p>	No additional impacts are expected.
Vegetation	This alternative would permanently alter approximately 1.32 acres of Lower Colorado – Sonoran Desertscrub vegetation communities. This plant community is both locally and regionally common, and the permanent loss of 1.32 acres would not adversely affect the population viability or fecundity of any floral species.	No additional impacts are expected.

Table 2-2, continued

Affected Environment	Proposed Action	No Action Alternative
Wildlife	The Proposed Action would permanently alter approximately 1.32 acres of wildlife habitat. Noise and construction activity would have a temporary impact on some wildlife, resulting in avoidance of the area. Impacts on common wildlife would be minimal due to the limited habitat loss, limited construction duration (APS estimates a 1 to 2-month construction schedule), and the ability of most wildlife to temporarily avoid the area by using the abundance of adjacent habitat.	No additional impacts are expected.
Protected Species	Potential habitat for the blue sand lily, sand food, flat-tailed horned lizard and western burrowing owls would be impacted; these species were not observed during recent biological surveys and the habitat for these species is both locally and regionally common. None of these species are Federally protected species and no Federally protected species would be potentially impacted by the Proposed Action. Therefore, the expected impacts would not constitute a significant impact.	No additional impacts are expected.
Cultural Resources	No impacts on cultural resources would occur, since none are present within the project area. Section 106 compliance would be completed prior to construction activities. As a result of this compliance and lack of sites, the Proposed Action would have no effect on cultural resources.	No additional impacts are expected.



Table 2-2, continued

Affected Environment	Proposed Action	No Action Alternative
Air Quality	<p>The Proposed Action would not generate emissions that exceed Federal <i>de minimis</i> thresholds and, therefore, do not require a Conformity Determination. Although operating the portable generators results in no violations of air quality standards and no conflicts with the state implementation plans, replacing them with a permanent electrical power connection would have a beneficial impact on air quality from implementation of the Proposed Action.</p>	<p>No additional impacts are expected.</p>
Hazardous Materials	<p>During the biological surveys no visible evidence of potential contamination was observed. Petroleums, oils, and lubricants would be stored properly and within designated containers, which would include primary and secondary containment measures. Over the long-term, implementation of the Proposed Action would have a beneficial impact by reducing the use of diesel fuels to operate the existing portable generators and the potential for fuel spills within the project area.</p> <p>Sanitary facilities would be provided during construction activities, and waste products would be collected and disposed of by licensed contractors. Because the proper permits would be obtained by the licensed contractor tasked to handle any unregulated solid waste, and because all of the unregulated solid waste would be handled in the proper manner, no hazards for the public are expected through the transport, use, or disposal of unregulated solid waste.</p>	<p>No additional impacts are expected.</p>
Utilities	<p>No significant increases in electrical power demand are expected. Utilities in the ROI would not be impacted.</p>	<p>No impacts are expected.</p>

**THIS PAGE LEFT INTENTIONALLY BLANK**

***SECTION 3.0***  
***ENVIRONMENTAL FEATURES AND CONSEQUENCES***

---

---



---

---

## 3.0 ENVIRONMENTAL FEATURES AND CONSEQUENCES

---

---

### 3.1 PRELIMINARY IMPACT SCOPING

This section of the SEA describes the natural and human environment that exists within the project corridor and ROI and the potential impacts of the Proposed Action and No Action Alternative outlined in Section 2.0 of this document. Only those resources that have the potential to be affected by any of the alternatives considered are described, as per CEQ guidance (40 CFR 1501.7 [3]). Some topics are limited in scope due to the lack of direct effect from the proposed project on the resource or because that particular resource is not located within the project corridor. Some resources within the ROI are not addressed in this SEA because they are not relevant to the analyses. Resources that are not addressed and the reasons for their elimination are:

- Communications: The Proposed Action would not affect communications systems in the area.
- Geology: The Proposed Action would not affect geological features.
- Climate: The Proposed Action would not affect nor be affected by the climate.
- Wild and Scenic Rivers: The Proposed Action would not affect any designated Wild and Scenic Rivers, because no rivers designated as such are located within or near the project corridor.
- Aquatic Resources: There are no aquatic ecosystems that occur within or near the project corridor.
- Transportation: The project corridor is located in a remote region of Arizona, and no activities would take place on public roadways, other than normal transport of goods and personnel on an intermittent basis during construction activities. Therefore, impacts on roadways and traffic will not be discussed further.
- Prime Farmlands: No impact would occur on soils protected by the Farmland Protection Policy Act (7 U.S.C. 4201), since none are located within the project corridor.
- Human Health and Safety: Occupational Safety and Health Administration and EPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors. Contractors would be required to establish and maintain safety programs at the

construction site, consistent with these standards. The Proposed Action would not expose members of the general public to increased safety risks.

- Environmental Justice and Protection of Children: The project corridor is located in a remote region of Arizona. No residences or businesses are located near or within the project corridor. No children would be impacted as a result of the Proposed Action.
- Noise: Due to the remote location of the project site, the type of construction planned, and the lack of sensitive noise receptors in the area, a noise impacts analysis is not warranted for this project. Noise impacts on wildlife will be discussed in the biological resources section.
- Flood Zones, Waters of the U.S, and Wetlands: No Federal Emergency Management Agency (FEMA) flood hazard maps exist within the project corridor; therefore, no impacts would occur to any 100-year flood zones (FEMA 2009). There are no WUS or wetlands associated with the project corridor. No Clean Water Act, Section 404 permits would be required. Therefore, the Proposed Action would not expose natural or human resources to flooding or affect WUS or wetlands.
- Unique and Sensitive Areas: The nearest unique or sensitive areas are associated with the Colorado River and the Cabeza Prieta National Wildlife Refuge. These areas are, respectively, 8 miles west and 45 miles east of the project corridor. Therefore, there is no potential for unique or sensitive areas to be affected.
- Socioeconomics: APS would install the power line using its existing crews. Therefore, the Proposed Action would have no effect on local or regional socioeconomics and these resources will not be discussed further.
- Aesthetics: The installation of a power line would not detract from the aesthetic values of the project corridor due to its proximity to the proposed GYPA commercial port-of-entry (POE), existing BIS, and County 25<sup>th</sup> Street. Therefore, aesthetics will not be carried forward for analysis.

In accordance with both NEPA (42 U.S.C. § 4321 *et seq.*) and the CEQ regulations implementing NEPA (40 CFR Parts 1500 -1508), this SEA will examine the potential impacts to those resources that could be affected by the Proposed Action or No Action Alternative. More specifically, for the Proposed Action and No Action Alternative, the SEA will examine the potential for direct, indirect, adverse, or beneficial impacts. The SEA will also assess whether such impacts are likely to be long term, short term, or permanent.

Impacts for the No Action Alternative for this SEA includes the actions proposed in both the 2004 EA and the 2007 SEA. Impact analyses from the Proposed Action include only the additional actions and impacts caused by the implementation of the Proposed Action of this current SEA (*i.e.*, installing a power line and the construction access road). The Proposed Action assumes that the actions proposed in the 2004 EA and 2007 SEA will be fully implemented. Table 3-1 provides a summary of impacts (in acres) for each project component.

**Table 3-1. Summary of Impacts (Acres) of Project Components by Alternative**

<b>Project Components</b>	<b>No Action Alternative (acres)<sup>1</sup></b>	<b>Proposed Action (acres)</b>
Bridges	0.03	NA
Road Improvements	40.3	NA
Construction Access Road	NA	1.06
Permanent Security Lighting (41 square feet per pole)	0.72	NA
Power Line	NA	0.26
Enforcement Zone*	132.5	NA
Security Zone**	199	NA
<b>Total Area Disturbed (Acres)</b>	209	1.32

<sup>1</sup> The No Action Alternative impacts were addressed in previous NEPA documents (CBP 2004, 2007) and are in various stages of completion.

\*Enforcement Zone = Maintenance Road and Pedestrian Fence.

\*\*Security Zone = Area cleared of brush, which includes 164 acres west of Bypass Drain and 35 acres east of the Bypass Drain.

NA – Not Applicable

Source: CBP 2007

## 3.2 LAND USE

### 3.2.1 Affected Environment

This section was discussed in the December 2004 Final EA and is incorporated herein by reference (CBP 2004). Land use immediately adjacent to the project area is irrigated agriculture, undeveloped desertscrub land, BIS, and planned commercial POE. The proposed project would be completed entirely within GYPA property. The GYPA has granted CBP a ROW in order to install the power supply.

## **3.2.2 Environmental Consequences**

### **3.2.2.1 Proposed Action**

Land use within the project area would change from GYPA property consisting of undeveloped desertscrub land to construction access road and power line ROW. The impacts to land use as a result of the Proposed Action would be negligible as the GYPA has agreed to the use of 1.32 acres for a power line ROW. No significant impacts would occur to land use regionally or locally if this alternative was implemented.

### **3.2.2.2 No Action Alternative**

No additional impacts are expected to land use from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to land use as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.3 SOILS**

### **3.3.1 Affected Environment**

According to the U.S. Department of Agriculture, NRCS, there is one soil type identified in the project area; Rositas Sands (NRCS 2009). This soil type is classified as being deep, somewhat excessively drained, and found on terraces, alluvial fans, or sand dunes. The water erosion hazard for Rositas Sand is low, and the wind erosion hazard is high for this soil type.

### **3.3.2 Environmental Consequences**

#### **3.3.2.1 Proposed Action**

Short term impacts on soils, such as increased erosion, can be expected from the construction of the access road; however, these impacts would be alleviated once construction is finished. Long term effects on soils would result from the compaction of the soils due to construction of the construction access road. A stormwater pollution prevention plan (SWPPP) and Notice of Intent under the Clean Water Act (33 U.S.C. §



1251 *et seq.*) National Pollutant Discharge Elimination System would be completed (33 U.S.C. §1342). Environmental design measures and pre- and post-construction best management practices (BMPs) will be developed and implemented to reduce or eliminate erosion.

The Proposed Action would directly impact approximately 1.32 acres of Rositas Sand soils. These soils are common both locally and regionally, and the disturbance to 1.32 acres of Rositas Sands soils would not result in significant impacts to soils.

### **3.3.2.2 No Action Alternative**

No additional impacts are expected to soils from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to soils as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.4 WATER RESOURCES**

### **3.4.1 Affected Environment**

#### **3.4.1.1 Surface Water**

In the December 2004 Final EA, this section was discussed in detail and is incorporated herein by reference (CBP 2004). The project area is completely within the Colorado River/Lower Gila River watershed. No WUS or other water resources that could be considered jurisdictional under the Clean Water Act are located within the proposed project footprint. Water quality in the Lower Colorado River from the main canal south to the U.S./Mexico border is classified as Category 5, which means that the surface water is impaired and a Total Maximum Daily Load (TMDL) analysis is required (ADEQ 2008). ADEQ lists the causes for impairment of the Colorado River/Lower Gila River watershed as low dissolved oxygen levels and high selenium concentrates. Selenium salts are considered toxic in high levels. Selenium reaches water systems through agricultural runoff, causing gastrointestinal diseases, hair and fingernail loss, and

neurological damage (EPA 2009a). TMDL analyses are scheduled for the watershed in 2010 (ADEQ 2008).

### **3.4.1.2 Groundwater**

The project corridor is within the Yuma Groundwater basin. The water budget comprises inflows and outflows to the ground-water system. Yuma Basin experiences an inflow deficit. Inflows to Yuma Basin consist mainly of excess water applied for irrigation and canal leakage. No significant recharge occurs from direct infiltration from precipitation because the minimal precipitation in the Yuma area evaporates (Arizona Department of Water Resources 2007). Before western development, the Colorado and Gila Rivers were the sources of nearly all of the groundwater in the Yuma Basin through direct infiltration of water from river channels and annual overbank flooding. After construction of upstream reservoirs and clearing and irrigation of the floodplains, the rivers now act as drains for the groundwater. Groundwater levels in most of the Yuma area are higher now than they were in predevelopment time (Lacroix 2008). A groundwater mound has formed under Yuma Mesa from long-term surface-water irrigation; about 600,000 to 800,000 acre-feet of water are stored in the mound. Groundwater withdrawals adjacent to the southerly international boundary have resulted in water-level declines in that area (Dickenson *et al.* 2006). The cultural demand (agriculture, industry and municipal) for groundwater in the Yuma Basin is approximately 263 acre-feet annually and recharge is 213 acre-feet (Arizona Department of Water Resources 2007). The Yuma Basin aquifer experiences a groundwater deficit.

## **3.4.2 Environmental Consequences**

### **3.4.2.1 Proposed Action**

#### Surface Water

Direct impacts to surface water resources under the Proposed Action would be insignificant. BMPs would be used during construction to minimize adverse impacts to the water quality of the Colorado River, its riparian areas, and the irrigation canals within the project area. During construction activities, water quality within the project area would be protected through the use of BMPs that would be developed in a SWPPP.

