FINAL

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

FOR THE SBI*NET* AJO-1 TOWER PROJECT

AJO STATION'S AREA OF RESPONSIBILITY

U.S. BORDER PATROL, TUCSON SECTOR

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

NOVEMBER 2011

FINAL
FINDING OF NO SIGNIFICANT IMPACT
FOR THE SBI*NET* AJO-1 TOWER PROJECT
AJO STATION'S AREA OF RESPONSIBILITY
U.S. BORDER PATROL, TUCSON SECTOR

Project History: On January 6, 2011, United States (U.S.) Customs and Border Protection's (CBP) Office of Technology Innovation and Acquisition (OTIA) released the draft supplemental environmental assessment (SEA) that analyzed the potential adverse and beneficial impacts on the natural and human environment associated with the Proposed Action and alternatives. The Proposed Action included constructing access to the existing commercial power grid from approximately 1.2 miles west of State Highway 85 (SR 85) to TCA-AJO-302 and TCA-AJO-004 and the installation of a fiber-optic cable between TCA-AJO-302 and TCA-AJO-004. The installation of a fiber-optic cable at TCA-AJO-004 and TCA-AJO-302 would eliminate the need for TCA-AJO-189 altogether. TCA-AJO-189 was designed to relay signals from TCA-AJO-302 to TCA-AJO-305. Installation of a fiber-optic cable would eliminate the need to relay signals via radio waves and, in effect, be faster, more efficient, and stable. Access to the existing commercial power grid would also be provided to the USBP forward operating base (FOB) that was relocated north of TCA-AJO-302 as part of the SBI*net* Ajo-1 Tower Project. Fiber-optic cable was also proposed to be installed at the FOB. The relocation of the FOB was analyzed in the 2009 Ajo-1 EA, and only the construction of access to the existing commercial power grid and potential installation of fiber-optic cable was analyzed in the draft SEA. The installation of a fiber-optic cable at TCA-AJO-216 was also proposed as part of the draft SEA. Additionally, the ecological restoration of former tower site TCA-AJO-189 was included as part of the Proposed Action.

While a permanent solution for TCA-AJO-189 was being developed, OTIA installed communications equipment on an existing, operational telecommunications radio repeater facility operated by CBP's Project 25 (P-25) program. This repeater facility is located on Growler Mountain in proximity to the TCA-AJO-189 tower site. The purpose of this action was to temporarily utilize available space within CBP's P-25 telecommunications facility on Growler Mountain to establish immediate, short-term, communications connectivity with TCA-AJO-302 and TCA-AJO-305. Installation of the OTIA communications equipment was authorized under Categorical Exclusions E1 and E2 outlined in Department of Homelands Security's (DHS) *Directive 023-01*, Appendix A, Section 3B. The OTIA communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels, and OTIA has decided to maintain and operate the communications equipment on a long-term basis. OTIA has determined that the Proposed Action, as analyzed in the draft SEA, is no longer necessary to achieve the communication link between TCA-AJO-302 and TCA-AJO-305, and the Proposed Action in this final SEA has been revised to only include the restoration of former tower site TCA-AJO-189. In response to the draft SEA, U.S. Fish and Wildlife Service (USFWS), in a February 9, 2011 correspondence, directed OTIA to restore TCA-AJO-189 to pre-project conditions, to the extent possible.

The SEA was prepared in compliance with the provisions of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code 4321 et seq)., the Council on Environmental

Quality's NEPA implementing regulations at 40 Code of Federal Regulations Part 1500, and the Department of Homeland Security's *Directive 023-01*.

Project Location: The affected area for this SEA is the former TCA-AJO-189 tower site located on Growler Mountain within the CPNWR Wilderness Area, Arizona.

Purpose and Need: The purpose of the proposed project is to restore the former TCA-AJO-189 tower site.

This action is needed to:

1) restore impacts that occurred at the former TCA-AJO-189 tower site;
2) reduce impacts on designated wilderness;
3) comply with previous USFWS's directive; and
4) comply with previous NEPA documents.

Proposed Action: The Proposed Action is the restoration of the former TCA-AJO-189 tower site to pre-project conditions (to the extent possible) in accordance with the restoration plan prepared by CBP and approved by USFWS. The restoration plan is included as an appendix to the SEA and is incorporated herein by reference. Restoration activities would include the 35- x 35-foot original project area that was previously cleared of vegetation and graded, including the 14- x 14- x 6-foot hole for a proposed tower foundation that was excavated within the 35- x 35-foot area. The final rehabilitated site should be similar in appearance and vegetation characteristics (e.g. plant species and plant density) to the adjacent landscape. A majority of the rehabilitation work at former tower site TCA-AJO-189 would require helicopter transport of restoration materials due to the remote location of the site. It is anticipated that the rehabilitation of TCA-AJO-189 would require a total of 90 airlifts if the restoration activities are conducted during the fall or winter months (November through March). Airlifts would be allocated as follows: 68 lifts for site rehabilitation and landscaping, six lifts for revegetation efforts, 14 lifts for irrigation efforts (including water delivery), and two lifts for project termination. Site rehabilitation (i.e., backfilling of the hole and landscaping) and the installation of irrigation would be completed before March 15, prior to the Sonoran pronghorn (*Antilocapra americana sonoriensis*) closure season. The remaining airlifts for revegetation efforts and project termination would occur after March 15 per coordination with USFWS. OTIA is currently coordinating with USFWS regarding the reinitiation of formal consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq) for Sonoran pronghorn and lesser long-nosed bat (*Leptonycteris yerbabuenae*). Restoration activities will not be initiated until the reinitiated Section 7 consultation with USFWS has been completed for the project.

No Action Alternative: The No Action Alternative is the same as the Proposed Action presented in the 2009 Ajo-1 EA, with one exception. Under the No Action Alternative, the former TCA-AJO-189 tower site would not be restored per the USFWS's directive. The No Action Alternative would not satisfy the stated purpose and need; however, its inclusion in the SEA is required by NEPA regulations (40 CFR § 1502.14(d)) as a basis of comparison to the anticipated effects of the action alternatives.

Alternatives Eliminated: Three alternatives (Modified Tower Foundation, TCA-AJO-189B, and TCA-AJO-189C) were proposed as potential alternatives to the Proposed Action in the draft SEA. These alternatives were eliminated during the preparation of the final SEA. OTIA decided to eliminate these alternatives as a result of the success of the temporary installation of communications equipment within an existing, operational telecommunications radio repeater facility operated by CBP's Project 25 (P-25) program. The communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels and OTIA has decided to maintain and operate the communications equipment on a long-term basis. Therefore, alternatives to the original TCA-AJO-189 design and/or tower site are no longer necessary.

Environmental Consequences: Implementation of the Proposed Action would permanently affect approximately 0.03 acre of a previously disturbed site. CBP proposes to restore the former TCA-AJO-189 tower site to pre-project conditions, to the extent possible, as directed by USFWS in a February 9, 2011 correspondence. The proposed project has been coordinated with USFWS. Restoration of TCA-AJO-189 would require the issuance of a special use permit and minimum requirement analysis from USFWS.

Restoration of the former TCA-AJO-189 tower site would have no effects to negligible effects on surface waters, vegetation, hazardous materials, cultural resources, or air quality. Temporary, minor effects on soils, wildlife, and protected species would be expected. The Proposed Action would result in temporary, moderate effects on land use, noise, wilderness, groundwater, and aesthetics. Potential long-term, beneficial effects would be realized on land use, wilderness, soils, vegetation, and aesthetics.

Mitigation: It is CBP's policy to reduce impacts through a sequence of avoidance, minimization, mitigation, and compensation. Mitigations vary and include activities such as restoration of habitat in other areas, acquisition of lands, implementation of best management practices (BMP), and typically are coordinated with the USFWS and other appropriate Federal and state resource agencies. The following is a list of mitigation measures to be implemented as part of the Proposed Action. Many of the measures listed below were developed in coordination with USFWS during the reinitiation of Section 7 consultation for this project.

PROJECT PLANNING/DESIGN – GENERAL CONSTRUCTION

CBP will ensure that restoration efforts follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

A CBP-approved spill prevention control and countermeasure plan (SPCCP) will be developed and implemented at restoration and maintenance sites to ensure that any toxic substances are properly handled and that escape into the environment is prevented. Agency standard protocols will be used. Drip pans will be placed underneath parked or stationary equipment, containment zones will be used when refueling vehicles or equipment, and other measures will be included.

All BMPs to be implemented by the project contractor will be included in the contract.

GENERAL CONSTRUCTION ACTIVITIES

CBP will avoid nighttime lighting impacts by conducting restoration activities during daylight hours only.

CBP will not use natural sources of water for restoration or irrigation purposes to avoid transmitting disease vectors, introducing invasive non-native species, and depleting natural aquatic systems.

All irrigation components will be temporary and removed when the restoration goals are met. Irrigation equipment will be removed from the site after 1 year following the initial planting if the site is accepted by USFWS.

CBP and its contractor will minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.

CBP will notify the USFWS 2 weeks before any construction activities begin, and within 1 week after project construction activities are completed.

All BMPs to be implemented by the project contractor will be included in the contract.

SOILS

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work shall cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material.

CBP will implement environmental design measures, such as straw wattles and wetting compounds to decrease erosion and sedimentation.

CBP will implement erosion control measures and appropriate BMPs before and during restoration activities, as appropriate.

CBP will place drip pans under stationary equipment and use containment zones when refueling vehicles or equipment.

VEGETATIVE HABITAT

Salvage, transplantation, and container planting will be done in accordance with a restoration plan approved by the land manager and USFWS that includes success criteria and monitoring.

All plant material will be obtained from the Cabeza Prieta National Wildlife Refuge (CPNWR) to maintain a local plant source. Plant material will be obtained by harvesting cuttings from donor plants at locations identified by CPNWR personnel.

Fill material (gravel and topsoil) brought in from outside of the project area will be identified by its source location. Sources will be used that are clean and weed-free.

Certified weed and weed-seed free natural materials (e.g., straw) will be used for on-site erosion control to avoid the spread of non-native plants.

The site will be surveyed for the presence of exotic plant species. If exotic plant species that are not already established in the surrounding landscape are encountered within the restoration action area, they will be documented, and OTIA will coordinate with USFWS concerning corrective actions.

CBP will avoid the spread of non-native plants by using certified weed and weed-seed free natural materials (e.g., straw) for on-site erosion control if natural materials must be used.

WILDLIFE AND AQUATIC RESOURCES

The Migratory Bird Treaty Act (16 U.S.C. 703-712, [1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989]) requires that Federal agencies coordinate with the USFWS if a construction activity would result in the take of a migratory bird. If restoration activities are scheduled during nesting seasons (February 15 through August 31), surveys will be performed to identify active nests. If restoration activities result in the take of a migratory bird, then coordination with the USFWS will be required and applicable permits would be obtained prior to construction or clearing activities. Another mitigation measure that may be employed is to schedule all restoration activities outside nesting seasons, negating the requirement for nesting bird surveys.

CBP will not permit any pets inside the project area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

Biological monitors will check underneath construction equipment for wildlife species (e.g., desert tortoise) prior to moving equipment that has been idle for more than 1 hour.

PROTECTED SPECIES

CBP will minimize impacts on Sonoran pronghorn and their habitat by using flagging or temporary fencing to clearly demarcate project construction area perimeters. Soil and vegetation outside the construction area perimeter will not be disturbed.

CBP will minimize impacts on listed species and their habitats by using areas already disturbed by past activities for staging, parking, laydown, and equipment storage. If site disturbance is unavoidable, CBP will minimize the area of disturbance by scheduling deliveries of materials and equipment to only those items needed for ongoing project implementation.

CBP will minimize impacts on listed species and their habitats by limiting grading or topsoil removal to areas where this activity is absolutely necessary for construction, staging, or maintenance activities.

CBP will minimize impacts on listed species and their habitats by obtaining materials that are clean, such as gravel or topsoil, from existing developed or previously used sources, and not from undisturbed areas adjacent to the project area.

CBP will minimize the number of construction and maintenance trips to the tower site.

To minimize impacts on endangered species, CBP will follow a helicopter ingress/egress route to the project site that avoids or minimizes flight activity in Sonoran pronghorn habitat as specified by USFWS. The Restoration Plan has been designed to include the minimum number of helicopter lifts necessary.

All vehicular traffic associated with restoration efforts will use designated/authorized roads to access the sites and will avoid off-road vehicle activity outside of the project footprint.

CBP will minimize potential animal collisions, particularly with Sonoran pronghorn, by not exceeding speed limits of 25 mph on all unpaved roads.

Any collisions with Sonoran pronghorn will be reported to USFWS-Arizona Ecological Services Office (AESO) via telephone and electronic mail as soon as practicable, but no later than 12 hours after the collision. Information to be relayed will include: a) location of the collision, b) date and time of the collision, c) type of vehicle, and d) a description of the collision to include the outcome and a photograph of the Sonoran pronghorn (if available).

CBP will place restrictions on restoration activities during the Sonoran pronghorn fawning season (March 15 to July 31) to avoid and minimize disturbance to females and fawns.

CBP will provide for an on-site biological monitor to be present during work activities for all construction activities. The biological monitor will have the following duties: ensure and document that agreed-upon measures to minimize and avoid impacts on listed species and BMPs are properly implemented, send a weekly summary report via electronic mail to the CPNWR and USFWS-AESO following CBP review, and notify the construction manager (who has the authority to temporarily suspend activities) when construction activities are not in compliance with all agreed-upon BMPs.

The biological monitor shall report all detections of Sonoran pronghorn via electronic mail or phone to USFWS-AESO and the CPNWR within 24 hours of any detection. The electronic mail will include the following details: a) if known, the coordinates and a description of the locations where the pronghorn was detected, b) the date and time of the detection, c) the method used to make the detection, and d) as available, other pertinent details, such as the behavior of the Sonoran pronghorn (i.e. standing, foraging, or running).

All project personnel will report detections of Sonoran pronghorn to the biological monitor.

WATER RESOURCES

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during restoration activities. All work shall cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material.

All fuels, waste oils, and solvents will be collected and stored in tanks or drums within secondary containment areas consisting of an impervious floor and bermed sidewalls capable of holding the volume of the largest container stored therein.

CBP will avoid impacts on groundwater by obtaining treated water from outside the immediate area for restoration use.

CULTURAL RESOURCES

If human remains are encountered, the OTIA Environmental Manager, the CPNWR refuge manager, and the appropriate law enforcement authorities per the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq., 43 CFR 10, as updated) will be contacted. Descendant tribal communities will be notified of the inadvertent discovery, and consultation will be initiated through CPNWR.

AIR QUALITY

Mitigation measures will be incorporated to ensure that fugitive dust and other air quality constituents' emission levels do not rise above the minimum threshold as required per 40 CFR 51.853(b)(1), (2). Standard construction BMPs such as routine watering of the construction site will be used to control fugitive dust and thereby assist in limiting potential particulate matter less than 10 microns (PM-10) emissions during restoration of the site. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

NOISE

During backfilling and grading, temporary noise impacts are possible. All applicable Occupational Safety and Health Administration regulations and requirements will be followed. Construction equipment will possess properly working mufflers and will be kept properly tuned to reduce backfires. Implementation of these measures will reduce the potential temporary noise impacts to an insignificant level in and around the construction site.

CBP will avoid noise impacts during the nighttime by conducting restoration activities during daylight hours only.

HAZARDOUS MATERIALS

BMPs will be implemented as standard operating procedures during all restoration activities, and will include proper handling, storage, and/or disposal of hazardous and/or regulated materials.

To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein.

Refueling of machinery will be completed in accordance with accepted industry and regulatory guidelines.

Any spills will be contained immediately and cleaned up using the appropriate methods for the spill.

To ensure pollution prevention, an SPCCP will be in place prior to the start of restoration activities and all personnel will be briefed on the implementation and responsibilities of this plan. All spills will be reported to the OTIA environmental manager and the CPNWR refuge manager. Furthermore, a spill of any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 of a reportable quantity will be cleaned up and reported to the appropriate Federal and state agencies.

CBP and its contractor(s) will contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the restoration site.

CBP and its contractor(s) will recycle all waste oil and solvents. All non-recyclable hazardous and regulated wastes will be collected, characterized, labeled, stored, transported, and disposed of in accordance with all applicable Federal, state, and local regulations, including proper waste-manifesting procedures.

CBP and its contractor(s) will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. Storage tanks will be on-ground containers, have proper air space to avoid rainfall-induced overtopping, and be located in upland areas instead of washes.

All construction will follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

Finding: Based upon the analyses of the SEA and the mitigation measures to be incorporated as part of the Proposed Action, it has been concluded that the Proposed Action will not result in any significant adverse effects on the environment. Therefore, no further environmental impact analysis is warranted.

_____ _____

David R. Hoffman Date
Chief, Strategic Planning, Policy, and Analysis Division
Headquarters, U.S. Border Patrol
U.S. Customs and Border Protection

_____ _____

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

FINAL

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR THE SBI*NET* AJO-1 TOWER PROJECT AJO STATION'S AREA OF RESPONSIBILITY U.S. BORDER PATROL, TUCSON SECTOR

November 2011

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EXECUTIVE SUMMARY

INTRODUCTION

This Supplemental Environmental Assessment (SEA) supplements United States (U.S.) Customs and Border Protection's (CBP) 2009 *Environmental Assessment for the SBInet Ajo-1 Tower Project Ajo Station's Area of Responsibility, U.S. Border Patrol, Tucson Sector,* which analyzed various aspects of a proposed project that would be carried out under CBP's former SBI*net* program. The Secure Border Initiative (SBI) is a comprehensive, multi-year plan established by the Department of Homeland Security (DHS) in November 2005 to secure the United States borders and reduce illegal immigration. SBI*net* was the component of the former SBI program charged with developing and installing technology and attendant tactical infrastructure solutions to help DHS, CBP gain effective control of the Nation's borders. While SBI*net* no longer exists, the Office of Technology Innovation and Acquisition (OTIA) has assumed all of SBI and SBI*net*'s responsibilities.

After completion of the 2009 Ajo-1 EA and development of the final laydown for the SBI*net* Ajo-1 Tower Project, SBI*net* identified the need for modification of some aspects of one tower site covered in the 2009 Ajo-1 EA. The original design for the TCA-AJO-189 tower site included a rock anchor foundation. This type of foundation is designed to be installed in bedrock at or near the ground surface. However, during the initial phases of foundation construction, bedrock was not found at or near the ground surface. In an attempt to locate bedrock, a 14- x 14-foot hole was excavated to a depth of 6 feet. However, it was determined that bedrock was deeper than 6 feet, and an alternate tower foundation was required for tower construction at the TCA-AJO-189 site on top of Growler Mountain. During the excavation of the hole, excavated material was airlifted in canvas slings and staged at the Ajo Airport. During one of the airlifts, a canvas sling, with an approximately 3,000-pound payload, was released to avoid stalling the helicopter. The payload landed on the side of Growler Mountain within designated wilderness. U.S. Fish and Wildlife Service (USFWS) requested that tower construction be halted until a reasonable alternative construction method or an alternative tower site could be developed for TCA-AJO-189.

On January 6, 2011, OTIA released the draft SEA that analyzed the potential adverse and beneficial impacts on the natural and human environment associated with the Proposed Action and alternatives. The Proposed Action included constructing access to the existing commercial power grid from approximately 1.2 miles west of State Highway 85 (SR 85) to TCA-AJO-302 and TCA-AJO-004 and the installation of a fiber-optic cable between TCA-AJO-302 and TCA-AJO-004 (Figure 1-2). The installation of a fiber-optic cable at TCA-AJO-004 and TCA-AJO-302 would eliminate the need for TCA-AJO-189 altogether. TCA-AJO-189 was designed to relay signals from TCA-AJO-302 to TCA-AJO-305. Installation of a fiber-optic cable would eliminate the need to relay signals via radio waves and, in effect, be faster, more efficient, and stable. Access to the existing commercial power grid would also be provided to the USBP forward operating base (FOB) that was relocated north of TCA-AJO-302 as part of the SBI*net* Ajo-1 Tower Project. Fiber-optic cable was also proposed to be installed at the FOB. The relocation of the FOB was analyzed in the 2009 Ajo-1 EA, and only the construction of access to the existing commercial power grid and potential installation of fiber-optic cable was analyzed in

the draft SEA. The installation of a fiber-optic cable at TCA-AJO-216 was also proposed as part of the draft SEA. Additionally, the ecological restoration of former tower site TCA-AJO-189 was included as part of the Proposed Action.

While a permanent solution for TCA-AJO-189 was being developed, OTIA installed communications equipment on an existing, operational telecommunications radio repeater facility operated by CBP's Project 25 (P-25) program. This repeater facility is located on Growler Mountain in proximity to the TCA-AJO-189 tower site. The purpose of this action was to temporarily utilize available space within CBP's P-25 telecommunications facility on Growler Mountain to establish immediate, short-term, communications connectivity with TCA-AJO-302 and TCA-AJO-305. Installation of the OTIA communications equipment was authorized under Categorical Exclusions E1 and E2 outlined in DHS's *Directive 023-01*, Appendix A, Section 3B. The OTIA communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels, and OTIA has decided to maintain and operate the communications equipment on a long-term basis. OTIA has determined that the Proposed Action, as analyzed in the draft SEA, is no longer necessary to achieve the communication link between TCA-AJO-302 and TCA-AJO-305, and the Proposed Action in this final SEA has been revised to only include the restoration of former tower site TCA-AJO-189. In response to the draft SEA, USFWS, in a February 9, 2011 correspondence, directed OTIA to restore TCA-AJO-189 to pre-project conditions, to the extent possible.

PURPOSE AND NEED

The purpose of the proposed project is to restore former tower site TCA-AJO-189.

The action is needed to:

1) restore impacts that occurred at the former TCA-AJO-189 tower site;
2) reduce impacts on designated wilderness;
3) comply with USFWS's directive; and
4) comply with previous NEPA documents.

DESCRIPTION OF PROPOSED ACTION

The Proposed Action is the restoration of former tower site TCA-AJO-189 to pre-project conditions (to the extent possible) in accordance with the Restoration Plan (CBP 2011) prepared by CBP and approved by USFWS (Appendix B). Restoration activities would include the 35- x 35-foot original project area that was previously cleared of vegetation and graded, including the 14- x 14- x 6-foot hole for a proposed tower foundation that was excavated within the 35- x 35-foot area of the formerly proposed tower site. The final rehabilitated site should be similar in appearance and vegetation characteristics (e.g. plant species and plant density) to the adjacent landscape. A majority of the rehabilitation work at former tower site TCA-AJO-189 would require helicopter transport of site restoration materials due to the remote location of the site. It is anticipated that the rehabilitation of former tower site TCA-AJO-189 would require a total of 90 airlifts if the restoration activities are conducted during the fall or winter months (November through March). Airlifts would be allocated as follows: 68 lifts for site rehabilitation and

landscaping, six lifts for revegetation efforts, 14 lifts for irrigation efforts (including water delivery), and two lifts for project termination. Site rehabilitation (i.e., backfilling of the hole and landscaping) and the installation of irrigation would be completed before March 15, prior to the Sonoran pronghorn (*Antilocapra americana sonoriensis*) closure season. The remaining airlifts for revegetation efforts and project termination would occur after March 15 per coordination with USFWS. CBP is currently coordinating with USFWS regarding the reinitiation of formal consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq) for Sonoran pronghorn and lesser long-nosed bat (*Leptonycteris yerbabuenae*). Restoration activities will not be initiated until the reinitiated Section 7 consultation with USFWS has been completed for the project.

One main storage and staging area would be maintained at the Ajo Airport in Ajo, Arizona. Light-duty equipment and materials, and personnel would be transported to the work area daily, as needed. All heavy-duty equipment would be staged overnight within the disturbed area at the project site.

ALTERNATIVES CONSIDERED

Three alternatives (Modified Tower Foundation, TCA-AJO-189B, and TCA-AJO-189C) were proposed as potential alternatives to the Proposed Action in the draft SEA. These alternatives were eliminated during the preparation of the final SEA. OTIA decided to eliminate these alternatives as a result of the success of the temporary installation of communications equipment within an existing, operational telecommunications radio repeater facility operated by CBP's P-25 program. The communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels, and OTIA has decided to maintain and operate the communications equipment on a long-term basis. Therefore, alternatives to the original TCA-AJO-189 design and/or tower site are no longer necessary.

AFFECTED ENVIRONMENT AND CONSEQUENCES

Implementation of the Proposed Action would permanently affect approximately 0.03 acre of the previously disturbed site. CBP proposes to restore former tower site TCA-AJO-189 to pre-project conditions, to the extent possible, and as directed by USFWS in a February 9, 2011 correspondence. The proposed project has been coordinated with USFWS. Restoration of former tower site TCA-AJO-189 would require the issuance of a special use permit and minimum requirement analysis from USFWS.

Restoration of former tower site TCA-AJO-189 would have no effects to negligible effects on surface waters, vegetation, hazardous materials, cultural resources, and air quality. Temporary, minor effects on soils, wildlife, and protected species would be expected. The Proposed Action would result in a temporary, moderate effect on land use, noise, wilderness, groundwater, and aesthetics. Potential long-term, beneficial effects would be realized on land use, wilderness, soils, vegetation, and aesthetics.

FINDINGS AND CONCLUSIONS

Based upon the analyses of this SEA and the environmental design and mitigation measures to be implemented, the Proposed Action would not result in a significant effect on the environment. Therefore, no additional environmental impact evaluation is warranted.

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1.0 BACKGROUND

1.1 INTRODUCTION

The Secure Border Initiative (SBI) is a comprehensive, multi-year plan established by the Department of Homeland Security (DHS) in November 2005 to secure the United States (U.S.) borders and reduce illegal immigration. SBI*net* was the component of the former SBI program charged with developing and installing technology and attendant tactical infrastructure (TI) solutions to help DHS, U.S. Customs and Border Protection (CBP) gain effective control of the Nation's borders. While SBI*net* no longer exists, the Office of Technology Innovation and Acquisition (OTIA) has assumed all of SBI and SBI*net*. The mission is still to promote border security strategies that protect against and prevent terrorist attacks and other transnational crimes.

CBP implements the National Border Patrol Strategy with the goal of establishing and maintaining effective control of the borders. U.S. Border Patrol (USBP) maximizes border security with an appropriate balance of personnel, technology, and infrastructure. Effective control exists when CBP is consistently able to: 1) detect illegal entries into the United States when they occur; 2) identify the entry and classify its level of threat; 3) efficiently and effectively respond to these entries; and, 4) bring each event to an appropriate law enforcement resolution. The appropriate balance of personnel, technology, and infrastructure enhances CBP's detection capabilities and interdiction efficiency and provides a deterrence to illegal cross-border activities.

This Supplemental Environmental Assessment (SEA) supplements CBP's 2009 *Environmental Assessment for the Proposed SBInet Ajo-1 Tower Project Ajo Station's Area of Responsibility, U.S. Border Patrol, Tucson Sector,* which analyzed various aspects of a proposed project that would be carried out under the SBI*net* program. The 2009 Environmental Assessment (EA) addressed the potential direct and indirect effects of the proposed construction, installation, operation, and maintenance of a system of 10 sensor and communication towers and the construction and improvement of access roads on Organ Pipe Cactus National Monument (OPCNM), Cabeza Prieta National Wildlife Refuge (CPNWR), Bureau of Land Management (BLM) lands, Arizona State Trust lands, and CBP-leased land at the Lukeville Port of Entry (POE [CBP 2009]) (Figure 1-1).