## Groundwater

Water would be required for watering the construction access road surface to compact the road bed and minimize fugitive dust during construction activities. The volume of water necessary is estimated to be 0.5 acre-feet per mile (162,926 gallons per mile) (Miranda 2006). Therefore, approximately 0.36 acre-feet (118,615 gallons) of water would be required for the proposed project. These withdrawals would occur over the entire construction period, which is expected to be 1 to 2 months.

The Yuma Basin experiences an overdraft of groundwater resources; although the water needs are approximately 0.36 acre-feet, CBP would consider methods to avoid increasing this deficit such as trucking water in from other sources. If water is shipped in from other sources, no impacts on groundwater within the Yuma Basin are expected. However, if water is withdrawn from the Yuma Basin for construction of the project, impacts to the basin would be moderate. Inflow from canal seepage, agriculture return, and other sources would help offset this one time withdrawal.

### **3.4.2.2 No Action Alternative**

#### Surface Water

No additional impacts are expected to surface waters from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to surface waters as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

#### Groundwater

No additional impacts are expected to groundwater from the No Action Alternative as the power line and its associated construction access road would not be installed and water use would not be necessary. However, the impacts to groundwater as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

## 3.5 BIOLOGICAL RESOURCES

### 3.5.1 Affected Environment

#### 3.5.1.1 Vegetation

Existing vegetation communities adjacent to the project corridor were described in the 2004 EA and this information is incorporated herein by reference (CBP 2004). The vegetation community in the project corridor is the Lower Colorado subdivision within Sonoran Desertscrub community (Brown 1994) (Photograph 3-1).



Photograph 3-1. Typical vegetation of the Sonoran Desertscrub community found within the project corridor.

This vegetation community is characterized by creosotebush (*Larrea tridentata*) and its major associate, white bursage (*Ambrosia dumosa*), in the lowest elevations (Brown 1994). During August 2009 biological surveys of the proposed power line ROW, Gulf South Research Corporation (GSRC) biologists observed a creosote/bursage community comprised primarily of creosotebush, fanleaf crinklemat (*Tiquilia plicata*), white bursage, threeawn grass (*Aristida* sp.), Spanish needles (*Palafoxia arida*), plantain (*Plantago* sp.), cryptantha (*Cryptantha* sp.), spiderling (*Boerhavia* sp.), and dyebush (*Psoralea emoryi*).

#### 3.5.1.2 Wildlife

Wildlife resources potentially found within the project corridor were discussed in the 2004 EA, and this information is incorporated herein by reference (CBP 2004). During biological surveys of the power line ROW, GSRC biologists observed the following species within the project corridor: greater roadrunner (*Geococcyx californianus*), common raven (*Corvus corax*), and western whiptail lizard (*Aspidocelis tigris*).

### 3.5.1.3 Protected Species

#### Federal

This section was discussed in the 2004 Final EA and is incorporated herein by reference (CBP 2004). Within Yuma County, six species are listed as Federally endangered and one species is considered a candidate for listing (Table 3-2). Although six species are Federally listed, none of these species have the potential to occur within the project area due to the lack of suitable habitat. Additionally, no critical habitat for any of the species within Yuma County is located near or within the project corridor.

**Table 3-2. Federally Endangered or Threatened Species, Yuma County**

<b>Common/Scientific Name</b>	<b>Federal Status</b>	<b>Habitat</b>	<b>Potential to Occur within Project Corridor</b>
<b>BIRDS</b>			
<b>Yellow-billed cuckoo</b> <i>Coccyzus americanus</i>	Candidate	Large blocks of riparian woods.	No – No suitable habitat occurs within the project corridor.
<b>Southwestern willow flycatcher</b> <i>Empidonax traillii extimus</i>	Endangered	Cottonwood/willow and tamarisk vegetation communities along river and streams.	No – No suitable habitat occurs within the project corridor.
<b>California brown pelican</b> <i>Pelecanus occidentalis californicus</i>	Endangered	Coastal lands and islands, also found around lakes and rivers inland.	No – No suitable habitat occurs within the project corridor.
<b>Yuma clapper rail</b> <i>Rallus longirostris yumanensis</i>	Endangered	Freshwater and brackish marshes.	No – No suitable habitat occurs within the project corridor.
<b>MAMMALS</b>			
<b>Sonoran pronghorn</b> <i>Antilocapra americana sonoriensis</i>	Endangered	Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations. Current distribution known to occur on the Cabeza Prieta National Wildlife Refuge.	No- Sonoran pronghorn do not occur near the project corridor.
<b>Lesser long-nosed bat</b> <i>Leptonycteris curasoae yerbabuena</i>	Endangered	Desertscrub habitat with agave and columnar cacti present as food plants.	No – No suitable habitat occurs within the project corridor.
<b>FISHES</b>			
<b>Razorback sucker</b> <i>Xyrauchen texanus</i>	Endangered	Shallow springs, small streams, and marshes. Tolerant of saline and warm water.	No – No suitable habitat occurs within the project corridor.

Source: USFWS 2009

The flat-tailed horned lizard (*Phrynosoma mcallii*) (FTHL), a conservation agreement species, is not a Federally protected species. However, five Federal agencies signed a Memorandum of Agreement to protect the FTHL and its habitat on Federal lands. Habitat for the FTHL exists within the project corridor in the Yuma Desert Management Area (YDMA). Established by the 1997 Flat-Tailed Horned Lizard Rangeland Management Strategy, the YDMA serves as a tool to facilitate FTHL conservation. The project area is located within the YDMA. On December 7, 2005 the courts issued a ruling reinstating (70 FR 72776) the proposed rule to list the FTHL as threatened. However, on June 28, 2006 the U.S. Fish and Wildlife Service (USFWS) withdrew its proposed rule to list the FTHL. Further information regarding the FTHL can be found in the 2004 EA (CBP 2004) as well as the 2005 *Final Environmental Assessment for the Installation of Permanent Vehicle Barriers and Patrol Roads, Office of Border Patrol, Yuma Sector, Arizona* (CBP 2005) and is incorporated herein by reference.

### State

The AGFD Natural Heritage Program maintains lists of Wildlife of Special Concern (WSC) in Arizona. This list includes flora and fauna whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines (AGFD 2009). These species are not necessarily the same as those protected by the Federal government under the Endangered Species Act (35 U.S.C. §1531). A list of state protected species for Yuma County is included in Appendix A. WSC species known to occur within a 5-mile radius of the project area include the western burrowing owl (*Athene cunicularia hypugaea*), blue sand lily (*Tritelelopsis palmeri*), Yuman desert fringed-toed lizard (*Uma rufopunctata*), sand food (*Pholisma sonora*), and FTHL (AGFD 2009). Although these species have the greatest potential to exist within the project area and have been observed in the immediate vicinity of the project area, none were observed during recent biological surveys of the power line ROW.

## **3.5.2 Environmental Consequences**

### **3.5.2.1 Proposed Action**

#### Vegetation

This alternative would permanently alter approximately 1.32 acres of Lower Colorado – Sonoran Desertscrub vegetation communities. This plant community is both locally and regionally common, and the permanent loss of 1.32 acres would not adversely affect the population viability or fecundity of any floral species. Therefore, impacts are expected to be negligible.

This alternative would also have temporary indirect impacts on vegetation. Fugitive dust emissions resulting from construction would affect photosynthesis and respiration of plants adjacent to the proposed ROW. The magnitude of these effects would depend upon several biotic and abiotic factors, including the speed and type of vehicles, climatic conditions, success of wetting measures during construction, and the general health and density of nearby vegetation.

#### Wildlife

The Proposed Action would permanently alter approximately 1.32 acres of wildlife habitat. Noise and construction activity would have a temporary impact on some wildlife, resulting in avoidance of the area. Impacts on common wildlife would be minimal due to the limited habitat loss, limited construction duration (APS estimates a 1 to 2-month construction schedule), and the ability of most wildlife to temporarily avoid the area by using the abundance of adjacent habitat.

Mobile animals (e.g., birds) would escape to areas of similar habitat, while other slow or sedentary species of reptiles, amphibians, and small mammals could potentially be lost. As a result, direct minor adverse impacts on wildlife species in the vicinity of the project corridor are expected. Although some animals may be lost, this alternative would not result in any substantial reduction of the breeding opportunities for birds and other animals on a regional scale due to the abundance of suitable, similar habitat adjacent to the project corridor. The construction activities are slated to occur outside of the

migratory bird nesting season; therefore, no impacts on nesting birds are expected. If construction does occur within the migratory bird season, appropriate mitigation measures such as migratory bird surveys would be conducted and reported accordingly.

Increased noise during construction activities could have short-term impacts on wildlife species (e.g., red-tailed hawk [*Buteo jamaicensis*], desert cottontail [*Sylvilagus audubonii*]). Physiological responses from noise range from minor responses, such as an increase in heart rate, to more damaging effects on metabolism and hormone balance. Long-term exposure to noise can cause excessive stimulation of the nervous system and chronic stress that is harmful to the health of wildlife species and their reproductive fitness (Fletcher 1990). Behavioral responses vary among species of animals and even among individuals of a particular species. Variations in response may be due to temperament, sex, age, or prior experience. Minor responses include head-raising and body-shifting, and usually, more disturbed mammals would travel short distances. Panic and escape behavior results from more severe disturbances, causing the animal to leave the area (Busnel and Fletcher 1978). Since the highest period of movement for most wildlife species occurs during nighttime or low daylight hours, and construction activities would be conducted during daylight hours and only for 1 to 2 months, short-term impacts of noise on wildlife species are expected to be minimal.

### Protected Species

The Proposed Action would potentially impact the habitat of five state WSCs: the western burrowing owl, FTHL, sand food, Yuman desert fringe-toed lizard, and the blue sand lily. Although potential habitat for the blue sand lily, sand food, and western burrowing owls would be impacted, these species were not observed during recent biological surveys and the habitat for these species is both locally and regionally common. Therefore, the expected impacts would not constitute a significant impact.

FTHL habitat would be impacted by the construction activities and there is the potential for taking individuals. Design measures discussed in Section 5.0 of this document such as preconstruction surveys and monitoring for the presence of the FTHL during



construction activities would minimize the impacts to FTHL. Therefore, due to the BMPs to be implemented in addition to the abundance of habitat for the FTHL existing both locally and regionally no significant impacts would occur as a result of the Proposed Action.

### **3.5.2.2 No Action Alternative**

#### Vegetation

No additional impacts are expected to vegetation from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to vegetation as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

#### Wildlife

No additional impacts are expected to wildlife from the No Action Alternative. Impacts to wildlife as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

#### Protected Species

No additional impacts are expected to protected species (*i.e.*, southwestern willow flycatcher, FTHL, western burrowing owl, blue sand lily, sand food) from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to protected species as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.6 CULTURAL RESOURCES**

### **3.6.1 Affected Environment**

This section was discussed in the December 2004 Final EA and is incorporated herein by reference (CBP 2004). The power line ROW lies within the Lower Colorado River Valley which has a long history of human occupation and settlement. Cultural Remains have been documented in the region from about 10,000 B.C. to the present (Stone 1991). The ROI has been the subject of numerous surveys including those for this project, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona* (Hart 2009). A brief summary of the major trends in each of the main periods of occupation (*i.e.*, Archaic, Ceramic, Protohistoric, Historical) are detailed in Hart (2009) and are incorporated herein by reference.

#### **3.6.1.1 Previous Investigations**

Archaeologists from Northland Research Incorporated (Northland), as part of the cultural resources survey in August 2009, conducted a records search and literature review of the project area and the surrounding area up to 1 mile away. Personnel consulted the AZSITE database, Arizona State Museum, Arizona SHPO, and Northland's archive for this information. Northland does not take responsibility for discrepancies in the available records from the various institutions. However, every effort was made to rectify differences where possible. The records search revealed that three known cultural resources surveys have been conducted within 1 mile of the proposed power line ROW and construction access road (Table 3-3). The previous investigations resulted in the identification of one site within 1 mile of the proposed power line.

**Table 3-3. Previous Investigations Within An Approximate 1-Mile Radius**

<b>Survey No.</b>	<b>AZSITE No.</b>	<b>Location (1-mile radius)</b>	<b>Results (1-mile radius)</b>	<b>Reference</b>
F04-05.NRI	1455NP	Sec. 23 and 24, T11S, R24W	No sites	Hart 2004
1995-357	1808	Sec. 24, T11S, R24W	No sites	Darrington and Bruder 1995
14-234.SHPO*	N/A	Not listed	No sites	JTF-6, Corps of Engineers Project

\*No additional information is available.  
Source: Hart 2009

The previously recorded site, AZ-050-1421, consists of a single pot break. It was recorded by Darrell Sanders of BLM, Yuma Field Office, in 1987 and consists of a half dozen gray ware sherds. No other artifacts or features were found in association with the pot break. Site AZ-050-1421 is not within the current power line ROW and will not be impacted by the project.