After completion of the 2009 Ajo-1 EA and development of the final laydown for the SBI*net* Ajo-1 Tower Project, SBI*net* identified the need to modify some aspects of tower site TCA-AJO-189 originally covered in the 2009 Ajo-1 EA (CBP 2009). The original design for TCA-AJO-189 included a rock anchor foundation. This type of foundation is designed to be installed in bedrock at or near the ground surface. However, during the initial phases of foundation construction, bedrock was not found at or near the ground surface. In an attempt to locate bedrock, a 14- x 14-foot hole was excavated to a depth of 6 feet. However, it was determined that bedrock was deeper than 6 feet, and an alternate tower foundation was required for tower construction at the TCA-AJO-189 site on top of Growler Mountain. Excavated material from TCA-AJO-189 was airlifted in canvas slings and staged at the Ajo Airport. During one of the airlifts, a canvas sling with an approximately 3,000-pound payload was released to avoid stalling

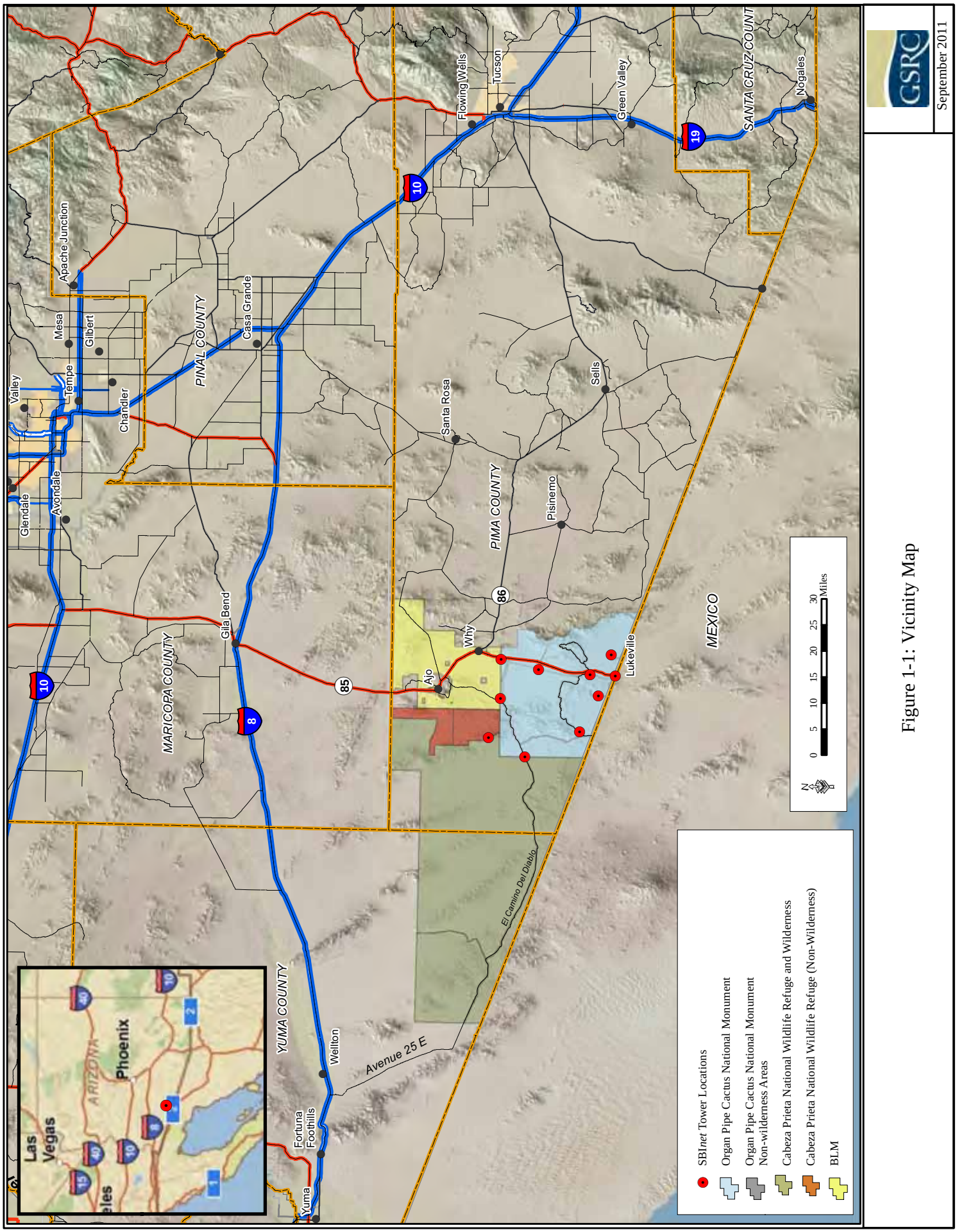

Figure 1-1: Vicinity Map

the helicopter. The payload landed on the side of Growler Mountain within designated wilderness. The U.S. Fish and Wildlife Service (USFWS) requested that tower construction be halted until a reasonable alternative construction method or an alternative tower site could be developed for TCA-AJO-189. A total tower site area of approximately 35 x 35 feet, including the 14- x 14-foot hole for the tower foundation, was disturbed during the initial construction activities.

To accommodate the USFWS's request, OTIA developed one alternative that would eliminate the need for the construction of TCA-AJO-189. Three other alternatives were considered in the draft SEA: 1) the construction of a communications tower at TCA-AJO-189 (with a modified foundation); 2) the construction of a communications tower at alternate site TCA-AJO-189B; and 3) the construction of a communications tower at alternate site TCA-AJO-189C (Figure 1-2).

On January 6, 2011, OTIA released the draft SEA that analyzed the potential adverse and beneficial impacts on the natural and human environment associated with the Proposed Action and alternatives. The Proposed Action included constructing access to the existing commercial power grid from approximately 1.2 miles west of State Highway 85 (SR 85) to TCA-AJO-302 and TCA-AJO-004 and the installation of a fiber-optic cable between TCA-AJO-302 and TCA-AJO-004 (Figure 1-3). The installation of a fiber-optic cable at TCA-AJO-004 and TCA-AJO-302 would eliminate the need for TCA-AJO-189 altogether. TCA-AJO-189 was designed to relay signals from TCA-AJO-302 to TCA-AJO-305. Installation of a fiber-optic cable would eliminate the need to relay signals via radio waves and, in effect, be faster, more efficient, and stable. Access to the existing commercial power grid would also be provided to the USBP forward operating base (FOB) that was relocated north of TCA-AJO-302 as part of the SBI*net* Ajo-1 Tower Project. Consequently, only the construction of access to the existing commercial power grid and installation of fiber-optic cable was analyzed in the January 2011 draft SEA. The installation of fiber-optic cable at TCA-AJO-216 was also proposed as part of the draft SEA. Additionally, the restoration of former tower site TCA-AJO-189 was included as part of the Proposed Action.

While a permanent solution for TCA-AJO-189 was being developed, OTIA installed communications equipment on an existing, operational telecommunications radio repeater facility operated by CBP's Project 25 (P-25) program. This repeater facility is located on Growler Mountain in proximity to TCA-AJO-189. The purpose of this action was to temporarily utilize available space within CBP's P-25 telecommunications facility on Growler Mountain in order to establish immediate, short-term communications connectivity with TCA-AJO-302 and TCA-AJO-305. Installation of the OTIA communications equipment was authorized under Categorical Exclusions E1 and E2 outlined in DHS *Directive 023-01*, Appendix A, Section 3B. The OTIA communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels, and OTIA has decided to maintain and operate the communications equipment on a long-term basis. OTIA determined that the Proposed Action as analyzed in the draft SEA is no longer necessary to achieve the communications link between TCA-AJO-302 and TCA-AJO-305, and the Proposed Action in the final SEA has been revised to only include the rehabilitation of former tower site TCA-AJO-189.

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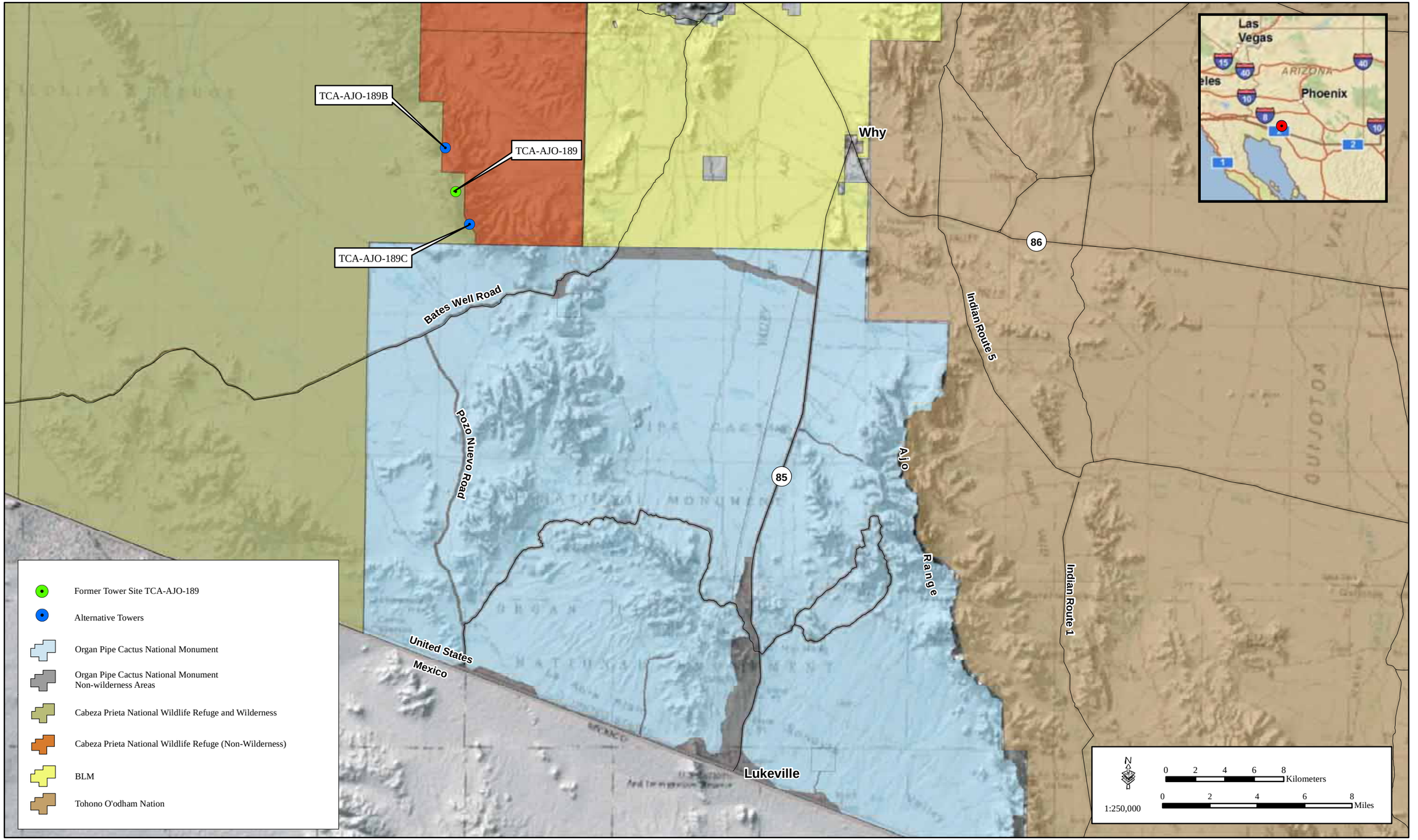

Figure 1-2: TCA-AJO-189, TCA-AJO-189B and TCA-AJO-189C Location Map

GSRC

September 2011

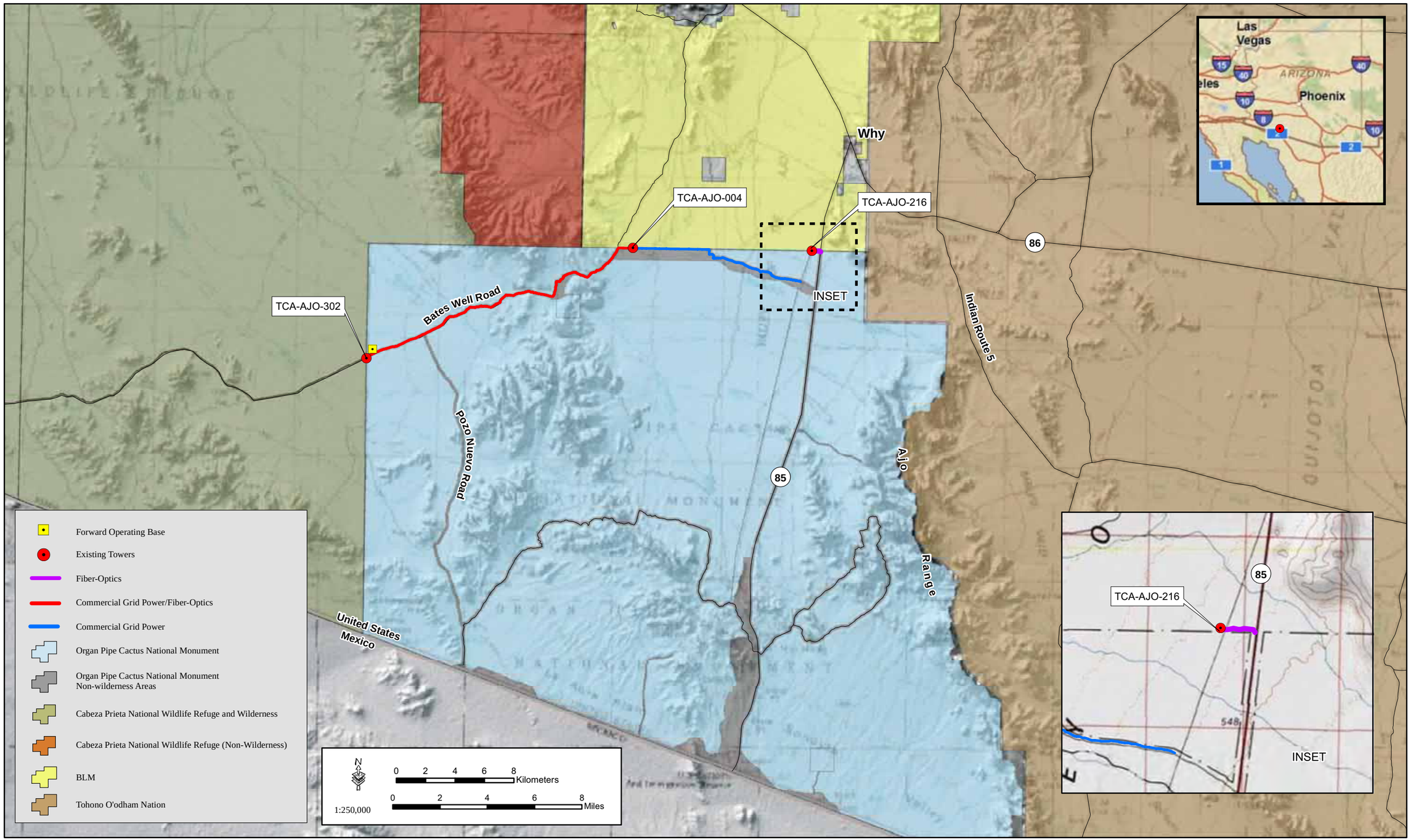

Figure 1-3: Location of Fiber-Optic and Electrical Lines for Three Tower Sites

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September 2011

This SEA was prepared in compliance with provisions of the National Environmental Policy Act (NEPA) of 1969 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 DHS's *Directive 023-01*.

Consistent with 40 CFR 1508.28, this SEA analyzes direct and indirect project and cumulative environmental impacts of this supplemental Proposed Action. In connection with earlier border infrastructure projects, much of this area and similar actions were analyzed in previous NEPA documents prepared by CBP and the legacy Immigration and Naturalization Service (INS). Accordingly, this SEA tiers from the *Programmatic Environmental Assessment for the Proposed Installation and Operation of Remote Video Surveillance Systems in the Western Region of Immigration and Naturalization Service* (INS 2003). Where this SEA incorporates previously documented information, the appropriate NEPA document is cited and the incorporated content is summarized in this SEA, such as from CBP's 2009 Ajo-1 EA (CBP 2009). Where previous NEPA documents do not provide sufficient information for the analysis required in this SEA, new surveys for sensitive resources and tower site characterization were completed. That information is included in this SEA.

1.1.1 Program Background

The United States experiences substantial cross-border traffic of cross-border violators (CBVs), and the transportation of illegal drugs and other contraband every year. These illegal cross-border activities not only violate United States laws, but adversely affect natural resources on public and private lands through the creation of illegal roads and trails, degradation and loss of habitat from fires set by CBVs, deposition of trash and human waste, and the destruction of fences. Additionally, CBVs pose a threat to public safety from high-speed vehicle chases on public roads, smuggling, and other crimes. The program background was described in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009).

1.1.2 Cooperating Agencies

The U.S. Department of the Interior (DOI) is a cooperating agency (40 CFR § 1501.6) on CBP projects, including the proposed OTIA supplemental project included in this SEA. A Memorandum of Understanding (MOU) was entered into in March 2006 between DHS, DOI, and U.S. Department of Agriculture (USDA). The MOU outlines the cooperative efforts between DOI, USDA, and DHS with operations in the southwest border region when planning and negotiating project details to best meet each agency's goals and objectives. Additionally, a Memorandum of Agreement (MOA) entered into in January 2008 between CBP and DOI for SBI projects formalized the commitment among CBP and DOI to coordinate the review of projects subject to NEPA and CEQ Regulations for Implementing NEPA. Further, DOI's actions, such as issuance of special use permits and minimum requirement analysis (MRA) associated with this proposed action are included as part of this NEPA analysis.

1.1.3 Legislative Background

The legislative background that provides authorization and guidance to DHS and CBP, National Park Service (NPS), USFWS, and BLM was described in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009).

1.2 PURPOSE AND NEED

Following the failed attempt to locate bedrock and the release of excavated material on the side of Growler Mountain, the USFWS requested SBI*net* halt tower construction and develop reasonable alternative construction methods or alternative tower sites for TCA-AJO-189. OTIA has determined that the Proposed Action, analyzed in the draft SEA, is no longer necessary to achieve the communication link location TCA-AJO-302 and TCA-AJO-305. In a February 9, 2011 correspondence, USFWS directed OTIA to restore former tower site TCA-AJO-189 to pre-project conditions to the extent possible (Appendix A). Thus, the purpose of the proposed project is to restore former tower site TCA-AJO-189.

The action is needed to:

1) restore impacts that occurred at the former TCA-AJO-189 tower site;
2) reduce impacts on designated wilderness;
3) comply with USFWS's directive; and
4) comply with previous NEPA documents.

1.3 PUBLIC INVOLVEMENT

1.3.1 Public Review

OTIA (formerly SBI*net*) initiated public involvement and scoping activities as directed by 40 CFR § 1501.7, 1503, and 1506.6 to identify any significant issues related to the construction of CBP towers in Arizona. This process began in June 2007 through the issuance of 47 agency coordination letters to potentially affected Federal, state, and local agencies and Indian tribes, inviting their participation and input regarding the proposed SBI*net* tower project. On December 30, 2009, the 2009 Ajo-1 EA and Finding of No Significant Impact (FONSI) were released to the public. The public review process was described in detail in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009).

On January 6, 2011, OTIA released the draft SEA to the public for review and comment. A Notice of Availability (NOA) for the draft SEA was published in the *Ajo Copper News* newspaper on January 5, 2011, and the *Arizona Daily Star* and *Arizona Republic* newspaper on January 6, 2011 to solicit comments on the proposed project. Proof of publication of the NOA is included in Appendix A. A total of eight comment letters were received from Federal and state agencies, tribes, and organizations (Appendix A). The majority of the comments received were in reference to the installation of fiber optics and commercial grid power. These comments are not addressed in the SEA, as these actions have been removed from the Proposed Action. Only one comment from USFWS addressed the restoration of former tower site TCA-AJO-189. In a February 9, 2011 correspondence, USFWS directed OTIA to restore former tower site TCA-AJO-189 to pre-project conditions, to the extent possible (Appendix A). In response to USFWS' comment, OTIA prepared a site restoration plan in cooperation with USFWS and prepared this SEA for the restoration of former tower site TCA-AJO-189.

1.3.2 Agency Coordination

Coordination and consultation with stakeholder agencies and other potentially affected parties occurred at the initial preparation stages of the 2009 Ajo-1 EA. The agency coordination process was described in detail in the 2009 Ajo-1 EA and is incorporated herein by reference. On June 18, 2010, 11 agency coordination letters specifically addressing the proposed actions described in the draft SEA were issued to potentially affected Federal, state, and local agencies and Indian tribes, inviting their participation and input regarding this project (Appendix A). Formal and informal coordination was conducted is on-going with the following agencies:

- U.S. DOI
  - NPS, OPCNM
  - BLM
  - USFWS-Arizona Ecological Service Office (AESO) and CPNWR
- U.S. Section, International Boundary and Water Commission (USIBWC)
- U.S. Army Corps of Engineers (USACE)
- U.S. Environmental Protection Agency (EPA)
- Arizona Game and Fish Department (AGFD)
- Arizona State Historic Preservation Officer (SHPO)
- Arizona Department of Environmental Quality (ADEQ)
- Arizona Department of Transportation

OTIA has developed a restoration plan for former tower site TCA-AJO-189 in cooperation with USFWS. The restoration plan developed by OTIA was approved by USFWS. CBP is currently coordinating with USFWS regarding the reinitiation of formal consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq) for Sonoran pronghorn (*Antilocapra americana sonoriensis*) and lesser long-nosed bat (*Leptonycteris yerbabuenae*). Restoration activities will not be initiated until the reinitiated Section 7 consultation with USFWS has been completed for the project.

1.4 FRAMEWORK FOR ANALYSIS

The framework for analysis was discussed in detail in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009). This SEA was prepared in accordance with provisions of NEPA of 1969, as amended (40 U.S.C. 4321 et seq.), CEQ's NEPA implementing regulations in 40 CFR Part 1500, and the DHS *Directive 023-01* (previously numbered 5100.1). Table 1-1 summarizes some of the applicable laws and regulations that were considered in the development of this SEA.

Table 1-1. Summary of Guidance, Statutes, and Relevant Regulation Including Compliance Requirements

Issue	Acts Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review/Status
Wilderness	Wilderness Act of 1964, 16 U.S.C. § 1131-1136, Public Law [P.L.] 88-577)	Land administrating agency	Approval from land administrating agency that action is minimum necessary to manage an area as wilderness
	Arizona Desert Wilderness Act of 1990 (P.L. 101-628)	Land administrating agency	Approval from land administrating agency that action is minimum necessary to manage an area as wilderness
	National Parks and Recreation Act of 1978 (P.L. 95-625)	NPS	Approval from land administrating agency that action is minimum necessary to manage an area as wilderness
Soils	Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 et seq., as amended	EPA	Proper management, and in some cases, permit for restoration
	Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601et seq., as amended	EPA	Development of emergency response plans, notification, and cleanup
	Farmland Protection Policy Act of 1981, 7 U.S.C. §4201 et seq. 7 CFR 657-658 Prime and unique farmlands	Natural Resource Conservation Service (NRCS)	NRCS determination via Form AD-1006, if prime or unique farmlands are present
Natural Resources	Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq., as amended	USFWS	Compliance by lead agency and/or consultation to assess impacts.
	Migratory Bird Treaty Act of 1918, 16 U.S.C. § 703 et seq.	USFWS	Compliance by lead agency and/or consultation to assess impacts and, if necessary, develop mitigation measures
	National Wildlife Refuge System Administration Act of 1966, 16 U.S.C. § 668dd-668ee, and amendments	USFWS	Compliance by lead agency to ensure the protection and conservation of National wildlife resources
	National Wildlife Refuge Improvement Act of 1997, 16 U.S.C. § 668dd et seq., P.L. 105-57	USFWS	Compliance by lead agency
	Organic Act of 1916 (U.S.C. 1 2 3 and 4)	NPS	Compliance by lead agency
	Federal Land Policy Management Act (P.L. 94-579)	BLM	Compliance by lead agency

Table 1-1, continued

Issue	Acts Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review/Status
Cultural/ Archaeological	National Historic Preservation Act of 1966 (16 U.S.C. § 470a et seq.), as amended	Advisory Council on Historic Preservation through SHPO	Section 106 Consultation
	Archaeological Resources Protection Act of 1979 (16 U.S.C. § 470aa et seq.)	Affected land-managing agency	Permits to survey and excavate/ remove archaeological resources on Federal lands; Native American tribes with interests in resources must be consulted prior to issue of permits
	Native American Graves Protection and Repatriation Act of 1990	Affected land-managing agency	Compliance by lead agency
	Indian Sacred Sites of 1996 (Executive Order; EO 13007)	Affected land-managing agency and affected Native American tribe	Compliance by lead agency
	Consultation and Coordination with Indian Tribal Governments of 2000 (EO 13175)	Affected land-managing agency and affected Native American tribe	Compliance by lead agency
	Government-to-Government Relations with Native American Tribal Governments of 1994 (Presidential Memorandum)	Affected land-managing agency and affected Native American tribe	Compliance by lead agency
Air	Clean Air Act, and amendments of 1990 (42 U.S.C. § 7401 et seq.)	EPA and Arizona Department of Environmental Quality	Compliance with National Ambient Air Quality Standards (NAAQS) and emission limits and/or reduction measures; Conformity to *de minimus* thresholds; preparation of a Record of Non-Applicability
Water	Federal Water Pollution Control Act of 1977 (also known as the Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.)	EPA	Section 402(b) National Pollutant Discharge Elimination System General Permit for Storm Water Discharges for Construction Activities-Storm Water Pollution Prevention Plan (SWPPP)
	EO 11988 (Floodplain Management), 42 Federal Register (FR) 26,951 (May 24, 1997), as amended.	Water Resources Council, Federal Emergency Management Agency (FEMA), CEQ	Compliance
	EO 11990 (Protection of Wetlands), 42 FR 26,691(May 24, 1977), as amended	USACE and USFWS	Compliance
	CWA (33 U.S.C. § 1341 et seq.)	USACE and Arizona Department of Water Resources	Section 401/404 Permit

Table 1-1, continued

Issue	Acts Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review/Status
Social/ Economic	EO12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) of 1994, 59 FR 7629 (February 11, 1994)	EPA	Compliance
Sound/Noise	Noise Control Act of 1972, 42 U.S.C. § 4901 et seq., as amended	EPA	Compliance with surface carrier noise emissions
Health and Safety	Occupational Health and Safety Act of 1970, 29 U.S.C. §651 et seq.	Occupational Safety and Health Administration	Compliance with guidelines including Material Safety Data Sheets

SECTION 2.0
PROPOSED ACTION AND ALTERNATIVES

2.0 PROPOSED ACTION AND ALTERNATIVES

Four alternatives in addition to the Proposed Action were identified and analyzed in the draft SEA: Modified Foundation Alternative, the TCA-AJO-189B Alternative, the TCA-AJO-189C Alternative, and the No Action Alternative. Each of these alternatives, with the exception of the Modified Foundation Alternative, also included the restoration of former tower site TCA-AJO-189. On January 6, 2011, the draft SEA was released to the public for review and comment.

After the completion of the 30-day public review period for the draft SEA, OTIA determined that the alternatives analyzed in the draft SEA were no longer necessary and decided to only include the rehabilitation of former tower site TCA-AJO-189 in the final SEA. Therefore, TCA-AJO-189B, TCA-AJO-189C, and the Modified Foundation alternatives have been eliminated from the final SEA. The rehabilitation of former tower site TCA-AJO-189 was a part of the original Proposed Action, TCA-AJO-189B Alternative, and TCA-AJO-189C Alternative, and the beneficial and adverse effects associated with rehabilitation activities were analyzed as part of these alternatives in the draft SEA. As the proposed rehabilitation efforts were fully disclosed and analyzed in the draft SEA and the current Proposed Action is a reduction in the scope of work, OTIA determined that it is unnecessary to release a second draft SEA for public review.