The 1909 and 1922 General Land Office Plat maps for Township 11 South, Range 24 West were consulted for the power line ROW. A search of land patents for sections 23 and 24 of Township 11 South, Range 24 West yielded no results. No historical features of significance were depicted in the vicinity of the project area. However, the 1909 Plat depicts an area as the "International Boundary Reservation 60 feet wide" along the border, which corresponds with the Roosevelt Reservation.

The Roosevelt Reservation is a 60-foot corridor adjacent to the U.S./Mexico border that was set aside for law enforcement and border protection or public highway by Presidential Proclamation in 1907 by Theodore Roosevelt. The Roosevelt Reservation includes all Federally owned lands at the time of the Proclamation in California, Arizona, and New Mexico, creating a formal border zone between the U.S. and Mexico. Privately owned lands along the border are not included in the Roosevelt Reservation; therefore, the Roosevelt Reservation is not continuous for the length of its 675 miles along the U.S./Mexico border. However, the Roosevelt Reservation is continuous along the U.S./Mexico border within the project corridor.

### **3.6.1.2 Current Investigations**

Northland completed a Class III cultural resources survey and Class I records search of approximately 1.32 acres in Yuma County, Arizona. The purpose of the survey was to identify, record, and assess any cultural resources that might be present in the ROW prior to the proposed construction of a power line. The pedestrian survey consisted of an archaeologist walking transects parallel to the proposed ROW. The area along and between transects was inspected for cultural remains. Ground visibility within the project areas ranged from good to excellent (80 to 95 percent) due to the absence of thick vegetation. The records search yielded no previously known sites within or adjacent to the project area. No archaeological sites or isolated occurrences were observed during the pedestrian survey and no additional archaeological investigation is considered necessary.

Northland's inspection of the property examined the ground surface only. It is important to note that if previously unidentified cultural resources are encountered during power line installation, the contractor should stop all ground disturbing activities in the vicinity of the discovery until officials from CBP and the Arizona SHPO are notified and the nature and significance of the find can be evaluated. If human remains are encountered during construction activity, the Arizona State Museum, SHPO, and CBP must be also be notified per the Native American Graves Protection and Repatriation Act (NAGPRA), A.R.S. §41-844, A.R.S. §41-865, and appropriate Tribal organizations must be consulted.

## **3.6.2 Environmental Consequences**

### **3.6.2.1 Proposed Action**

No impacts on cultural resources would occur, since none are present within the project area. Additionally, all Federally recognized tribes with affiliation to the project corridor have been coordinated with regarding the proposed project. Copies of the draft cultural resources investigations report were sent to the SHPO and tribes for review and comment on August 21, 2009. Section 106 compliance would be completed prior to construction activities. A copy of the draft cultural resources report was sent to the SHPO

and Federally recognized tribes with affiliation to the project corridor for review on August 21, 2009. As a result of this compliance and lack of sites, the Proposed Action would have no effect on cultural resources.

### **3.6.2.2 No Action Alternative**

No additional impacts are expected to cultural resources from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to cultural resources as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.7 AIR QUALITY**

### **3.7.1 Affected Environment**

This section has been previously discussed in the 2004 Final EA and is incorporated herein by reference (CBP 2004). EPA established National Ambient Air Quality Standards (NAAQS) for specific pollutants. The NAAQS standards are classified as either "primary" or "secondary" standards. The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter of 10 microns or less (PM-10), and lead (Pb). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 3-4.

**Table 3-4. National Ambient Air Quality Standards**

<b>Pollutant</b>	<b>Standard Value</b>	<b>Standard Type</b>
<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 microns (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 microns (PM-2.5)</b>		
Annual arithmetic mean	15µg/m <sup>3</sup>	P and S
24-hour average	35µg/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  
 mg/m<sup>3</sup> = milligrams per cubic meter of air  
 \* Parenthetical value is an approximate equivalent concentration

Source: EPA 2009b  
 ppm = parts per million  
 µg/m<sup>3</sup> = micrograms per cubic meter of air

Areas that do not meet these NAAQS standards are called non-attainment areas or maintenance areas; areas that meet both primary and secondary standards are known as attainment areas. The Federal Conformity Final Rule (40 CFR 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. The Federal Conformity Rule was first promulgated in 1993 by EPA, following the passage of Amendments to the Clean Air Act in 1990 (Public Law 101-549). The rule mandates that a conformity analysis must be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS.

A conformity analysis is the process used to determine whether a Federal action meets the requirements of general conformity rule. It requires the responsible Federal agency

to evaluate the nature of the Proposed Action and associated air pollutant emissions, calculate emissions as a result of the Proposed Action, and mitigate emissions if *de minimis* thresholds are exceeded.

Since 2004, Yuma County has been classified as being in non-attainment and attainment for Particulate Matter less than 10 microns (PM-10). Currently Yuma County is listed as being in non-attainment for PM-10 (EPA 2009b). Identified emission sources are agricultural tilling and burning, paved and unpaved road dust, and disturbed areas. Lack of vegetation, high winds, existing illegal vehicular traffic, traffic on unpaved roads, legal off-road traffic, and agricultural practices contribute to the PM-10 emissions in Yuma County. Furthermore, transboundary air flows from Mexico as a result of seasonal crop burning, as well as farm vehicle activity south of the U.S./Mexico border, also contribute to increased emission levels within Yuma County.

### **3.7.2 Environmental Consequences**

#### **3.7.2.1 Proposed Action**

Temporary and minor increases in air pollution would occur from the use of construction equipment (combustible emissions) and the disturbance of soils (fugitive dust) during installation of the proposed power lines. The following paragraphs describe the air calculation methodologies utilized to estimate air emissions produced by the Proposed Action.

Fugitive dust emissions were calculated using the emission factor of 0.19 ton per acre per month (Midwest Research Institute [MRI] 1996), which is a more current standard than the 1985 PM-10 emission factor of 1.2 tons per acre-month presented in AP-42 Section 13 Miscellaneous Sources 13.2.3.3 (EPA 2001).

EPA's NONROAD Model (EPA 2005a) was used, as recommended by EPA's *Procedures Document for National Emission Inventory, Criteria Air Pollutants, 1985-1999* (EPA 2001), to calculate emissions from construction equipment. Combustible emission calculations were made for standard construction equipment, such as front-

end loaders, backhoes, bulldozers, and cement trucks. Assumptions were made regarding the total number of days each piece of equipment would be used, and the number of hours per day each type of equipment would be used.

Construction workers would temporarily increase the combustible emissions in the county air shed during their commute to and from the project area. Emissions from delivery trucks contribute to the overall air emission budget. Emissions from delivery trucks, construction worker commuters traveling to the job site were calculated using the EPA MOBILE6.2 Model (EPA 2005b, 2005c and 2005d).

The total air quality emissions were calculated for the construction activities to compare to the General Conformity Rule. Summaries of the total emissions for the Proposed Action are presented in Table 3-5. Details of the analyses are presented in Appendix B.

**Table 3-5. Total Air Emissions (tons/year) from the Proposed Action Construction versus the *De minimis* Threshold Levels**

<b>Pollutant</b>	<b>Total (tons/year)</b>	<b><i>De minimis</i> Thresholds (tons/year)<sup>1</sup></b>
CO	8.78	100
Volatile Organic Compounds	1.21	100
NOx	5.97	100
PM-10	3.95	100
PM-2.5	0.76	100
Sulfur Dioxide (SO <sub>2</sub> )	0.63	100

Source: 40 CFR 51.853 and GSRC model projections.  
 1. Note that Yuma County is in non-attainment for PM-10.

Several sources of air pollutants contribute to the over-all air impacts of the construction project. The air results in Table 3-5 included emissions from:

1. Combustible engines of construction equipment
2. Construction workers commute to and from work
3. Supply trucks delivering materials to construction site
4. Fugitive dust from job site ground disturbances



As can be seen from the tables above, the proposed construction activities would not generate emissions that exceed Federal *de minimis* thresholds and, therefore, do not require a Conformity Determination. As there are no violations of air quality standards and no conflicts with the state implementation plans, there would be no significant impacts on air quality from the implementation of the Proposed Action.

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods should be implemented to minimize fugitive dust. In particular, wetting solutions would be applied to construction area to minimize the emissions of fugitive dust. By using these environmental design measures, air emissions from the Proposed Action would be temporary and would not have a significant affect on air quality in the region.

Beneficial impacts to air quality would occur. Diesel generators which are currently being used to power the security lights within the BIS would no longer be necessary. The emissions from running diesel generators from dusk until dawn would be eliminated in the area of the BIS that the proposed power line would serve. Approximately 0.21 tons of VOC, 0.66 tons of CO, 1.05 tons of NO<sub>x</sub>, 0.13 tons of PM-10, 0.13 tons of PM-2.5, and 0.14 tons of SO<sub>2</sub> emissions would be eliminated annually.

### **3.7.2.2 No Action Alternative**

No additional impacts are expected to air quality from the No Action Alternative as the power line and its associated construction access road would not be installed. Impacts to air quality as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and those impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.8 HAZARDOUS MATERIALS**

### **3.8.1 Affected Environment**

EPA maintains a list of hazardous waste sites, particularly waste storage/treatment facilities or former industrial manufacturing sites in the EPA databases, Environmental and Compliance History Online and Envirofacts Data Warehouse, were reviewed for the locations of hazardous waste sites within or near the project corridor (EPA 2009c, 2009d). According to both of these databases, no hazardous waste sites are located near or within the project corridor. In addition, during biological surveys, no visual evidence of hazardous materials was observed within the project corridor.

### **3.8.2 Environmental Consequences**

#### **3.8.2.1 Proposed Action**

No evidence of hazardous materials or wastes have been observed and no such materials or work are expected to occur within the project corridor. Petroleums, oils, and lubricants (POL) would be stored properly and within designated containers, which would include primary and secondary containment measures. Clean-up materials (e.g., oil mops), in accordance with the project's Spill Prevention, Control, and Countermeasures Plan (SPCCP), would also be maintained at the site to allow immediate action in case an accidental spill occurs. Drip pans would be provided for any stationary equipment to capture any POL that is accidentally spilled during maintenance activities or leaks from the equipment.

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

solid waste. Additionally, the Proposed Action would eliminate the potential for diesel fuel spills during the refueling of portable generators.

### **3.8.2.2 No Action Alternative**

No additional impacts are expected from hazardous materials as the power line and its associated construction access road would not be installed. Impacts from hazardous materials as discussed in the 2004 Final EA and the 2007 Final SEA would continue as construction of the BIS is completed and the impacts are incorporated herein by reference (CBP 2004, 2007).

## **3.9 UTILITIES**

### **3.9.1 Affected Environment**

APS is the main energy service provider in the ROI (Greater Yuma Economic Development Corporation 2009). All of the construction and installation work necessary for the proposed power line and construction access road would be completed by APS. The amount of energy utilized by the security lights would be metered and billed to USBP Yuma Sector.

### **3.9.2 Environmental Consequences**

#### **3.9.2.1 Proposed Action**

The Proposed Action would not have a significant impact on the local electrical power supply. It is not anticipated that the security lights would require a significant increase in electrical power production at the regional level.

#### **3.9.2.2 No Action Alternative**

No additional impacts are expected from hazardous materials as the power line and its associated construction access road would not be installed. In previous project documentation, there was no connection to the commercial power grid, so this resource was not discussed in the 2004 EA or the 2007 SEA.

**THIS PAGE LEFT INTENTIONALLY BLANK**

***SECTION 4.0***  
***CUMULATIVE IMPACTS***

---



---

---

## 4.0 CUMULATIVE IMPACTS

---

---

This section of the SEA addresses the potential cumulative impacts associated with implementation of the Proposed Action and other projects/programs that are planned for the region. The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). This section continues, “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

USBP has been conducting law enforcement actions along the border since its inception in 1924, and has continually transformed its methods as new missions, CBV modes of operation, agent needs, and National enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have affected thousands of acres, with synergistic and cumulative impacts to soil, wildlife habitats, water quality, and noise. Beneficial effects have resulted from the construction and use of these roads and fences, including, but not limited to: increased employment and income for border regions and surrounding communities; protection and enhancement of sensitive resources north of the border; reduction in crime within urban areas near the border; increased land value in areas where border security has increased; and increased knowledge of the biological communities and pre-history of the region through numerous biological and cultural resources surveys and studies.

With continued implementation of CBP’s environmental conservation measures, use of biological and archaeological monitors, and restoration activities, adverse impacts of future and ongoing projects can be prevented or minimized. However, recent, ongoing, and reasonably foreseeable proposed projects could result in cumulative impacts. General descriptions of these types of activities are discussed in the following paragraphs.