2.1 PROPOSED ACTION

The Proposed Action is the restoration of former tower site TCA-AJO-189 to pre-project conditions (to the extent possible) in accordance with the Restoration Plan (CBP 2011) prepared by CBP and approved by USFWS (Appendix B). Restoration efforts would include the 35- x 35-foot original project area that was previously cleared of vegetation and graded, including the 14- x 14- x 6-foot hole for a proposed tower foundation that was excavated within the 35- x 35-foot area. Restoration activities include backfilling the existing hole, grading the site, landscaping the site, collecting native plant sources for regeneration, planting the site with native vegetation, irrigating the plantings, and monitoring the restored site. The final rehabilitated site should be similar in appearance and vegetation characteristics (e.g. plant species and plant density) to the adjacent landscape.

A majority of the restoration work at former tower site TCA-AJO-189 would require helicopter transport due to the remote location of the site, and it is anticipated that the rehabilitation of former tower site TCA-AJO-189 would require a total of 90 airlifts if the restoration activities are conducted during the fall or winter months (November through March). Airlifts would be allocated as follows: 68 lifts for site rehabilitation and landscaping, six lifts for revegetation efforts, 14 lifts for irrigation efforts (including water delivery), and two lifts for project approval and termination.

One main storage and staging area would be maintained at the Ajo Airport in Ajo, Arizona. Light duty equipment, materials, and personnel would be transported to the work area daily as needed. All heavy equipment would be staged overnight within the disturbed area at the project site.

2.2 NO ACTION ALTERNATIVE

The No Action Alternative would include the continued use of the communications equipment within the P-25 telecommunication facility, and former tower site TCA-AJO-189 would not be restored per USFWS' directive. The No Action Alternative would not satisfy the stated purpose and need; however, its inclusion in this SEA is required by NEPA regulations (40 CFR 1502.14(d)) as a basis of comparison to the anticipated effects of the action alternative.

2.3 ALTERNATIVES ELIMINATED FROM ANALYSIS

Three alternatives (Modified Tower Foundation, TCA-AJO-189B, and TCA-AJO-189C) were proposed as potential alternatives to the Proposed Action in the draft SEA. These alternatives were eliminated during the preparation of the final SEA. OTIA decided to eliminate these alternatives as a result of the success of the temporary installation of communications equipment within an existing, operational telecommunications radio repeater facility operated by CBP. The communications equipment within CBP's P-25 telecommunications facility on Growler Mountain has operated at acceptable levels, and OTIA has decided to maintain and operate the communications equipment on a long-term basis. Therefore, alternatives to the original TCA-AJO-189 design and/or tower site are no longer necessary.

Two other alternative sites (TCA-AJO-189A and TCA-AJO-189D) were evaluated for communications efficiencies and overall compatibility with the SBI*net* Ajo-1 Tower Project network design and connectivity. The rationale for eliminating the two potential alternatives is provided in the following paragraphs.

TCA-AJO-189A was eliminated from consideration based on technical and constructability reasons. At the former design antenna height for the TCA-AJO-189 tower, terrain and communications line-of-sight (LOS) analyses indicated that TCA-AJO-189A may be able to communicate with TCA-AJO-305 but would not be able to communicate with TCA-AJO-302. The terrain at the proposed site has a couple of ridges, which would block communications and prohibit tower placement in that location. The use of the proposed tower site would require a taller antenna height than in the present RAT design. Further, the terrain at the site does not provide a helicopter landing area close enough to the proposed tower location that would be practical for construction.

TCA-AJO-189D was eliminated from consideration based on constructability reasons. The terrain at the site does not provide a helicopter landing area close enough to the proposed tower location that would be practical for construction.

2.4 SUMMARY

Only the Proposed Action and No Action Alternative are analyzed in the final SEA. An alternative matrix (Table 2-1) shows how each of these alternatives satisfies the stated purpose and need. Table 2-2 presents a summary matrix of the impacts from the two alternatives.

Table 2-1. Alternative Matrix of Purpose and Need of Alternatives

Purpose and Need	No Action Alternative	Proposed Action
Restore impacts that occurred at the former TCA-AJO-189 tower site	No	Yes
Reduce impacts on designated wilderness	No	Yes
Comply with USFWS's directive	No	Yes
Comply with previous NEPA documents	No	Yes

Table 2-2. Summary Matrix

Affected Environment	No Action Alternative	Proposed Action
Land Use (Section 3.2)	Former tower site TCA-AJO-189 would not be restored and the site would remain in its current degraded state. The No Action Alternative would have an indirect, moderate adverse impact on land use.	The Proposed Action would restore former tower site TCA-AJO-189 to pre-project conditions (to the extent possible) in accordance with USFWS's directive. The Proposed Action would have a long-term, moderate beneficial impact on land use.
Wilderness (Section 3.3)	Under the No Action Alternative, former tower site TCA-AJO-189 would not be restored to pre-project conditions and the mechanically disturbed area would remain within designated wilderness. The No Action Alternative would have an indirect, major adverse impact on designated wilderness.	Under the Proposed Action, the project site would be restored to pre-project conditions (to the extent possible). The natural setting of designated wilderness at the project site would be restored, and over time it would not be apparent that a man-made disturbance had occurred at the project site. The Proposed Action would have a permanent, moderate, indirect beneficial impact on designated wilderness. However, noise levels generated during the restoration activities would have a temporary, minor adverse effect on the quality of designated wilderness.
Geology and Soils (Section 3.4)	Under the No Action Alternative, former tower site TCA-AJO-189 would not be restored and the excavated hole would remain open. Left unrestored, the disturbed area, especially the open hole, would be susceptible to erosion and the potential for erosion would likely increase. The No Action Alternative would have a permanent, minor adverse impact on the soils at former tower site TCA-AJO-189.	The project site would be restored to pre-project conditions (to the extent possible), thus stabilizing the site and reducing the potential for soil erosion. The Proposed Action would have a permanent, moderate beneficial impact on soils at former tower site TCA-AJO-189.
Hydrology and Groundwater (Section 3.5)	No additional impacts on hydrology or groundwater would occur under the No Action Alternative beyond those described in the 2009 Ajo-1 EA (CBP 2009).	Approximately 3,250 gallons would be required for irrigating plants for 5 months. It is assumed that up to 1,000 gallons may be needed to compact the backfill soil in compliance with the Restoration Plan. Currently, the Lower Gila Basin experiences an annual overdraft of groundwater; therefore, the Proposed Action would have a temporary, moderate adverse impact on hydrology and groundwater resources.
Surface Waters (Section 3.6)	Indirect impacts on surface waters could occur as a result of potential soil erosion at the unrestored site. Sediment could be carried off-site into the headwaters of drainages. Thus, the No Action Alternative would have a long-term, minor adverse effect on water quality.	Restoration of the site would reduce the potential for erosion and resulting sedimentation. Thus, having a long-term, negligible beneficial impact on surface waters and water quality.

Table 2-2, continued

Affected Environment	No Action Alternative	Proposed Action
Vegetative Habitat (Section 3.8)	No additional direct impacts on vegetation would occur beyond those described in the Proposed Action in the 2009 Ajo-1 EA (CBP 2009). However, the site would not be restored and would remain unvegetated with the exception of naturally recruited vegetation. The No Action Alternative would have a long-term, negligible impact on vegetation in the project area.	In accordance with the Restoration Plan, native vegetation would be reestablished on the approximately 35- x 35-foot disturbance area. The Proposed Action would have a permanent, negligible beneficial impact on vegetation on the CPNWR.
Wildlife and Aquatic Resources (Section 3.9)	No additional impacts on wildlife and aquatic resources would occur beyond those described in the Proposed Action in the 2009 Ajo-1 EA (CBP 2009).	Noise emissions from heavy construction equipment and helicopter airlifts would have a temporary, minor adverse effect on wildlife.
Protected Species (Section 3.10)	No direct impacts on threatened or endangered species or their habitats would occur beyond those described for the Proposed Action in the 2009 Ajo-1 EA (CBP 2009).	Noise levels associated with helicopters, as well as heavy construction equipment, would have temporary, minor adverse impacts on Sonoran pronghorn and a temporary, negligible impact on lesser long-nosed bat.
Cultural Resources (Section 3.11)	The No Action Alternative would have no effect, either beneficial or adverse, on cultural resources beyond those described in the 2009 Ajo-1 EA.	No significant cultural resources were identified at former tower site TCA-AJO-189 during a previous cultural resources survey; therefore, no impacts on cultural resources are anticipated under the Proposed Action.
Air Quality (Section 3.12)	The No Action Alternative would not result in any directs impacts on air quality because restoration efforts would not occur.	The proposed restoration activities would neither violate air quality standards nor conflict with the state implementation plan; therefore, impacts on air quality would be less than significant.
Noise (Section 3.13)	Under the No Action Alternative, sensitive noise receptors and wildlife would incur no additional impacts beyond those described in the 2009 Ajo-1 EA (CBP 2009).	The noise impacts from restoration activities would be temporary and moderate.
Aesthetic and Visual Resources (Section 3.17)	Under the No Action Alternative, the disturbed area would not be restored and would remain in a degraded state. The No Action Alternative would have a permanent, moderate effect on aesthetic resources in the project area.	The final rehabilitated site would be similar in appearance and vegetation characteristic (e.g. plant species and plant density) to the adjacent landscape. Therefore, the Proposed Action would have a permanent, moderate beneficial impact on aesthetics.
Hazardous Waste (Section 3.18)	The No Action Alternative would not contribute any additional hazardous waste or materials to the project area beyond those described in the 2009 Ajo-1 EA (CBP 2009).	The potential exists for minor releases of petroleum, oil, and lubricant (POL) during restoration activities. Best management practices (BMPs) would be put in place to minimize any potential contamination at the proposed sites during restoration. The Proposed Action would have a temporary, minor potential to contaminate the environment with hazardous materials.

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SECTION 3.0
AFFECTED ENVIRONMENT AND CONSEQUENCES

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 PRELIMINARY IMPACT ANALYSIS

This section of the SEA describes the natural and human environment that exists within the project area of the supplemental SBI*net* Ajo-1 Tower Project and the potential impacts of the Proposed Action as outlined in Section 2.0 of this document. Only those parameters with the potential to be affected by the Proposed Action are described, per CEQ regulation (40 CFR 1501.7 [3]). Impacts can vary in magnitude from a slight to a total change in the environment. The impact analysis presented in this SEA is based upon existing regulatory standards, scientific and environmental knowledge, and best professional opinions.

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. Resources such as climate, wild and scenic rivers, floodplains, waters of the U.S. and wetlands, prime farmlands, aquatic resources, radio frequency environment, utilities and infrastructure, roadways and traffic, socioeconomics, environmental justice and protection of children, and sustainability and greening are not addressed for the following reasons:

Climate
The climate would not be impacted by the implementation of the Proposed Action.

Floodplains
The Proposed Action would not affect floodplains because none are located in the project area.

Waters of the U.S. and Wetlands
On February 18, 2009, Gulf South Research Corporation (GSRC) surveyed former tower site TCA-AJO-189 for biological resources and waters of the U.S. No potential jurisdictional waters of the U.S., including wetlands were observed at the former tower site. Therefore, no waters of the U.S. or wetlands would be impacted by the Proposed Action.

Prime Farmlands
The only soil type identified at the site of the Proposed Action, Quilotosa-Vaiva-Rock Outcrop complex, is not classified as a Prime Farmlands soil. Therefore, the Proposed Action would not affect Prime Farmlands.

Aquatic Resources
No streams or waterbodies are located within the project area; therefore, the Proposed Action would not affect any aquatic resources.

Radio Frequency
The radio frequency environment would not be affected by the Proposed Action.

Utilities and Infrastructure
There would be no additional impacts on utilities and infrastructure beyond those described for the Proposed Action in the 2009 Ajo-1 EA (CBP 2009).

Roadways and Traffic
There would be no additional impacts on roadways and traffic beyond those described for the Proposed Action in the 2009 Ajo-1 EA (CBP 2009).

Environmental Justice and Protection of Children
The project site is located in an extremely remote area of southwest Arizona and no communities or residential areas are located within proximity to former tower site TCA-AJO-189. Therefore, the Proposed Action would not affect low-income or minority populations, or children.

Socioeconomics
The Proposed Action would potentially have temporary, negligible benefits from local purchases, if they occur.

Sustainability and Greening
The Proposed Action does not include the construction and operation of Federal facilities; therefore, Federal sustainability and greening practices are not applicable.

Wild and Scenic Rivers
The Proposed Action would not affect any designated Wild and Scenic Rivers (16 U.S.C. 551, 1278[c], 1281[d]) because no rivers designated as such are located within or near the project area.

Impacts can be either beneficial or adverse and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). As discussed in this section, the No Action Alternative and Proposed Action may create temporary (lasting the duration of restoration efforts), short-term (up to 3 years), or long-term (greater than 3 years) impacts.

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis the intensity of impacts will be classified as negligible, minor, moderate, or major. The intensity thresholds are defined as follows:

- Negligible: A resource would not be affected or the effects would be at or below the level of detection, and changes would not be of any measurable or perceptible consequences.
- Minor: Effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. Mitigation measures, if needed to offset adverse effects, would be simple and achievable.
- Moderate: Effects on a resource would be readily detectable, long-term, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.

- Major: Effects on a resource would be obvious, long-term, and would have substantial consequences on a regional scale. Mitigation measures to offset the adverse effects would be required and extensive, and success of the mitigation measures would not be guaranteed.

The following discussions describe and, where possible, quantify the potential effects of each alternative on the resources within or near the project area. All impacts described below are considered to be adverse unless stated otherwise.

3.2 LAND USE

3.2.1 Affected Environment

Land use in the project area was discussed in detail in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009). Pima County is situated on the southwestern border of Arizona and encompasses 9,184 square miles (Arizona Department of Commerce [AZDC] 2008). The majority of the county is located along the United States/Mexico border. Land use is dependent upon soil characteristics and water availability since the majority of Pima County is desert. Government, tourism, commercial, and Indian reservations are the county's principal land uses. BLM and U.S. Forest Service account for 12.1 percent of land ownership; Indian reservations, 42.1 percent; the State of Arizona, 14.9 percent; private or corporate, 13.8 percent; and other public lands, 17.1 percent (AZDC 2008). Other public lands include those managed by USFWS and NPS.

Former tower site TCA-AJO-189 is located on CPNWR which consists of undeveloped lands established for the recovery of the desert bighorn sheep. Approximately 93 percent of CPNWR is designated wilderness, as discussed in detail in Section 3.3. Former tower site TCA-AJO-189 is located within the Cabeza Prieta Wilderness.

3.2.2 Environmental Consequences

3.2.2.1 No Action Alternative

Under the No Action Alternative, former tower site TCA-AJO-189 would not be restored and the site would remain in its current degraded state. The USFWS's directive to restore the site would not be realized and impacts on designated wilderness would not be reduced. The No Action Alternative would have an indirect, moderate adverse impact on land use in the project area.

3.2.2.2 Proposed Action

The Proposed Action would include the restoration of former tower site TCA-AJO-189 to pre-project conditions (to the extent possible) in accordance with USFWS's directive. Restoration of the project site would reduce impacts on designated wilderness and return the former tower site to its original land use. The Proposed Action would have a long-term, moderate beneficial impact on land use in the project area.

3.3 WILDERNESS

3.3.1 Affected Environment

The Wilderness Act of 1964 (Public Law [P.L.] 88-577 [Wilderness Act]) allowed for the establishment of a National Wilderness Preservation System and allows for the designation of wilderness on Federally owned lands by Congress. The Wilderness Act was discussed in detail in the 2009 Ajo-1 EA, and that discussion is herein incorporated by reference (CBP 2009).

Cabeza Prieta National Wildlife Refuge and Cabeza Prieta Wilderness

CPNWR is one of 510 refuges governed by the National Wildlife Refuge System Administration Act of 1966, as amended (P.L. 106-580) and National Wildlife Refuge System Improvement Act (P.L. 105-57).

Cabeza Prieta Wilderness was created within CPNWR by the 1990 Arizona Wilderness Act (House Report 2570 Title III). It encompasses 93 percent (803,418 acres) of CPNWR (Figure 3-1) and was created to preserve the Sonoran Desert Ecosystem. Descriptions of CPNWR and Cabeza Prieta Wilderness were provided in the 2009 Ajo-1 EA and are herein incorporated by reference (CBP 2009).

Minimum Requirement Analysis (MRA)

As specified under Section 4(c) of the Wilderness Act, an MRA is a process which helps an agency to determine whether an action should be completed in designated wilderness. The MRA process was described in the 2009 Ajo-1 EA and that description is incorporated herein by reference (CBP 2009).

Existing Conditions

The existing conditions of the Cabeza Prieta Wilderness were discussed in the 2009 Ajo-1 EA, and that discussion is herein incorporated by reference (CBP 2009). Currently, an approximately 35- x 35-foot area on top of Growler Mountain within designated wilderness has been mechanically disturbed, including an approximately 14- x 14-foot excavated hole. The entire 35- x 35-foot area was cleared of vegetation and graded during the early phases of tower construction.

3.3.2 Environmental Consequences

3.3.2.1 No Action Alternative

Under the No Action Alternative, former tower site TCA-AJO-189 would not be restored and the mechanically disturbed area would remain within designated wilderness. The disturbed site would adversely impact the aesthetics of designated wilderness and would be evidence of a man-made disturbance in designated wilderness. Additionally, the No Action Alternative would not be in compliance with USFWS's directive and would be in violation of the Wilderness Act. The No Action Alternative would have a permanent, major impact on designated wilderness.

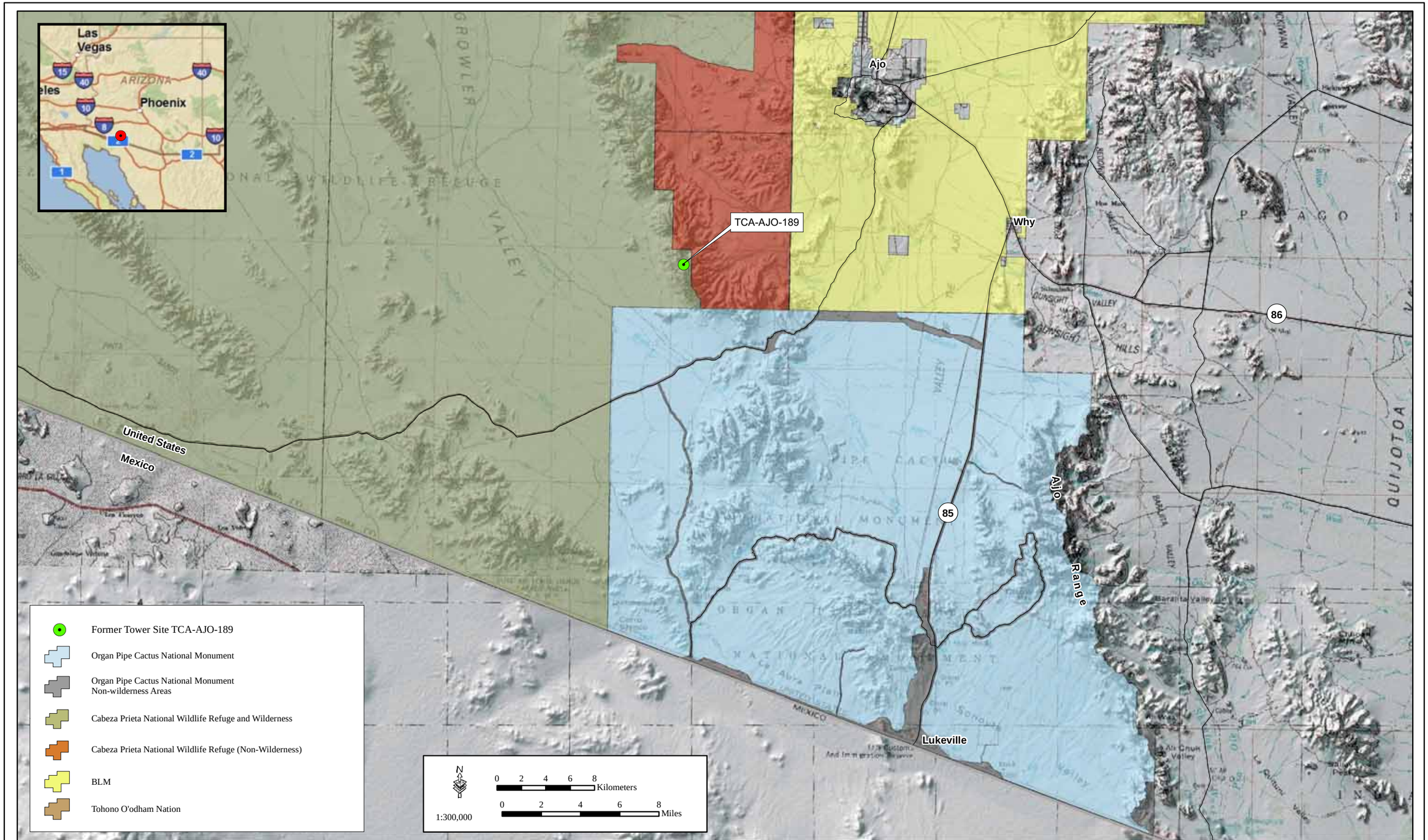

Figure 3-1: Organ Pipe Cactus National Monument and Cabeza Prieta National Wildlife Refuge Wilderness Areas

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3.3.2.2 Proposed Action

Restoration activities at former tower site TCA-AJO-189 would require the use of helicopters and heavy construction equipment. The use of helicopters and heavy equipment would increase the noise levels in designated wilderness beyond ambient noise levels. Noise levels associated with helicopters and heavy construction equipment would have an adverse impact on the quietness and solitude of designated wilderness at the project site and the adjacent area. However, noise emissions would be intermittently produced during restoration efforts (e.g., backfilling of hole and subsequent planting and irrigation efforts) and noise levels would be anticipated to return to ambient levels following the completion of restoration efforts. Noise emissions during restoration efforts would have a temporary, minor adverse effect on the quality of designated wilderness. A detailed noise analysis is provided in Section 3.12.

Under the Proposed Action, former tower site TCA-AJO-189 would be restored to pre-project conditions (to the extent possible). The natural setting of designated wilderness at the project site would be restored in accordance with the USFWS approved Restoration Plan, and over time, it would not be apparent that a man-made disturbance had occurred at the project site (Appendix B). The Proposed Action would have a permanent, moderate, indirect, beneficial impact on designated wilderness.

3.4 GEOLOGY AND SOILS

3.4.1 Affected Environment

The geologic environment and soils within the SBI*net* Ajo-1 Tower Project were described in the 2009 Ajo-1 EA, and that discussion is incorporated herein by reference (CBP 2009). In summary, the project area is part of the Basin and Range Physiographic Province as delineated by the U.S. Geological Survey [USGS] (USGS and California Geologic Survey 2000). Most landforms within this province are the result of tectonic and alluvial processes, and the province is characterized by low mountains and deep valleys filled with alluvium (USGS and California Geologic Survey 2000).

Soils

The Quilotosa-Vaiva-Rock Outcrop soil complex is associated with former tower site TCA-AJO-189 (Figure 3-2). This map unit is on mountain and hill slopes at elevations ranging from 1,200 to 3,000 feet above mean sea level (amsl). The complex is comprised of 50 percent Quilotosa extremely gravelly sandy loam, 20 percent Vaiva extremely gravelly sandy loam, and 20 percent rock outcrop (Natural Resources Conservation Service [NRCS] 2010). The Quilotosa soil and Vaiva soil components are well-drained soils formed in alluvium and colluvium derived from granite and gneiss. Permeability of the Quilotosa and Vaiva soils are moderately rapid and moderate, respectively. Runoff is medium to rapid for both Quilotosa and Vaiva soils. Both soil units have a moderate water erosion hazard, and cuts and fills are highly susceptible to erosion. Rock outcrop areas consist of exposed areas of granite and gneiss (NRCS 2010).

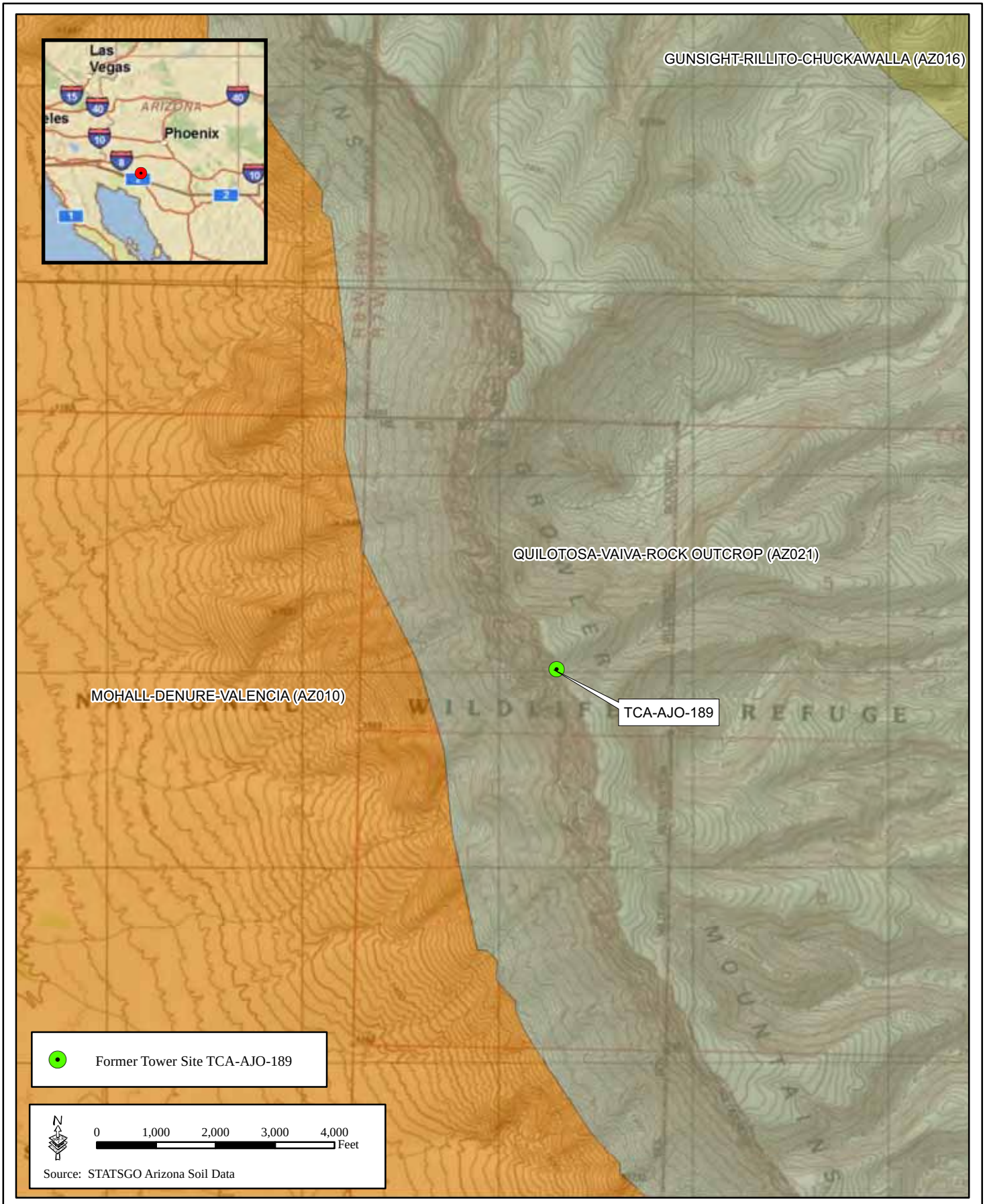

Figure 3-2: TCA-AJO-189 Tower Soil Survey Map

3.4.2 Environmental Consequences

3.4.2.1 No Action Alternative

Under the No Action Alternative, the project site would not be restored and the excavated hole would remain open. Exposed soils are more susceptible to wind and water erosion. Both the Quilotosa and Vaiva soils have a moderate water erosion hazard and cut and fills are highly susceptible to erosion. Left unrestored, the disturbed area, especially the open hole, would be susceptible to erosion and the potential for erosion would likely increase. The No Action Alternative would have a permanent, minor adverse impact on the soils at former tower site TCA-AJO-189.