**Cumulative Fencing along Southwestern Border.** In fiscal years (FY) 2008 and 2009, CBP completed construction of up to approximately 338 miles of primary fence and 298 miles of vehicle fence in Texas, Arizona, and California (CBP 2009).

**Past Actions.** Past actions are those within the cumulative effects analysis areas that have occurred prior to the development of this SEA. The effects of these past actions are generally described throughout the previous sections. For example, BLM cleared approximately 552 acres of Colorado River Riparian area for fire safety/fuel reduction, border security, and law enforcement purposes in 2006, 2007 and 2008.

**Present Actions.** Present actions include current or funded construction projects, USBP or other agency actions in close proximity to the proposed power line ROW, and current resource management programs and land use activities within the cumulative effects analysis areas. Ongoing actions considered in the cumulative effects analysis include the following:

- Secure Border Initiative (SBI) TI Projects – SBI is a comprehensive program focused on transforming border control through technology and infrastructure. The goal of the program is to field the ideal combination of technology, infrastructure, and staffing, and integrate them into a single comprehensive border security suite for DHS. SBI constructed 30 miles of primary pedestrian fence along the U.S./Mexico border within the Barry M. Goldwater Range (BMGR) and 6 miles west of the BMGR (122 acres). This project was recently completed in FY 2008.
- JTF-N Border Road Construction – JTF-N has been working to extend an all-weather driving surface along the border road east of San Luis, Arizona. As National Guard or full-time military units become available, JTF-N assigns short term missions to resurface the existing border road with an all-weather aggregate. The present mission extended the border road from Avenue A eastward to Avenue 3E.

**Reasonably Foreseeable Future Actions.** Reasonably foreseeable future actions consist of activities that have been approved and can be evaluated with respect to their effects. The following activities are reasonably foreseeable future actions:



- SBI<sup>net</sup> Projects - Potential future SBI<sup>net</sup> 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<sup>net</sup> is planning to construct approximately 16 towers in Yuma and Imperial counties in FY 2010.

Other CBP Projects:

- USBP Facilities – CBP is also planning to construct a new USBP station in Wellton, Arizona (43 acres).
- Vegetation Clearing along the Colorado River – USBP is cooperating with BLM, the Cocopah Tribe, State of Arizona, and private landowners to remove exotic plants and trees along the Colorado River. The entire area to be cleared is approximately 1,327 acres and current plans are to replant native vegetation at selected mitigation sites.
- Lighting Projects – USBP plans to install permanent lights along the international border within Imperial County and other areas within Yuma County where the need for additional security is identified.
- Morelos Dam Fence Relocation – CBP plans to relocate approximately 932 feet of existing Normandy style vehicle fence and purchase and install approximately 320 feet of additional Normandy style vehicle fence adjacent to International Boundary Water Commission's Morelos Dam emergency spillway (Vehicle Fence 300 segment CV-1A). Related work will include the construction of a construction access road along the new fence route and widening of the levee road to maintain the Reclamation's 40-foot maintenance easement.
- Comprehensive TI Maintenance and Repair Program – CBP is developing a comprehensive program to maintain and repair CBP TI along the southwest border. The project is currently in the planning phase.

In addition, USBP might be required to implement other activities and operations that are currently not foreseen or mentioned in this document. These actions could be in response to National emergencies or security events like the terrorist attacks on September 11, 2001, or to changes in the mode of operations of the CBVs.

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

- BMGR currently has numerous projects that are in the planning stages, including conservation activities, new facilities, and enhanced training opportunities.
- ADOT and the Yuma Metropolitan Planning Organization (YMPO) plan to establish a new point of entry at the U.S./Mexico international border which will be a new "commercial vehicles only" crossing, approximately 5 miles east of the existing POE south of San Luis, Arizona (YMPO 2008a). The new commercial POE is approximately 6 miles east of the current San Luis POE and would be approximately 339 acres in size. This POE would be located on lands owned by the GYPA and would be used by CBP and other agencies, but would be constructed by the GYPA.
- On September 4, 2009, the Area Service Highway (State Route 195), a 23-mile, 4-lane highway linking I-8 at the Araby Road Interchange in Yuma, Arizona to Avenue E at County 23rd Street in San Luis, Arizona was completed and open for traffic (YMPO 2008b, ADOT 2008a, Vaughn 2009). ADOT is currently constructing a segment of the new State Route 195 connecting 40th Street to I-8 along Araby Road (ADOT 2008b).
- The U.S. Air Force and U.S. Marine Corps have released a Final EIS for the implementation of an Integrated Natural Resource Management Plan (INRMP) for the BMGR (U.S. Department of Air Force, Navy, and Interior 2006). The INRMP would be produced following the completion of the environmental analysis. The INRMP, if implemented, could also change the areas available for certain USBP operations/activities.
- The Lower Colorado River Drop 2 Storage Reservoir is proposed by Reclamation and the Imperial Irrigation District (IID) to provide additional water supply storage. This project is approximately 30 miles east of the City of El Centro and includes a 450-acre reservoir located on a 615-acre site. Administrative and office buildings as well as mechanical equipment necessary for operations of the reservoir would be located on the 615-acre site. In addition to the reservoir, this project includes 6.5 miles of new canal to connect the Coachella Valley Canal to the reservoir and from the reservoir to the All American Canal. The total acreage expected to be impacted from this proposed project is 967 acres (CBP 2007).
- Reclamation is planning the Hunter's Hole Restoration Area. Once completed, the project will restore water flow and re-establish riparian woodland habitat and wetland areas within the approximately 435-acre Hunter's Hole area (Reclamation 2009).
- Reclamation and IID is currently conducting a project to line the All American Canal with concrete along a 23-mile reach, beginning at the Pilot Knob and extending to the Drop 3 weir. The project is designed to reduce seepage from the canal and is anticipated to conserve over 67,000 acre-feet of water each year after completion.
- Arizona State Prisons are currently expanding the Arizona State Prison-Yuma Complex at the junction of Avenue B and County 25<sup>th</sup> Street east of San Luis. The expansion includes the addition of 2,000 beds to the southwestern portion of

the existing facility, nothing will be constructed outside of the existing property boundaries (Schroeder 2009).

A summary of the anticipated cumulative impacts of the project is presented in the following sections. Discussions are presented for each of the resources described previously.

#### **4.1 LAND USE**

The project would permanently affect 1.32 acres of GYPA lands located near the proposed commercial POE. The intended use of the land would not significantly be limited, due to the proximity to an existing roadway; thus, only minor direct or cumulative impacts on the region's land use would occur. Many of the past CBP projects have changed land use in the ROI from desertscrub land to BIS or other USBP facilities; however, due to the purpose and tactical use of the BIS and other facilities and infrastructure, proximity to the border is unavoidable. CBP makes every effort to site all infrastructure and facilities on previously disturbed or developed lands to the greatest extent practicable. Much of the infrastructure, the BIS, the BMGR's INRMP, and Reclamation's restoration projects, once completed, would help to protect lands used for natural resource management within the ROI.

#### **4.2 SOILS**

Although the project would permanently impact 1.32 acres of Rositas Sands, these soils are currently not in agricultural production. Rositas Sands are common throughout Yuma County and are not considered Prime Farmlands. As is common practice for all CBP projects, all practicable BMPs would be utilized to protect against wind and water erosion during the proposed power line installation and access road construction as well as all of the CBP projects identified above. Much of the infrastructure, the BIS, the BMGR's INRMP, and Reclamation's restoration projects, once completed, would help to protect soils within the ROI from impacts caused by wind and water erosion or compaction from CBV traffic.

### **4.3 WATER RESOURCES**

As a result of the project, when combined with other USBP projects, increased temporary erosion during power line installation and access road construction would occur; however, increased sediment and turbidity would have minimal cumulative impacts on water quality. Limited and short-term withdrawal from the regional groundwater basins would not affect long-term water supplies or groundwater quality. The volume of water withdrawn in the Yuma Basin would have a moderate affect on the public drinking water supplies, but could indirectly contribute to aquifer contamination from surface runoff. The indirect effects of altered surface drainage and potential consequent erosion would have minimal beneficial and adverse cumulative impacts to surface water quality.

### **4.4 BIOLOGICAL RESOURCES**

Since vegetation within the project corridor is sparse, there would be negligible direct or cumulative adverse impact on native vegetation communities if the project were implemented. Other USBP projects, including the proposed additional lighting project, would result in moderate to major cumulative adverse impacts; however, BMPs would be developed, to offset these potential impacts. Additionally, the reduction of illegal traffic would have beneficial cumulative impacts on vegetation communities in the region. The Reclamation projects would also have beneficial impacts on the vegetation and wildlife habitat available within the region.

The planned and proposed projects would have negligible cumulative impacts on fish or other aquatic species because the vegetation treatments and construction activities would not take place in flowing or standing water. Pedestrian fences and vehicle fence that are constructed within arroyos or washes are designed and constructed to allow conveyance of flood flows, which requires small gaps in the fence panels. Thus, there would still be opportunities for transboundary migration. Due to the vast amount of similar habitat contained within and surrounding the project corridor, the juxtaposition of the project corridor with other disturbed and developed areas, and the fact that there

would be gaps in the pedestrian fence, the long-term viability of species and communities in the ROI would not be threatened. The loss, when combined with other ground-disturbing or development projects in the project region, would result in moderate to major cumulative negative impacts on the region's biological resources.

CBP has maintained close coordination with the USFWS and AGFD regarding the special status species, and USFWS has provided valuable guidance to CBP regarding these species. Through the use of BMPs developed in coordination with USFWS, the potential impacts as a result of the project, as well as other past, present, and future actions, would ensure that major cumulative impacts to protected species do not occur.

#### **4.5 CULTURAL RESOURCES**

The project would have no adverse effect on any known cultural resources sites within the ROI. Therefore, this action, when combined with other existing and proposed projects in the region, would have no adverse cumulative effects on historic properties. Beneficial effects would occur from the protection afforded to previously discovered and any undiscovered cultural resources.

#### **4.6 AIR QUALITY**

The emissions generated during and after the vegetation treatment and maintenance treatments would be short-term and minor, even when combined with the other proposed developments in the border region. BMPs designed to reduce fugitive dust have been and would continue for all CBP construction projects. Deterrence of and improved response time to CBVs due to the construction of the fence and road and improving the line of sight through vegetation treatments would reduce the need for off-road enforcement actions by USBP agents. Minor beneficial impacts to air quality would occur as diesel generators, which are currently being used to power the security lights within the BIS, would no longer be necessary.

## 4.7 HAZARDOUS MATERIALS

Only minor increases in the use of hazardous substances (e.g., petroleum, oil, lubricants) would occur as a result of the project. No health or safety risks would be created by the project. When combined with other ongoing and proposed projects in the region, the project would have a negligible cumulative impact. The Proposed Action would have a beneficial effect as a result of eliminating the refueling of portable generators currently used to power lighting in the BIS. The elimination of recurring refueling efforts would eliminate the potential for fuel spills.

***SECTION 5.0***  
***ENVIRONMENTAL DESIGN MEASURES***

---

---





---

---

## **5.0 ENVIRONMENTAL DESIGN MEASURES**

---

---

This chapter describes those measures that will be implemented to reduce or eliminate potential adverse impacts to the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. It is CBP policy to mitigate adverse impacts through the sequence of avoidance, minimization, and finally, compensation. Environmental design measures will be presented below for each resource category that would be potentially affected. It should be noted that if any of the alternatives for this project are implemented, the following measures will be employed:

### **5.1 GENERAL CONSTRUCTION ACTIVITIES**

BMPs will be implemented as standard operating procedures during all construction activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils and solvents will be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery will be completed following accepted industry guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although it will be unlikely for a major spill to occur, any spill of reportable quantities will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock, etc.) will be used to absorb and contain the spill. Furthermore, any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 (included as part of an SPCCP) of a reportable quantity must be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities of those substances listed on 40 CFR 302 Table 302.4 will be included as part of the SPCCP. A SPCCP will be in place prior to the start of construction and all personnel will be briefed on the implementation and responsibilities of this plan.

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

## **5.2 SOILS**

Vehicular traffic associated with the construction activities and operational support activities will remain on established roads to the maximum extent practicable. Erosion control techniques, such as straw bales, aggregate materials, and wetting compounds will be incorporated with the design of the Proposed Action. In addition, other erosion control measures, as required and promulgated through the SWPPP, will be implemented before and after construction activities.

## **5.3 WILDLIFE**

Construction of the access road and installation of the power line would occur outside of the neotropical migratory bird nesting season (early May to early to mid September). If this is not possible, CBP will follow the requirements of the Migratory Bird Treaty Act. CBP will coordinate with the USFWS if a construction activity will result in the take of a migratory bird. Surveys of suitable habitat will be performed prior to construction to identify active nests. If construction activities would result in the take of a migratory bird, then consultation with the USFWS and AGFD would be conducted prior to construction or clearing activities to determine if nests, eggs, and/or chicks would be relocated. Bird surveys will not be required if construction/installation activities occur outside of the nesting season.