3.4.2.2 Proposed Action

The Proposed Action would temporarily disturb approximately 0.03 acre of previously disturbed Quilotosa-Vaiva-Rock Outcrop soils. Restoration of the site would eliminate the excavated hole and revegetate the approximately 35- x 35-foot disturbed area at former tower site TCA-AJO-189. Restoration efforts would stabilize the site and reduce the potential for erosion. The Proposed Action would have a permanent, moderate beneficial impact on soils at the project site. Mitigation measures to minimize soil erosion are provided in Section 5.0.

3.5 HYDROLOGY AND GROUNDWATER

3.5.1 Affected Environment

Former tower site TCA-AJO-189 is located in the Lower Gila Basin as designated by Arizona Department of Water Resources (ADWR). Groundwater resources were described in the 2009 Ajo-1 EA and are incorporated herein by reference (CBP 2009). The Lower Gila Basin is characterized by plains and valleys surrounded by low elevation mountain ranges (ADWR 2008). The average annual rainfall ranges between 3.8 to 7.7 inches across the basin. The annual groundwater recharge rate of the Lower Gila Basin is 9,000 to 88,000 acre-feet per year and the annual municipal, industrial, and agricultural use in the basin is approximately 287,900 acre-feet per year.

3.5.2 Environmental Consequences

3.5.2.1 No Action Alternative

No impacts on hydrology and groundwater would occur under the No Action Alternative beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.5.2.2 Proposed Action

Water would be needed for compaction of the backfill material in the excavated hole and to irrigate plants. Approximately 3,250 gallons would be required for irrigating plants for 5 months (CBP 2011). Based on the small area of the project site, it is estimated that up to 1,000 gallons of water may be needed to compact the backfill soil in compliance with the Restoration Plan (CBP 2011) located in Appendix B of this SEA. Water for restoration activities would be obtained in Ajo, Arizona and hauled into the project site. While the water requirements of the Proposed Action would be limited to the duration of the restoration activities and are small in comparison to the overall water use in the basin, the Lower Gila Basin experiences an annual overdraft of groundwater resources, and any increase in the demand would increase the deficit. Therefore, the impacts on groundwater resources would be temporary and moderate.

3.6 SURFACE WATERS

3.6.1 Affected Environment

The Proposed Action is located in the Lower Gila River Watershed as delineated by ADEQ (Figure 3-3). The closest perennial rivers are the Colorado River mainstream and its reservoirs and the Gila River near Yuma where irrigation return flow provides perennial flow (ADEQ 2008).

A detailed discussion of the region's surface waters was provided in the 2009 Ajo-1 EA and that information is incorporated herein by reference (CBP 2009). Within CPNWR, surface water drainage originates in mountainous areas and results in numerous intermittent, braided channels, connecting to larger arroyos or washes. These washes are well-defined and hold runoff from brief but intense summer rainstorms or other seasonal rainstorms that are typically less intense and longer in duration. Usually, runoff quickly infiltrates streambeds, and only rarely is it sufficient to cause flooding in the normally dry washes. The perennial and intermittent streams on CPNWR are presented in Figure 3-3. No surface water drainage features are located within TCA-AJO-189.

3.6.2 Environmental Consequences

3.6.2.1 No Action Alternative

Under the No Action Alternative, there would be no direct impacts on surface waters or waters of the U.S. beyond those discussed in the 2009 Ajo-1 EA (CBP 2009). Indirect impacts on surface waters and waters of the U.S. would occur as a result of potential soil erosion at the unrestored site. Sediment could be carried off-site into the headwaters of drainages. However, the potential for sediment originating at former tower site TCA-AJO-189 reaching drainages is low. The No Action Alternative would have a long-term, minor adverse effect on surface waters and water quality as a result of accelerated erosion associated with the unrestored site.

3.6.2.2 Proposed Action

Under the Proposed Action, the project site would be restored in accordance with the Restoration Plan (CBP 2011) prepared by CBP and approved by USFWS (Appendix B). Restoration of the site would include backfilling the existing excavated hole and revegetating the entire disturbed area with native vegetation. No surface waters would be directly impacted during restoration efforts. However, during backfilling and grading activities, the potential for erosion and sedimentation would increase. Stormwater management measures (e.g., straw wattles) would be incorporated to reduce the movement of soils from the site during restoration activities. Once the planted vegetation becomes established and the site is stabilized, the potential for erosion and resulting sedimentation would decrease, thus reducing the potential for indirect impacts on water quality. The Proposed Action would have a long-term, negligible beneficial impact on surface waters and water quality.

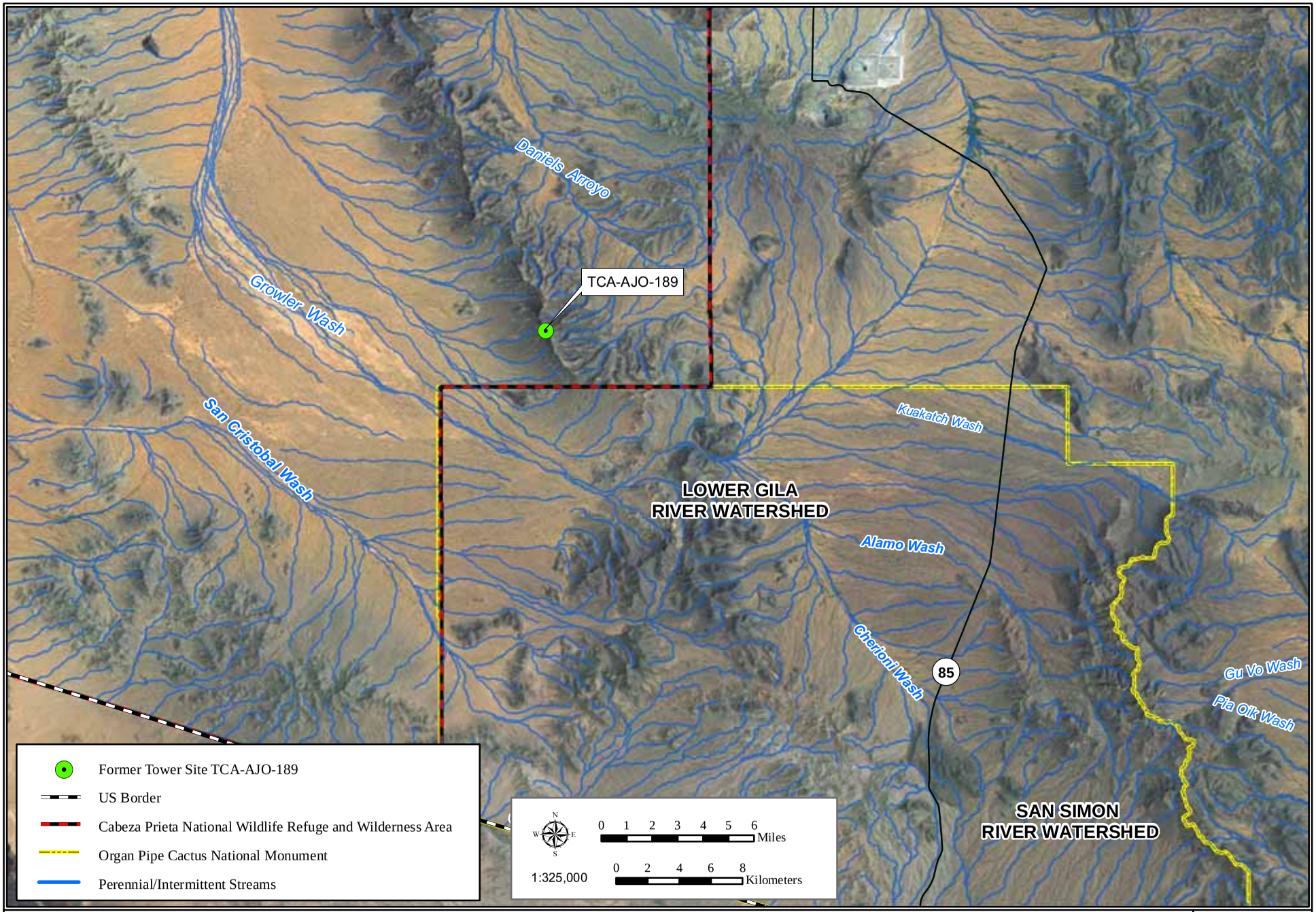

Figure 3-3: Perennial and Intermittent Streams within Organ Pipe Cactus National Monument and Cabeza Prieta National Wildlife Refuge and Wilderness Area

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3.7 VEGETATIVE HABITAT

3.7.1 Affected Environment

The vegetative environment of the SBI*net* Ajo-1 Tower Project was described in the 2009 Ajo-1 EA and is incorporated herein by reference (CBP 2009). In summary, the vegetative community within the project corridor includes Sonoran Desertscrub (Brown 1994).

On February 18, 2009, GSRC surveyed former tower site TCA-AJO-189 for biological resources and waters of the U.S. Vegetation at TCA-AJO-189 included saguaro (*Carnegiea gigantea*), agave (*Agave* sp.), creosotebush (*Larrea tridentate*), teddy-bear cholla (*Cylindropuntia bigelovii*), hedgehog cactus (*Echinocereus engelmannii*), prickly pear cactus (*Opuntia* sp.), staghorn cholla (*Opuntia versicolor*), longleaf ephedra (*Ephedra trifurca*), broom snakeweed (*Gutierrezia sarothrae*), triangle-leaf bursage (*Ambrosia deltoidea*), and ocotillo (*Fouquieria spendens*).

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

Under the No Action Alternative, the site would not be restored and would remain unvegetated with the exception of naturally recruited vegetation. The No Action Alternative would have a long-term, negligible impact on vegetation in the region.

3.7.2.2 Proposed Action

There would be no additional vegetation removal or disturbance beyond those described in the 2009 Ajo-1 EA, herein incorporated by reference (CBP 2009). Under the Proposed Action, the project site would be restored in accordance with the Restoration Plan (Appendix B). Native vegetation would be reestablished on the approximately 35- x 35-foot disturbance area following the backfilling of the existing hole. Thus, approximately 0.03 acre of Sonoran Desertscrub vegetation would be restored on the CPNWR. The restored site would be similar in appearance and vegetation characteristics (e.g. plant species and plant density) to the adjacent landscape. The Proposed Action would have a beneficial impact on vegetation on the CPNWR.

3.8 WILDLIFE AND AQUATIC RESOURCES

3.8.1 Affected Environment

The biological environment of the project area was discussed in detail in the EA for the SBI*net* Ajo-1 Tower Project, and is herein incorporated by reference (CBP 2009). In summary, many of the animals found in the Sonoran Desertscrub vegetation community are found throughout the warmer and drier regions of the southwestern United States. Because of the lack of available forage and extreme temperatures, many of the mammals occupying these vegetation communities are small, and most are nocturnal.

3.8.2 Environmental Consequences

3.8.2.1 No Action Alternative

No additional impacts on wildlife and aquatic resources would occur beyond those described in the Proposed Action in the 2009 Ajo-1 EA (CBP 2009).

3.8.2.2 Proposed Action

Noise levels associated with helicopter use, as well as heavy construction equipment, would likely have an adverse impact on wildlife at former tower site TCA-AJO-189 and the adjacent area. The use of helicopters and heavy equipment would increase the noise levels above ambient noise levels. It is anticipated that backfilling efforts at the project site would occur over a 10-day work period; however, noise emissions would be intermittently produced during the rehabilitation (e.g., planting and irrigation efforts) of the former tower site. Noise levels would be anticipated to return to ambient levels following the completion of rehabilitation efforts, and therefore would have a temporary, minor adverse effect on wildlife. A detailed noise analysis is provided in Section 3.12.

3.9 PROTECTED SPECIES AND CRITICAL HABITATS

3.9.1 Affected Environment

Protected species and critical habitats were discussed in the 2009 Ajo-1 EA and are herein incorporated by reference (CBP 2009).

3.9.1.1 Federal

USFWS-AESO lists 14 endangered species, two threatened species, and one proposed threatened species believed to occur within Pima County, Arizona (USFWS 2010). USFWS also lists four candidate species, although candidate species are not afforded protection under the ESA. A list of all USFWS threatened, endangered, and candidate species is provided in Appendix C. Not all of these species occur within the vicinity of the project area. Two endangered species have the potential to occur within or near the project area: lesser long-nosed bat and Sonoran pronghorn. Descriptions of lesser long-nosed bat and Sonoran pronghorn were provided in the 2009 Ajo-1 EA and are herein incorporated by reference (CBP 2009).

CBP entered into formal consultation with USFWS pursuant to Section 7 of the ESA for the SBI*net* Ajo-1 Tower Project in 2009. On December 12, 2009, USFWS issued a Biological Opinion (BO [USFWS-AESO/SE 22410-F-2009-0089 and 22410-1989-0078-R6]) concluding that the Proposed Action in the 2009 Ajo-1 EA may affect and is likely to adversely affect Sonoran pronghorn, lesser long-nosed bat, and desert (Quitobaquito) pupfish (*Cyprinodon* [*macularis*] *eremus*) (USFWS 2009). CBP is currently coordinating with USFWS regarding reinitiation of formal consultation pursuant to Section 7 of the ESA for Sonoran pronghorn and lesser long-nosed bat. The desert pupfish is not located within or near the project footprint of the current Proposed Action and will not be discussed as part of this SEA.