## 5.4 PROTECTED SPECIES

All naturally recruited native vegetation within the ROW, but outside of the construction access road, will be retained in an effort to encourage the re-growth and re-establishment of these native species.

If western burrowing owls are observed within the project ROW, on-site mitigation will consist of passive relocation. This entails encouraging owls to move from occupied burrows within the project area to alternative locations in suitable habitat beyond 150 feet from the project disturbance. The use of one-way doors on burrows should keep owls from returning to the burrows within the project area. Relocation will only be attempted during the non-breeding season (September 1 through March 1) (California Burrowing Owl Consortium 1993).

Pre-construction surveys and construction monitoring would occur for mitigation for potential impacts to the FTHL. All surveys and monitoring would be conducted according to the protocols identified in the *Flat-tailed Horned Lizard Rangewide Management Strategy: An Arizona-California Conservation Strategy* (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

## 5.5 CULTURAL RESOURCES

If any cultural material is discovered during the construction efforts, then all activities will halt until a qualified archaeologist can be brought in to assess the cultural remains.

## 5.6 WATER RESOURCES

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All project-related work will cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material. Effective March 10, 2003, in accordance with regulations of the

EPA Phase II of the National Pollutant Discharge Elimination System stormwater program, a SWPPP will be required for stormwater runoff from construction activities greater than 1 acre and less than 5 acres. Therefore, a SWPPP will be prepared and implemented prior to the start of any construction.

## **5.7 AIR QUALITY**

Mitigation measures will be incorporated to insure that PM-10 emission levels do not rise above the minimum threshold of 100 tons per year as required per 40 CFR 51.853(b)(1). Measures will include dust suppression methods to minimize airborne particulate matter that will be created during construction activities. Standard construction practices such as routine watering of the construction site will be used to control fugitive dust during the construction phases of the proposed project. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

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





---

---

## 6.0 REFERENCES

---

---

- Arizona Department of Environmental Quality (ADEQ). 2008. 2006/2008 Status of Ambient Surface Water Quality in Arizona: Arizona's Integrated 305(b) Assessment and 303(d) Listing Report. ADEQ Water Quality Division. Internet URL: <http://www.azdeq.gov/environ/water/assessment/download/2008/binder1.pdf>. Last accessed: August 17, 2009.
- Arizona Department of Transportation (ADOT). 2008a. Design Concept Report and Environmental Study. Internet URL: [http://www.azdot.gov/highways/Projects/SR195\\_I8\\_to\\_US95/Index.asp](http://www.azdot.gov/highways/Projects/SR195_I8_to_US95/Index.asp). Accessed August 7, 2008.
- ADOT. 2008b. SR 195: 40th Street to I-8. Internet URL: [http://www.azdot.gov/highways/Projects/SR195\\_40thStreet\\_to\\_I8/Index.asp](http://www.azdot.gov/highways/Projects/SR195_40thStreet_to_I8/Index.asp). Accessed August 7, 2008.
- Arizona Department of Water Resources. 2007. Arizona Water Atlas Volume 7: Lower Colorado River Planning Area (Draft). Arizona Department of Water Resources, Phoenix, Arizona. 509 p.
- Arizona Game and Fish Department. 2009. Arizona Natural Heritage Program. Internet URL: [http://www.azgfd.gov/w\\_c/edits/hdms\\_species\\_lists.shtml](http://www.azgfd.gov/w_c/edits/hdms_species_lists.shtml). Last Accessed: August 9, 2009.
- Brown, D. E. 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. University of Utah Press. Salt Lake City, Utah. 315 pp. 1994
- Busnel, R. G., and J. Fletcher. 1978. Effect of noise on wildlife. New York: Academic Press.
- California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Technical Report Burrowing Owl Consortium, Alviso, California.
- Congressional Research Service (CRS). 2006. *Border Security: Barriers Along the U.S. International Border*. Report for Congress prepared by Blas Nunez-Neto and Stephen Vina. Updated 12 December 2006.
- Darrington, Glenn P. and Simon J. Bruder. 1995. *Cultural Resource Survey for the San Luis Industrial Park II (Cattle Crossing) Power Line Project*. Dames & Moore, Phoenix.

- Dickinson, J.E., Land, Michael, Faunt, C.C., Leake, S.A., Reichard, E.G., Fleming, J.B., and Pool, D.R. 2006, Hydrogeologic framework refinement, ground-water flow and storage, water-chemistry analyses, and water-budget components of the Yuma area, southwestern Arizona and southeastern California: U.S. Geological Survey Scientific Investigations Report 2006–5135, 90 p.
- Dosh, Steven G. 2006. *Cultural Resources Survey Secondary Fence Alignment along Salinity Canal, Office of Border Patrol, Yuma Sector, Yuma, Arizona*. Report No. 06-33. Northland Research, Inc. Flagstaff, Arizona
- Federal Emergency Management Agency. 2009. FEMA Map Service Center – FEMA Issued Flood Maps. Internet URL:  
<http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&storeId=10001&categoryId=12001&langId=-1&userType=G&type=1&dfirmCatId=12009>. Last accessed: August 18, 2009.
- Fletcher, J.L. 1990. Review of noise and terrestrial species: 1983-1988. pp. 181-188 in: B. Berglund and T. Lindvall, eds. *Noise as a Public Health Problem Vol. 5: New Advances in Noise Research Part II*. Swedish Council for Building Research, Stockholm.
- Greater Yuma Economic Development Corporation. 2009. Utilities/Telecommunications. Internet URL:  
<http://www.greateryuma.org/utilities.html>. Last accessed: August 25, 2009.
- Hart, David R. 2009. *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*. Technical Report No. 09-33. Northland Research, Inc. Flagstaff, Arizona.
- Hart, David R. 2004. *Archaeological Survey for the Yuma Lighting and Fence Project, U.S. Border Patrol, Yuma Sector, Yuma County, Arizona*. Technical Report 04-68. Northland Research, Incorporated, Tempe.
- Joint Task Force 6 (JTF-6). 1998. Final Environmental Assessment JTF-6 Fence Construction Project Yuma County, Arizona. Joint Task Force Six. Fort Bliss, Texas. May 1998.
- JTF-6. 1999. Final Environmental Assessment Joint Task Force Six Proposed Lighting Project Yuma County, Arizona and Imperial County, California. Prepared by U.S. Army Corps of Engineers, Fort Worth District. Fort Worth, Texas. May 1999.
- Lacroix, K.E.M. 2008. Personal Communication between Steve Kolian of GSRC and Ms. Lacroix regarding annual natural and artificial recharge rates in the Yuma Basin.



- Midwest Research Institute (MRI). 1996. Improvement of Specific Emission Factors (BACM Project No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract 95040, Diamond Bar, CA. March 1996.
- Miranda, Chris. 2006. Personal Communication via electronic mail from Mr. Chris Miranda of Carter Burgess to Mr. Josh McEnany of GSRC. October 11, 2006.
- Natural Resources Conservation Service. 2009. Web Soil Survey. Internet URL: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Last Accessed: August 6, 2009.
- Schroeder, Karen. 2009. Yuma State Prison Expanding. Yuma Sun, Yuma, Arizona. June 06, 2009. Internet URL: <http://www.yumasun.com/news/prison-50555-yuma-lamoreaux.html>. Last accessed August 17, 2009.
- Sikel, Scott. 2005. Personal Communication between Mr. Scott Sikel of Carter Burgess (602) 253-1200 and Mr. Josh McEnany of GSRC. October 26, 2005.
- Stone, Connie L. 1991 *The Linear Oasis: Managing Cultural Resources along the Lower Colorado River*. Cultural Resource Series No. 6. Bureau of Land Management, Phoenix.
- U.S. Army Corps of Engineers. 2001. Final Supplemental Programmatic Environmental Impact Statement for INS and JTF-6 Activities. Fort Worth District. June 2001.
- U.S. Bureau of Reclamation (Reclamation). 2009. Final Environmental Assessment for Hunter's Hole Restoration Project. April 2009. Internet URL: [http://www.usbr.gov/lc/yuma/environmental\\_docs/hunters-hole/finaleadf.pdf](http://www.usbr.gov/lc/yuma/environmental_docs/hunters-hole/finaleadf.pdf). Last accessed: August 17, 2009.
- U.S. Customs and Border Protection (CBP). 2009. Tactical Infrastructure Master Data File. Last accessed October 21, 2009.
- CBP. 2007. Final Supplemental Environmental Assessment for the Installation of Permanent Lighting and a Border Infrastructure System Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. March 2007.
- CBP. 2005. Final Environmental Assessment for the Installation of Permanent Vehicle Barriers and Patrol Roads Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. July 2005.

- CBP. 2004. Final Environmental Assessment for the Installation of Permanent Lighting and a Border Infrastructure System Office of Border Patrol, Yuma Sector, Arizona. Prepared by Gulf South Research Corporation. Baton Rouge, Louisiana. December 2004.
- U.S. Departments of Air Force, Navy, and Interior. 2006. Environmental Impact Statement for the Barry M Goldwater Range, Integrated Natural Resources Management Plan.
- U.S. Environmental Protection Agency (EPA). 2009a. Basic Information about Selenium: Drinking Water Contaminants.  
<http://www.epa.gov/safewater/contaminants/basicinformation/selenium.html#three>.  
Last Accessed: August 17, 2009.
- EPA. 2009b. Welcome to the Green Book Nonattainment Areas for Criteria Pollutants  
[www.epa.gov/oar/oaqps/greenbk](http://www.epa.gov/oar/oaqps/greenbk)
- EPA. 2009c. Enforcement & Compliance History Online (ECHO). Internet URL:  
<http://www.epa.gov/cgi-bin/ideaotis.cgi>. Last Accessed: August 9, 2009.
- EPA. 2009d. Envirofacts Data Warehouse website. Internet URL:  
[http://www.epa.gov/enviro/index\\_java.html](http://www.epa.gov/enviro/index_java.html). Last Accessed: August 9, 2009
- EPA. 2005a. User's Guide for the Final NONROAD2005 Model. EPA420-R-05-013  
December 2005.
- EPA. 2005b. Emission Facts: Average In-Use Emissions from Heavy Duty Trucks. EPA  
420-F-05-0yy, May 2005.
- EPA. 2005c. Emission Facts: Average In-Use Emission Factors for Urban Buses and  
School Buses. Office of Transportation and Air Quality EPA420-F-05-024 August  
2005
- EPA. 2005d. Emission Facts: Average Annual Emissions and Fuel Consumption for  
Gasoline-Fueled Passenger Cars and Light Trucks. EPA 420-F-05-022
- EPA. 2001. Procedures Document for National Emission Inventory, Criteria Air  
Pollutants 1985-1999. EPA-454/R-01-006. Office of Air Quality Planning and  
Standards Research Triangle Park NC 27711.
- U.S. Fish and Wildlife Service (USFWS). 2009. Endangered Species List. Internet URL:  
<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm>. Last  
Accessed: August 6, 2009.

USFWS. 2005. Memorandum: Request for Concurrence on Hazardous Fuels Reduction Project, Yuma County, Arizona, AESO/SE 02-21-05-I-0349, to Field Manager, Yuma Field Office, Bureau of Land Management, Yuma, Arizona from Steven L. Spangle, USFWS, Arizona Ecological Services Field Office. April 12, 2005.

Vaugh, J. 2009. SR 195, linking border with I-8, to open Friday, *The Yuma Sun*. 9/04/2009. pp A-1 and A-7.

Yuma Metropolitan Planning Organization. 2004. Planning Projects. Robert A. Vaughan Expressway. Internet Address: <http://www.ympo.org/ash.htm>. Last accessed: October 25, 2005.

**THIS PAGE LEFT INTENTIONALLY BLANK**

**SECTION 7.0**  
**LIST OF PREPARERS**





## 7.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this Environmental Assessment.

<b>NAME</b>	<b>AGENCY/ORGANIZATION</b>	<b>DISCIPLINE/EXPERTISE</b>	<b>EXPERIENCE</b>	<b>ROLE IN PREPARING SEA</b>
Suna Adam Knaus	Gulf South Research Corporation	Forestry/Wildlife	20 years, natural resources	SEA review
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	30 years, NEPA studies	SEA review
Howard Nass	Gulf South Research Corporation	Forestry/Wildlife	18 years, natural resources and NEPA studies	Project Manager and SEA review
Josh McEnany	Gulf South Research Corporation	Forestry/Wildlife	9 years, natural resources and NEPA studies	SEA preparation
Maria Bernard Reid	Gulf South Research Corporation	Environmental Studies	7 years, NEPA and natural resources	SEA preparation
Steve Kolian	Gulf South Research Corporation	Environmental Science	10 years, environmental science	SEA preparation
Carey Lynn Perry	Gulf South Research Corporation	Ecology/Natural Resources	3 years, natural resources studies	SEA preparation
Sharon Newman	Gulf South Research Corporation	GIS/graphics	17 years, GIS/graphics	GIS/graphics

**THIS PAGE LEFT INTENTIONALLY BLANK**



***SECTION 8.0***  
***ACRONYMS***





---

---

## 8.0 ACRONYMS

---

---

ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
AO	area of operations
APS	Arizona Public Service
ASM	Arizona State Museum
BIS	Border Infrastructure System
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BMP	Best Management Practice
CBP	U.S. Customs and Border Protection
CBV	cross-border violator
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRS	Congressional Research Service
DHS	Department of Homeland Security
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FR	Federal Register
FTHL	flat-tailed horned lizard
FY	Fiscal Year
GSRC	Gulf South Research Corporation
GYPA	Greater Yuma Port Authority
IA	Illegal Alien
IID	Imperial Irrigation District
INRMP	Integrated Natural Resources Management Plan
INS	Immigration and Naturalization Service
JTF-6	Joint Task Force Six
JTF-N	Joint Task Force North
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act of 1969
Northland	Northland Research Incorporated
NRCS	Natural Resource Conservation Service
NOA	Notice of Availability
OBP	Office of Border Patrol
POE	port-of-entry
POL	petroleum, oil and lubricants
Reclamation	Bureau of Reclamation
ROI	Region of Influence
ROW	right-of-way

SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
U.S.	United States
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
WSC	Wildlife of Special Concern
WUS	Waters of the United States
YDMA	Yuma Desert Management Area
YMPO	Yuma Metropolitan Planning Organization

*APPENDIX A*  
*ARIZONA PROTECTED SPECIES FOR YUMA COUNTY*

---

---



COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yavapai	PLANT	Talinum validulum	Tusayan Flame Flower	SC						SR	PDPOR080M0	S3	G3
Yavapai	PLANT	Thelypteris puberula var. sonorensis	Aravaipa Wood Fern		S						PPTHE05192	S2	G5T3
Yavapai	PLANT	Trichostema brachiatum	Flux Weed								PDLAM22030	S4	G5
Yavapai	PLANT	Triteleia lemmoniae	Mazatzal Tritoleia							SR	PMLIL210C0	S3	G3
Yavapai	PLANT	Washingtonia filifera	California Fan Palm							SR	PMARE0G010	S1	G4
Yavapai	REPTILE	Charina trivirgata gracia	Desert Rosy Boa	SC	S		S				ARADA01021	S3S4	G4G5T3
Yavapai	REPTILE	Eumeces gilberti arizonensis	Arizona Skink	SC			S		PR	WSC	ARACH01061	S1	G5T1Q
Yavapai	REPTILE	Eumeces gilberti rubricaudatus	Western Red-tailed Skink						PR		ARACH01065	S3S4	G5T4Q
Yavapai	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC	S				A	WSC	ARAAF01013	S4	G4T4
Yavapai	REPTILE	Heloderma suspectum	Gila Monster						A		ARACE01010	S4	G4
Yavapai	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	SC					A		ARACE01011	S4	G4T4
Yavapai	REPTILE	Lampropeltis triangulum taylori	Utah Milksnake					4			ARADB19058	S2	G5T4Q
Yavapai	REPTILE	Thamnophis eques megalops	Northern Mexican Gartersnake	C			S		A	WSC	ARADB36061	S1	G5T5
Yavapai	REPTILE	Thamnophis rufipunctatus	Narrow-headed Gartersnake	SC	S		S			WSC	ARADB36110	S1	G3G4
Yavapai	REPTILE	Xantusia arizonae	Arizona Night Lizard				S				ARACK01050	S1	G3
Yuma	BIRD	Ardea alba	Great Egret		S					WSC	ABNGA04040	S1B,S4N	G5
Yuma	BIRD	Ardea herodias	Great Blue Heron								ABNGA04010	S5	G5
Yuma	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	SC	S			4	A		ABNSB10012	S3	G4T4
Yuma	BIRD	Bubulcus ibis	Cattle Egret								ABNGA07010	S1B,S4N	G5
Yuma	BIRD	Coccyzus americanus	Yellow-billed Cuckoo (Western U.S. C DPS)					2		WSC	ABNRB02020	S3	G5
Yuma	BIRD	Egretta thula	Snowy Egret		S					WSC	ABNGA06030	S1B,S4N	G5
Yuma	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	LE			S	2		WSC	ABPAE33043	S1	G5T1T2
Yuma	BIRD	Glauclidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S				A	WSC	ABNSB08041	S1	G5T3
Yuma	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC	S		S	2	P	WSC	ABNKC10015	S4N	G5TNR
Yuma	BIRD	Himantopus mexicanus	Black-necked Stilt								ABNND01010	S2	G5
Yuma	BIRD	Icterus bullockii	Bullock's Oriole								ABPBXB9220	S?	G5
Yuma	BIRD	Ixobrychus exilis	Least Bittern		S				A	WSC	ABNGA02010	S3	G5

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	BIRD	Lanius ludovicianus	Loggerhead Shrike	SC							ABPBR01030	S4	G4
Yuma	BIRD	Laterallus jamaicensis coturniculus	California Black Rail	SC	S		S		PR	WSC	ABNME03041	S1	G4T1
Yuma	BIRD	Rallus longirostris yumanensis	Yuma Clapper Rail	LE					P	WSC	ABNME0501A	S3	G5T3
Yuma	FISH	Xyrauchen texanus	Razorback Sucker	LE			S	2	P	WSC	AFCJC11010	S1	G1
Yuma	MAMMAL	Antilocapra americana sonoriensis	Sonoran Pronghorn	LE			S		P	WSC	AMALD01012	S1	G5T1
Yuma	MAMMAL	Antrozous pallidus	Pallid Bat								AMACC10010	S4	G5
Yuma	MAMMAL	Bat Colony									OBATCOLONY	SU	GNR
Yuma	MAMMAL	Bat Foraging Area	High Netting Concentration								OBATFORAG1	SU	GNR
Yuma	MAMMAL	Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S			4			AMACC08014	S3S4	G4T4
Yuma	MAMMAL	Euderma maculatum	Spotted Bat	SC	S				PR	WSC	AMACC07010	S1S2	G4
Yuma	MAMMAL	Eumops perotis californicus	Greater Western Bonneted Bat	SC	S						AMACD02011	S3	G5T4
Yuma	MAMMAL	Lasiurus xanthinus	Western Yellow Bat		S					WSC	AMACC05070	S2S3	G5
Yuma	MAMMAL	Leptonycteris curasoae yerbabuena	Lesser Long-nosed Bat	LE			S			WSC	AMACB03030	S2S3	G4
Yuma	MAMMAL	Macrotus californicus	California Leaf-nosed Bat	SC	S					WSC	AMACB01010	S3	G4
Yuma	MAMMAL	Myotis californicus	California Myotis								AMACC01120	S4S5	G5
Yuma	MAMMAL	Myotis yumanensis	Yuma Myotis	SC							AMACC01020	S3S4	G5
Yuma	MAMMAL	Nyctinomops femorosaccus	Pocketed Free-tailed Bat								AMACD04010	S3	G4
Yuma	MAMMAL	Peromyscus eremicus	Cactus Mouse								AMAFF03010	S5	G5
Yuma	MAMMAL	Sigmodon hispidus eremicus	Yuma Hispid Cotton Rat	SC							AMAFF07013	S2	G5T2T3
Yuma	MAMMAL	Tadarida brasiliensis	Brazilian Free-tailed Bat								AMACD01010	S3S4	G5
Yuma	PLANT	Allium parishii	Parish Onion		S					SR	PMLIL021N0	S1	G3
Yuma	PLANT	Astragalus insularis	Sand Flat Milk-vetch								PDFAB0F490	S2	G5
Yuma	PLANT	Berberis harrisoniana	Kofa Mt Barberry		S						PDBER02030	S1S2	G1G2
Yuma	PLANT	Calandrinia ambigua	Rock Purslane								PDPOR09010	S2?	G4
Yuma	PLANT	Colubrina californica	California Snakewood								PDRHA05030	S2S3	G4
Yuma	PLANT	Croton wigginsii	Dune Croton								PDEUP0H140	S1	G2G3
Yuma	PLANT	Cryptantha ganderi	Gander's Cryptantha	SC							PDBOR0A120	S1	G1G2



COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	PLANT	Drymaria viscosa									PDCAR09090	S1	G3?
Yuma	PLANT	Echinocactus polycephalus var. polycephalus	Clustered Barrel Cactus							SR	PDCAC05033	S2	G3G4T3T4
Yuma	PLANT	Echinodorus berteroi	Upright Burrhead								PMALI020B0	S1	G5
Yuma	PLANT	Erigeron lobatus	Lobed Fleabane								PDAST3M2C0	S3	G4
Yuma	PLANT	Eriogonum deserticola	Desert Wild-buckwheat								PDPGN081Q0	S1	G4?
Yuma	PLANT	Eryngium nasturtiifolium	Hierba del Sapo								PDAPI0Z0L0	S1	G5
Yuma	PLANT	Eucnide rupestris	Flor de la Piedra								PDLOA02020	S1	G3
Yuma	PLANT	Euphorbia platysperma	Dune Spurge	SC							PDEUP0D1X0	S1	G3
Yuma	PLANT	Ferocactus cylindraceus var. cylindraceus	California Barrel Cactus						PR	SR	PDCAC08081	S3	G5T4
Yuma	PLANT	Helianthus niveus ssp. tephrodes	Dune Sunflower	SC							PDAST4N0Z2	S2	G4T2
Yuma	PLANT	Lophocereus schottii	Senita							SR	PDCAC14010	S2	G4
Yuma	PLANT	Nemacaulis denudata	Woolly Heads								PDPGN0G010	S2	G3G4
Yuma	PLANT	Opuntia echinocarpa	Straw-top Cholla							SR	PDCAC0D2W0	S5	G5
Yuma	PLANT	Petalonyx linearis	Longleaf Sandpaper Plant								PDLOA04010	S2	G4
Yuma	PLANT	Pholisma sonorae	Sand Food	SC	S					HS	PDLNN02020	S1	G2
Yuma	PLANT	Pilostyles thurberi	Thurber Pilostyles								PDRAF01010	S2	G5
Yuma	PLANT	Polygonum fusiforme	Needles Knotweed								PDPGN0L110	S3?	G3G4Q
Yuma	PLANT	Rhus kearneyi	Kearney Sumac		S					SR	PDANA08050	S2	G4
Yuma	PLANT	Selaginella eremophila	Desert Spike Moss								PPSEL010G0	S3S4	G4
Yuma	PLANT	Stephanomeria schottii	Schott Wire Lettuce		S						PDAST8U0D0	S2	G2
Yuma	PLANT	Stillingia linearifolia	Linearleaf Sand Spurge								PDEUP1B020	S3S4	G4
Yuma	PLANT	Stillingia spinulosa	Spiny Sand Spurge								PDEUP1B040	S3S4	G4
Yuma	PLANT	Tetracoccus fasciculatus var. hallii	Hall Shrub Spurge								PDEUP1C021	S3S4	G4T4
Yuma	PLANT	Teucrium glandulosum	Desert Germander								PDLAM20040	S3?	G4
Yuma	PLANT	Triteleopsis palmeri	Blue Sand Lily		S					SR	PMLIL22010	S1	G3
Yuma	PLANT	Washingtonia filifera	California Fan Palm							SR	PMARE0G010	S1	G4
Yuma	REPTILE	Charina trivirgata gracia	Desert Rosy Boa	SC	S		S				ARADA01021	S3S4	G4G5T3

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ESA	BLM	CRIT HAB	USFS	NESL	MEXFED	STATE	ELCODE	S RANK	G RANK
Yuma	REPTILE	Crotalus mitchellii	Speckled Rattlesnake						PR		ARADE02060	S5	G5
Yuma	REPTILE	Crotaphytus bicinctores	Great Basin Collared Lizard								ARACF04010	S4	G5
Yuma	REPTILE	Crotaphytus nebrius	Sonoran Collared Lizard								ARACF04050	S3S4	G4
Yuma	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC	S				A	WSC	ARAAF01013	S4	G4T4
Yuma	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	SC					A		ARACE01011	S4	G4T4
Yuma	REPTILE	Phrynosoma mcallii	Flat-tailed Horned Lizard	SC	S				A	WSC	ARACF12040	S2	G3
Yuma	REPTILE	Sauromalus ater (Arizona Population)	Arizona Chuckwalla	SC	S				A		ARACF13013	S4	G5T4Q
Yuma	REPTILE	Uma rufopunctata	Yuman Desert Fringe-toed Lizard	SC	S		S		A	WSC	ARACF15040	S2	G3

*APPENDIX B*  
*AIR QUALITY MODEL CALCULATIONS*

---

---



CALCULATION SHEET-COMBUSTIBLE EMISSIONS

Assumptions for Combustible Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	10	60	180000
Diesel Road Compactors	1	100	10	40	40000
Diesel Dump Truck	1	300	10	20	60000
Diesel Excavator	1	300	10	20	60000
Diesel Hole Trenchers	1	175	10	20	35000
Diesel Bore/Drill Rigs	1	300	10	20	60000
Diesel Cement & Mortar Mixers	1	300	10	30	90000
Diesel Cranes	1	175	10	30	52500
Diesel Graders	1	300	10	0	0
Diesel Tractors/Loaders/Backhoes	1	100	10	30	30000
Diesel Bull Dozers	1	300	10	20	60000
Diesel Front End Loaders	1	300	10	20	60000
Diesel Fork Lifts	1	100	10	20	20000
Diesel Generator Set	2	40	10	20	16000

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

## CALCULATION SHEET-COMBUSTIBLE EMISSIONS

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr
Water Truck	0.087	0.411	1.089	0.081	0.079	0.147	106.321
Diesel Road Paver	0.016	0.065	0.216	0.015	0.015	0.033	23.636
Diesel Dump Truck	0.029	0.137	0.363	0.027	0.026	0.049	35.440
Diesel Excavator	0.022	0.086	0.304	0.021	0.020	0.049	35.460
Diesel Hole Cleaners\Trenchers	0.020	0.094	0.224	0.018	0.017	0.029	20.666
Diesel Bore/Drill Rigs	0.040	0.151	0.473	0.033	0.032	0.048	35.024
Diesel Cement & Mortar Mixers	0.060	0.230	0.722	0.048	0.047	0.072	52.536
Diesel Cranes	0.025	0.075	0.331	0.020	0.019	0.042	30.675
Diesel Graders	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Diesel Tractors/Loaders/Backhoes	0.061	0.271	0.239	0.045	0.044	0.031	22.848
Diesel Bull Dozers	0.024	0.091	0.315	0.022	0.021	0.049	35.460
Diesel Front End Loaders	0.025	0.102	0.331	0.023	0.022	0.049	35.454
Diesel Aerial Lifts	0.044	0.171	0.189	0.031	0.030	0.021	15.225
Diesel Generator Set	0.021	0.066	0.105	0.013	0.013	0.014	10.355
<b>Total Emissions</b>	<b>0.476</b>	<b>1.952</b>	<b>4.900</b>	<b>0.396</b>	<b>0.386</b>	<b>0.633</b>	<b>459.099</b>

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-TRANSPORTATION COMBUSTIBLE EMISSIONS

Construction Worker Personal Vehicle Commuting to Construction Site-Passenger and Light Duty Trucks									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	240	15	15	0.32	0.38	0.71
CO	12.4	15.7	60	240	15	15	2.95	3.74	6.69
NOx	0.95	1.22	60	240	15	15	0.23	0.29	0.52
PM-10	0.0052	0.0065	60	240	15	15	0.00	0.00	0.00
PM 2.5	0.0049	0.006	60	240	15	15	0.00	0.00	0.00

Heavy Duty Trucks Delivery Supply Trucks to Construction Site									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	240	2	2	0.01	0.02	0.03
CO	1.32	3.21	60	240	2	2	0.04	0.10	0.14
NOx	4.97	12.6	60	240	2	2	0.16	0.40	0.56
PM-10	0.12	0.33	60	240	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	240	2	2	0.00	0.01	0.02

Daily Commute New Residents									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of Cars	Number of trucks	Total Emissions cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	15	240	0	0	-	0.00	-
CO	12.4	15.7	15	240	0	0	-	0.00	-
NOx	0.95	1.22	15	240	0	0	-	0.00	-
PM-10	0.0052	0.0065	15	240	0	0	-	0.00	-
PM 2.5	0.0049	0.006	15	240	0	0	-	0.00	-

Truck Emission Factor Source: USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway vehicle emission factor model.

CALCULATION SHEET-FUGITIVE DUST

**Construction Fugitive Dust Emissions**

**Construction Fugitive Dust Emission Factors**

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

**PM2.5 Emissions**

PM2.5 Multiplier	0.10	(10% of PM10 emissions assumed to be PM2.5)	EPA 2001; EPA 2006
------------------	------	---	--------------------

**Control Efficiency**

0.50	(assume 50% control efficiency for PM10 and PM2.5 emissions)	EPA 2001; EPA 2006
------	--	--------------------

**Project Assumptions**

**Road Upgrade and General Construction Area (0.19 ton PM10/acre-month)**

Duration of Construction Project	12	months
Length	0	miles
Length (converted)	0	feet
Width	0	feet
Area	2.00	acres

**Conversion Factors**

0.000022957	acres per feet
5280	feet per mile

**New Roads (0.42 ton PM/acre-month)**

Duration of Construction Project	3	months
Length		miles
Length (converted)		feet
Width		feet
Area	2.00	acres

	<b>Project Emissions (tons/year)</b>			
	<b>PM10 uncontrolled</b>	<b>PM10 controlled</b>	<b>PM2.5 uncontrolled</b>	<b>PM2.5 controlled</b>
Road Upgrade and General Construction	4.56	2.28	0.46	0.23
New Roads (0.42 ton PM/acre-month)	2.52	1.26	0.25	0.13
<b>Total</b>	<b>7.08</b>	<b>3.54</b>	<b>0.71</b>	<b>0.35</b>



## Construction Fugitive Dust Emission Factors

### General Construction Activities Emission Factor

**0.19 ton PM10/acre-month** Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM10/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM10/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM10/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM10/acre-month) and 75% of the average emission factor (0.11 ton PM10/acre-month).

The 0.19 ton PM10/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM10/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas.

### New Road Construction Emission Factor

**0.42 ton PM10/acre-month** Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

### PM2.5 Multiplier

**0.10**

PM2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

### Control Efficiency for PM10 and PM2.5

**0.50**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (EPA 2006).

### References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

CALCULATION SHEET-SUMMARY OF EMISSIONS

<b>Proposed Action Construction Emissions for Criteria Pollutants (tons per year)</b>						
Emission source	VOC	CO	NOx	PM-10	PM-2.5	SO2
Combustible Emissions	0.48	1.95	4.90	0.40	0.39	0.63
Construction Site-fugitive PM-10	NA	NA	NA	3.54	0.35	NA
Construction Workers Commuter & Trucking	0.73	6.83	1.07	0.02	0.02	NA
<b>Total emissions</b>	<b>1.21</b>	<b>8.78</b>	<b>5.97</b>	<b>3.95</b>	<b>0.76</b>	<b>0.63</b>
De minimis threshold (1)	NA	NA	NA	100.00	NA	NA

1. De-minimis thresholds for Yuma County.

*APPENDIX C*  
*CORRESPONDENCE*







**DEPARTMENT OF THE ARMY**  
LOS ANGELES DISTRICT, CORPS OF ENGINEERS  
ARIZONA-NEVADA AREA OFFICE  
3636 NORTH CENTRAL AVENUE, SUITE 900  
PHOENIX, ARIZONA 85012

October 26, 2009

REPLY TO  
ATTENTION OF:

Office of the Chief  
Regulatory Division

U.S. Customs and Border Protection  
c/o David Guzewich  
Environmental Coordinator  
1301 Constitution Avenue, NW  
EPA West Suite B-155  
Washington, DC 20229

File Number: SPL-2009-00827-WHM

Dear Mr. Guzewich:

Reference is made to the October 8, 2009 request by the U.S Customs and Border Protection for a Department of Army review of a Supplemental Environmental Assessment for the installation of permanent security lighting and a border infrastructure system (Section 23, T11S, R24W), Yuma County, Arizona.

The Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the U.S. including wetlands under Section 404 of the Clean Water Act. Examples of activities requiring a permit include but are not limited to placing bank protection, temporary or permanent stockpiling, grading including vegetative clearing operations, road or pad fills, any other activity that involves the filling of low areas or leveling of the land, and discharging dredged or fill material into waters of the U.S. as part of any other activity or any work at all which results in a change to the existing elevation of a water of the U.S.

The proposed activity may require a permit under Section 404; however, there was not enough information for us to make this determination. Please provide more detailed information at your earliest convenience so we may make a determination. Please reference File Number SPL-2009-00827-WHM.

The receipt of your letter is appreciated. If you have questions, please contact William Miller at (602) 640-5385 ext 221.

Sincerely,

A handwritten signature in cursive script that reads "Sallie McGuire".

Sallie McGuire  
Chief, Arizona Branch  
Regulatory Division

Enclosure



# Publisher's Affidavit of Publication

o0o

STATE OF ARIZONA }  
COUNTY OF YUMA }

**NOTICE OF AVAILABILITY**  
**DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE INSTALLATION OF PERMANENT SECURITY LIGHTING AND A BORDER INFRASTRUCTURE SYSTEM OFFICE OF BORDER PATROL YUMA SECTOR, ARIZONA**

Joni Weerheim or Robert Rivens, having been first duly sworn, deposes and says: that Yuma Sun is a newspaper of general circulation published daily in the City of Yuma, County of Yuma, State of Arizona; that (s)he is the publisher or business manager of said paper; that the

NOTICE OF AVAILABILITY

The public is hereby notified of the availability of the Draft Supplemental Environmental Assessment (SEA) and Draft Finding of No Significant Impact (FONSI) for the Installation of Permanent Security Lighting and a Border Infrastructure System for the Office of Border Patrol (OBP), Yuma Sector, Arizona. This SEA addresses the potential impacts from the installation of power poles and approximately 3,844 feet of power lines from the existing power lines along County 25th Street south to the U.S. Border Patrol's Border Infrastructure System. A 12-foot wide construction access road would be installed within a 15-foot wide Right of Way. Arizona Public Service (APS) would install the proposed power line and road. The objective of the proposed project is to provide deterrence to the influx of illegal aliens into the area and to increase the safety of U.S. Border Patrol agents and other law enforcement personnel. The Draft SEA will be available for review at the following locations:

**Yuma County Library (Main Branch)**  
2951 South 21st Drive  
Yuma, Arizona

**Yuma County Library (San Luis Library)**  
1075 North 6th Avenue  
San Luis, Arizona

The Draft SEA can also be viewed via the Internet at the following address: <http://ecso.swf.usace.army.mil>

The comment period opens on Friday, October 9, 2009, and closes on Monday, November 9, 2009. To comment or for additional information, contact Dr. Jack Mobley, U.S. Army Corps of Engineers, Fort Worth District, P.O. Box 17300, Fort Worth, Texas 76102 or via facsimile at (817) 886-6499.  
Daily October 9, 2009 #L41610

a printed copy of which, as it appeared in said paper, is hereto attached and made a part of this affidavit, was published in Yuma Sun

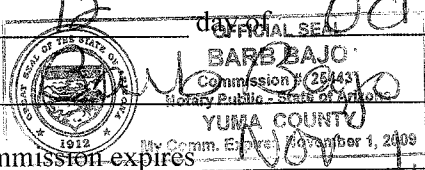
For ONE issues; that the date of the first publication of said NOTICE OF AVAILABILITY

was OCTOBER 09, 2009 and the date of the last publication being OCTOBER 09, 2009 and that the dates when said

NOTICE OF AVAILABILITY

was printed and published in said paper were OCTOBER 09, 2009

Subscribed and sworn to before me, by the said Joni Weerheim or Robert Rivens

12 day of Oct, 2009  
 Notary Public  
My commission expires NOV 1, 2009







# United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Field Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to:  
AESO/SE  
22410-2009-SL-472

September 30, 2009

Mr. Loren Flossman  
U.S. Customs and Border Patrol  
Tactical Infrastructure Facilities Mgt & Engineering  
1301 Constitution Avenue NW  
EPA West Suite B-155  
Washington, DC 20229

RE: U.S. Border Patrol Proposal to Install an Electrical Service Line Which Connects to an Existing Power Grid Along Avenue D Beginning at County 25<sup>th</sup> Street Extending Southward to Powerline ROW, Yuma County, Arizona

Dear Mr. Flossman:

Thank you for your recent request for information on threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may occur in your project area. The Arizona Ecological Service Field Office has posted lists of the endangered, threatened, proposed, and candidate species occurring in each of Arizona's 15 counties on the Internet. Please refer to the following web page for species information in the county where your project occurs:

<http://www.fws.gov/southwest/es/arizona>

If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find County Species Lists on the main page. Then click on the county of interest. The arrows on the left will guide you through information on species that are listed, proposed, candidates, or have conservation agreements. Here you will find information on the species' status, a physical description, all counties where the species occurs, habitat, elevation, and some general comments. Additional information can be obtained by going back to the main page. On the left side of the screen, click on Document Library, then click on Documents by Species, then click on the name of the species of interest to obtain General Species Information, or other documents that may be available. Click on the "Cactus" icon to view the desired document.

Mr. Loren Flossman, Program Manager

Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Under the General Species Information, citations for the Federal Register (FR) are included for each listed and proposed species. The FR is available at most Federal depository libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.


Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency will need to request formal consultation with us. If the action agency determines that the planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency will need to enter into a section 7 conference. The county list may also contain candidate or conservation agreement species. Candidate species are those for which there is sufficient information to support a proposal for listing; conservation agreement species are those for which we have entered into an agreement to protect the species and its habitat. Although candidate and conservation agreement species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

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

The State of Arizona and some of the Native American Tribes protect some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species, or contact the appropriate Native American Tribe to determine if sensitive species are protected by Tribal governments in your project area. We further recommend that you invite the Arizona Game and Fish Department and any Native American Tribes in or near your project area to participate in your informal or formal Section 7 Consultation process.

For additional communications regarding this project, please refer to consultation number 22410-2009-SL-472. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Brenda Smith (928) 226-0614 (x101) for projects in Northern Arizona, Debra Bills (602) 242-0210 (x239) for projects in central Arizona and along the Lower Colorado River, and Sherry Barrett (520) 670-6150 (x223) for projects in southern Arizona.

Sincerely,



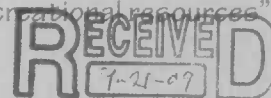
*for* Steven L. Spangle  
Field Supervisor

Mr. Loren Flossman, Program Manager

cc: Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ  
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ (Attn: Erin Fernandez)

W:\Cathy Gordon\administration\species ltrs\complete\US customs and border patrol install electrical servcie line yuma.docx:egg





No historic properties affected

September 8, 2009

Christopher S. Oh  
Director, Environmental Division  
U.S. Department of Homeland Security  
US Customs and Border Protection  
Washington, DC 20229

RE: Cultural Resources Survey Report for Yuma Powerline Right-of-Way; CBP  
SHPO-2009-1260 (40869)

Dear Mr. Oh:

Thank you for providing a copy of the survey report ["A Cultural Resources Survey of a Proposed Powerline Right-of-Way near Yuma, Yuma County, Arizona" (August 2009)] in support of the above referenced federal undertaking. I have the following comments:

The survey covered a 15-ft. wide, 0.5-mile long corridor extending north from the U.S.-Mexico International Border in the SE ¼ Section 23 and SW ¼ Section 24, Township 22 South, Range 24 West. No significant cultural resources were recorded within the corridor.

The report (page 1) indicates that the subject right-of-way is located on lands under the jurisdiction of the Yuma Port Authority and the Bureau of Reclamation. Required land jurisdiction is not marked on report maps. Please have the maps revised accordingly.

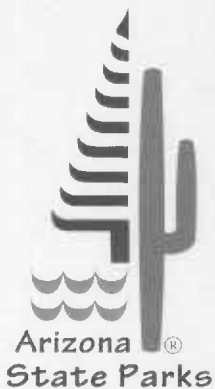
Your letter should have informed us about the results of your consultation with Indian Tribes and with land managers.

Contingent upon no concerns from Indian Tribes and the Bureau of Reclamation, I concur with your finding of no historic properties affected.

Sincerely,

Jo Anne Medley  
Compliance Specialist/Archaeologist  
State Historic Preservation Office

Cc: Mark Slaughter, Archaeologist, Bureau of Reclamation, Boulder City, NV



Janice K. Brewer  
Governor

State Parks  
Board Members

Chair  
Reese Woodling  
Tucson

Tracey Westerhausen  
Phoenix

Larry Landry  
Phoenix

Walter D. Armer, Jr.  
Vail

Arlan Colton  
Tucson

William C. Scalzo  
Phoenix

Maria Baier  
State Land  
Commissioner

Renée E. Bahl  
Executive Director

Arizona State Parks  
1300 W. Washington  
Phoenix, AZ 85007

Tel & TTY: 602.542.4174  
AZStateParks.com

800.285.3703 from  
(520 & 928) area codes

General Fax:  
602.542.4180

Director's Office Fax:  
602.542.4188





**QUECHAN INDIAN TRIBE**  
*Ft. Yuma Indian Reservation*

P.O. Box 1899  
Yuma, Arizona 85366-1899  
Phone (760) 572-0213  
Fax (760) 572-2102

September 1, 2009

U.S. Department of Homeland Security  
Mr. Christopher Oh  
Washington, DC 20229

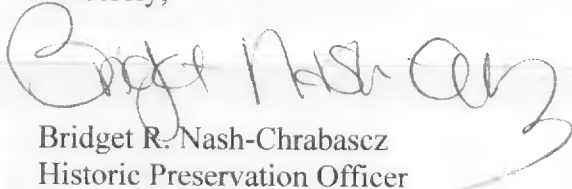
Dear Mr. Oh,

Thank you for notifying us of the proposed Powerline ROW east of San Luis, AZ.

While the Cultural Committee understands there were no cultural resources identified within the survey, they are requesting that contractors be required to take archaeological sensitivity training prior to beginning work on the powerline. They have also requested that my office be notified immediately if any resource, regardless of eligibility, is discovered during the course of construction.

If you need any further information or have any questions, please contact me at (760) 572-2423.

Sincerely,



Bridget R. Nash-Chrabasz  
Historic Preservation Officer







U.S. Customs and  
Border Protection

*Jerry G*  
8/25/09  
AUG 21 2009  
*[Signature]*

The Honorable Benjamin H. Nuvamsa  
Chairman  
Hopi Tribal Council  
Attn: Marvin Lalo, Acting Director  
Hopi Cultural Preservation Office  
1 Main Street  
Kykotsmovi, Arizona 86039

RECEIVED  
SEP 02 2009

BY: CPO/KS

Dear Chairman Nuvamsa:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

*Christopher S. Oh*

Christopher S. Oh  
Director  
Environmental Division

*CONCUR*  
*Moeqait*  
*[Signature]*  
Kwanwisiuma  
9-2-09

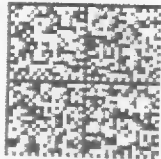
Enclosure(s)



THE HOPI TRIBE

P.O. Box 123  
Kykolismovi, Arizona  
86039

102 STRA 6215



02 1A  
0004619646  
MAILED FROM ZIP CODE 86039  
UNITED STATES POSTAGE  
FIRST CLASS PERMIT NO. 4271 PHOENIX AZ  
\$00.44  
SEP 03 2009

Christopher Ok  
US Customs & Border Protection  
1300 Pennsylvania Ave NW  
Suite NP 1220N  
Washington DC 20229



## THE COCOPAH INDIAN TRIBE

Cultural Resource Department

County 15<sup>th</sup> & Avenue G

Somerton, Arizona 85350

Telephone (928) 627-4849

Cell (928) 503-2291

Fax (928) 627-3173

CCR-018-09-006

August 28, 2009

Christopher S. Oh  
Environmental Division Director  
CBP/NMMP  
1331 Pennsylvania Ave, NW  
Suite 1220  
Washington, DC 20004

RE: Response for the Cultural Resources Survey of a Proposed Powerline Right-of-Way  
Near Yuma, Arizona

Dear Mr. Oh:

The Cocopah Indian Tribe appreciates your consultation efforts on this project. We are pleased that you contacted the Cocopah on this cultural resource issue for the purpose of solicitation of our input and to address our concerns on this matter. However, at this time we wish to make no comments on the development of this project, and concur with your determination of no historic properties affected. We would like to continue to be a part of the consultation process in the future and receive all documents, both draft and final, associated with this project.

If you have any questions or need additional information please feel free to contact the cultural resource department. We will be happy to assist you with any and all future concerns or questions.

Sincerely,

A handwritten signature in black ink that reads "H. Jill McCormick". The signature is written in a cursive style.

H. Jill McCormick

Cultural Resource Manager





**U.S. Customs and  
Border Protection**

**AUG 21 2009**

Ms. Bridget Nash-Chrabascz  
Historic Preservation Officer  
Quechan Indian Tribe  
350 Picacho Road  
PO Box 1899, Yuma, AZ 85366-1899  
Winterhaven, California 92283

Dear Ms Nash-Chrabascz:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". To the right of the signature are two circular initials, possibly "CO".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

Ms. Jill McCormick  
Cultural Resources Specialist  
Cocopah Tribe  
County 15th and Avenue G  
Somerton, Arizona 85350

Dear Ms McCormick:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh" followed by a stylized monogram.

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

Ms. JoAnne Medley  
Arizona State Parks  
State Historic Preservation Office  
1300 West Washington Street  
Phoenix, Arizona 85007

Dear Ms. Medley:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh" followed by a stylized flourish.

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Benjamin H. Nuvamsa  
Chairman  
Hopi Tribal Council  
Attn: Marvin Lalo, Acting Director  
Hopi Cultural Preservation Office  
1 Main Street  
Kykotsmovi, Arizona 86039

Dear Chairman Nuvamsa:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)





**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Diane Enos  
President  
Salt River Pima-Maricopa Indian Community  
Attn: Mr. Dan Daggett, Cultural Programs Supervisor  
10005 East Osborn Road  
Scottsdale, Arizona 85256

Dear President Enos:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". To the right of the signature are two small circular initials, possibly "CO".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Eldred Enas  
Chairman  
Colorado River Indian Tribes  
Attn: Mr. E. George Ray, Director  
Colorado River Indian Tribes Museum  
26600 Mohave Road  
Parker, Arizona 85344

Dear Chairman Enas:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh" followed by a stylized flourish.

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Louis Manuel Jr.  
Chairperson  
Ak-Chin Indian Community Council  
Attn: Cultural Resource Manager  
Ak-Chin Him Dak Eco Museum & Archives  
47685 North Eco Museum Road  
Maricopa, Arizona 85239

Dear Chairperson Manuel Jr.:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Mike Jackson, Jr.  
President  
Quechan Indian Tribe  
350 Picacho Road  
Winterhaven, California 92283

Dear President Jackson:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". The signature is written in a cursive style with a large initial "C" and a stylized "O".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Ned Norris, Jr.  
Chairman  
Tohono O'odham Nation  
Main Tribal Building Business Loop  
Sells, Arizona 85634

Dear Chairman Norris:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Peter Yucupicio  
Chairman  
Pascua Yaqui Tribe  
Attn: Ms. Amalia Reyes, Language and Cultural Preservation Specialist  
7474 South Camino de Oeste  
Tucson, Arizona 85746

Dear Chairman Yucupicio:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". To the right of the signature are two small circular marks, possibly initials or a stamp.

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Ronnie Lupe  
Chairman  
White Mountain Apache Tribal Council  
Attn: Mr. Mark Altaha, THPO  
202 East Walnut Street  
Whiteriver, Arizona 85941

Dear Chairman Lupe:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". To the right of the signature are two circular initials, possibly "CO".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Sherry Cordova  
Chairperson  
Cocopah Tribal Council  
Attn: Jill McCormick  
Cocopah Museum  
County 15th and Avenue G  
Somerton, Arizona 85350

Dear Chairperson Cordova:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". To the right of the signature are two small circular marks, possibly initials or a stamp.

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)





**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable Wendsler Nosie, Sr.  
Chairperson  
San Carlos Apache Tribe  
Attn: Ms. Vernelda Grant, THPO  
Historic Preservation & Archaeology Department  
San Carlos Avenue  
San Carlos, Arizona 85550

Dear Chairperson Nosie:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona, August 2009*. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh". The signature is written in a cursive style with a large "C" and "O".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)



**U.S. Customs and  
Border Protection**

**AUG 21 2009**

The Honorable William Rhodes  
Governor  
Gila River Indian Community  
Attn: Mr. Barnaby Lewis, Cultural Resource Specialist  
315 West Casa Blanco Road  
Sacaton, Arizona 85247

Dear Governor Rhodes:

U.S. Customs and Border Protection (CBP) has completed archaeological investigations of the Powerline Right-of-Way, a proposed project east of San Luis, Yuma County, Arizona involving a 15 foot corridor that begins at the U. S.-Mexico border and extends north for one half mile. CBP remains committed to responsible environmental stewardship of our valuable natural and cultural resources and is continuing to work collaboratively with potentially affected Tribes, the State Historic Preservation Office, and federal land managers.

Toward that end, we ask for your review and comment on the survey results, presented in the enclosed cultural resources report titled, *A Cultural Resources Survey of a Proposed Powerline Right-of-Way Near Yuma, Yuma County, Arizona*, August 2009. CBP determined that no historic properties will be affected by the proposed action as no historic properties were identified during pedestrian survey of the project corridor. Your concurrence is sought for this project undertaking.

If you require additional information or have any questions, please contact me at (202) 344-2448 or Mr. Dave Guzewich at (202) 325-4123. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink that reads "Christopher S. Oh".

Christopher S. Oh  
Director  
Environmental Division

Enclosure(s)