3.9.1.2 Critical Habitat

The ESA calls for the conservation of what is termed "critical habitat" – the areas of land, water, and air space that an endangered species requires for survival. Critical habitat also includes such things as food and water sources, breeding sites, cover or shelter, and sufficient habitat area to provide for normal population growth and behavior. One of the primary threats to many species is the destruction, conversion, or modification of essential habitat by uncontrolled land and water development. No critical habitat has been designated for either the lesser long-nosed bat or Sonoran pronghorn.

3.9.1.3 State

The AGFD Natural Heritage Program maintains lists of wildlife of special concern (WSC) in Arizona. This list includes fauna whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines (AGFD 2007). These species are not necessarily the same as those protected under the ESA. A list of these species is presented in Appendix C. No Arizona WSC species were observed within the project footprint; however, habitat adjacent to the project site was determined to be suitable for six Arizona WSC.

The Arizona Department of Agriculture (ADA) maintains a list of protected plant species within Arizona. The 1999 Arizona Native Plant Law defined five categories of protection within the state: 1) Highly Safeguarded, no collection allowed; 2) Salvage Restricted, collection only with permit; 3) Export Restricted, transport out of state prohibited; 4) Salvage Assessed, permit required to remove live trees; and 5) Harvest Restricted, permit required to remove plant by-products (ADA 2007). A list of native plants protected by the ADA is included in Appendix C. Only those plants with highly safeguarded and salvage-restricted status are discussed here, as other regulated activities would not occur. None of the highly safeguarded or salvage -restricted status species plants were observed at former tower site TCA-AJO-189.

3.9.2 Environmental Consequences

3.9.2.1 No Action Alternative

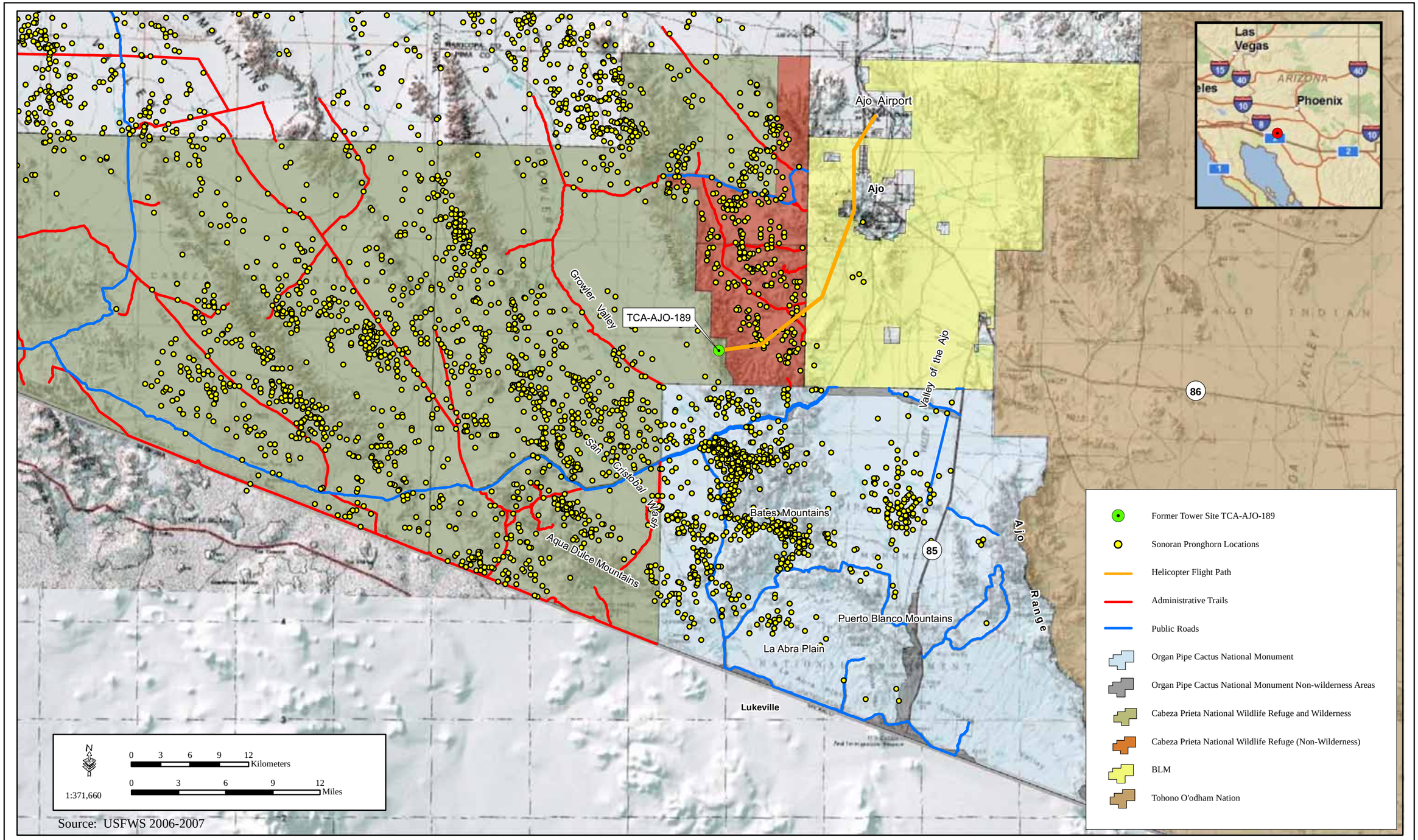
Under the No Action Alternative, there would be no direct impacts on protected species or critical habitat beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.9.2.2 Proposed Action

As described above, noise levels associated with helicopters, as well as heavy construction equipment, would likely have an adverse impact on wildlife, including threatened and endangered species, at former tower site TCA-AJO-189 and the adjacent area. Noise levels would be anticipated to return to ambient levels following the completion of restoration efforts. Potential impacts on specific species are discussed below.

Sonoran Pronghorn

Sonoran pronghorn are migratory; although, few migratory paths are known to occur in the immediate vicinity of the project site, the adjacent areas may be more heavily utilized (Figure 3-4). Noise levels associated with helicopters and heavy construction equipment could disturb pronghorn during restoration efforts; however, the helicopter path established by USFWS during formal Section 7 consultation for the SBI*net* Ajo-1 Tower Project would be used for ingress and egress to the project site during the restoration of the site (Figure 3-5). Utilization of the established helicopter flight path would reduce potential impacts on Sonoran pronghorn. CBP is currently reinitiating Section 7 consultation with USFWS for the restoration activities. Site rehabilitation (i.e., backfilling of the hole and landscaping) and the installation of irrigation would be completed before March 15, prior to the Sonoran pronghorn closure season. The remaining airlifts for revegetation efforts and project termination would occur after March 15 per coordination with USFWS. Site restoration will not commence until the reinitiated Section 7 consultation with USFWS has been completed. As thus, the Proposed Action would have temporary to short-term, minor adverse impacts on Sonoran pronghorn.



Source: USFWS 2006-2007

Figure 3-4: Historical Sonoran Pronghorn Sitings Telemetry Data

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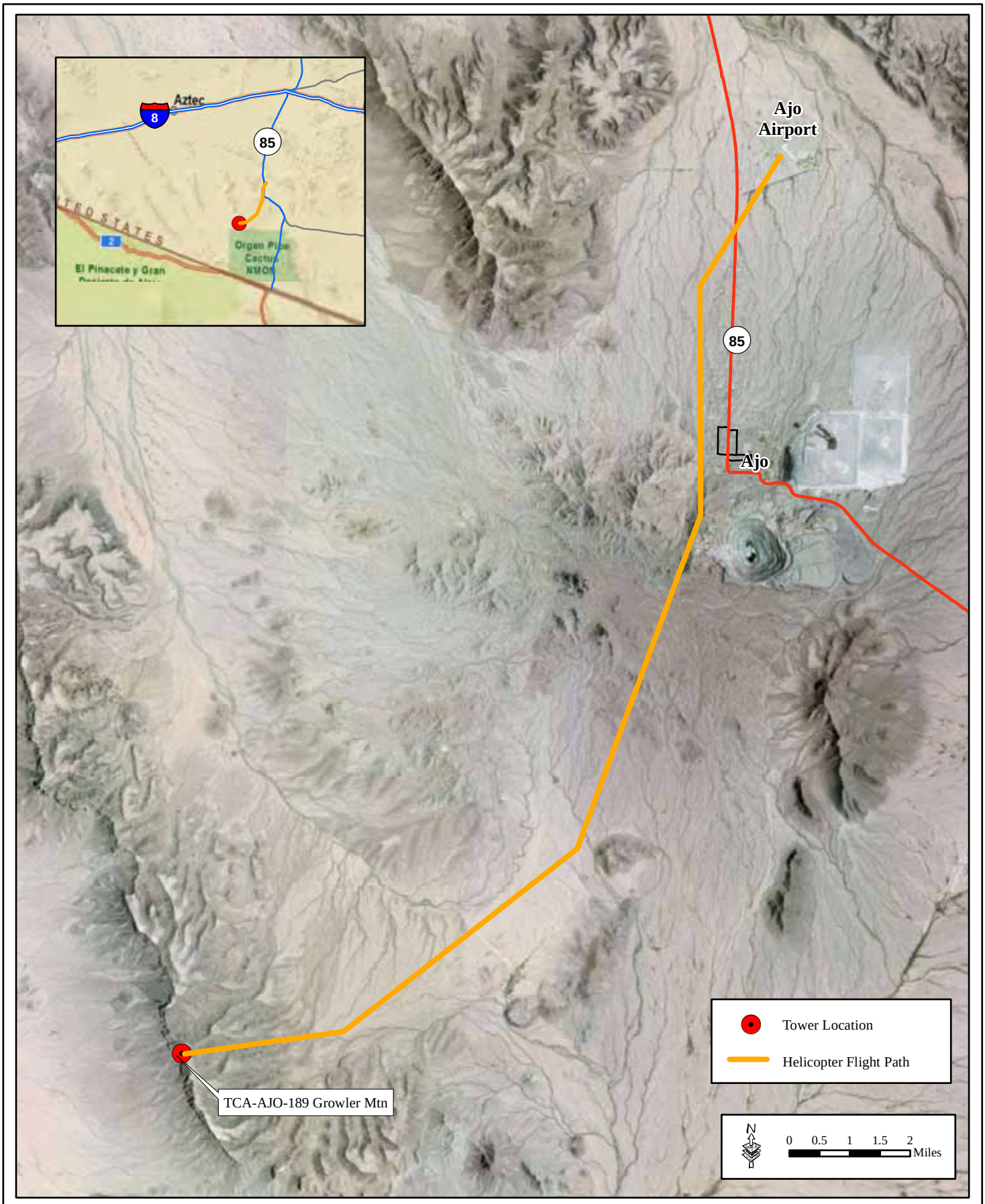

Figure 3-5: Helicopter Flight Path

Lesser Long-nosed Bat

Based on occurrence records provided by USFWS (USFWS 2011a), one lesser long-nosed bat roost occurs near the project area, although none are located within or adjacent to the footprint of TCA-AJO-189 (Figure 3-6). The designated helicopter flight path is located north of the known lesser long-nosed bat roost on the CPNWR. Therefore, roost disturbance from helicopter-generated noise is not anticipated during the restoration of TCA-AJO-189. Additionally, lesser long-nosed bats begin arriving at maternity roosts in Arizona as early as the second week in April. If the proposed restoration (i.e., backfilling and planting) is conducted between November and March as anticipated, lesser long-nosed bats will not have arrived in southwest Arizona at this time and thus, would not be present in the roost. The Proposed Action would have a short-term, negligible effect on lesser long-nosed bat.

3.10 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

3.10.1 Affected Environment

The process of identifying and evaluating potential impacts on cultural resources was described in detail in the 2009 Ajo-1 EA and incorporated herein by reference (CBP 2009). In a June 24, 2009 correspondence, SHPO concluded that the SBI*net* Ajo-1 Tower Project would have no adverse effects on cultural resources. This concurrence included former tower site TCA-AJO-189 tower site (Appendix A). Briefly, the National Historic Preservation Act (NHPA) of 1966, as amended, established the Advisory Council on Historic Preservation (ACHP) to advocate full consideration of historic values in Federal decision-making and ensure consistency in national policies. Additionally, the NHPA also established SHPO to administer national historic preservation programs on a state level and Tribal Historic Preservation Officers on tribal lands, where appropriate. The NHPA also established the National Register of Historic Places (NRHP), which is the Nation's official list of cultural resources worthy of preservation and protection. The historic preservation review process mandated by Section 106 of the NHPA is outlined in the ACHP regulations, "Protection of Historic Properties" (36 CFR Part 800), which were revised and became effective on January 11, 2001.

The cultural overview of the project region was described in various environmental documents and is incorporated by reference (CBP 2009 and INS and Joint Task Force-6 [JTF-6] 2001). Briefly, the cultural history of southwestern Arizona is usually discussed in periods: Paleo-Indian (circa 11,500 to 8,000 years before present), Archaic (circa 8,000 to 1,400 years before present) which is generally divided into the Early, Middle and Late Archaic periods, Formative Period (1,400 to 550 years before present) which is generally divided into the Pioneer Period, Colonial Period, Sedentary Period, and Classic Period, Protohistoric and Early Historic Periods (A.D. 1540 to 1860), and Late Historic Period (A.D. 1860 to 1950).

3.10.1.1 Previous Investigations

On February 18, 2009, Northland Research, Inc. (NRI) conducted a Class III cultural resources survey on approximately 0.70 acre located on top of Growler Mountain. The survey area included former tower site TCA-AJO-189 (Hart 2009). During the survey, three isolated occurrences were observed and recorded. The first isolated occurrence consists of a chipping station of fine-grained gray basalt. Approximately 25 flakes, along with a core and tested core,

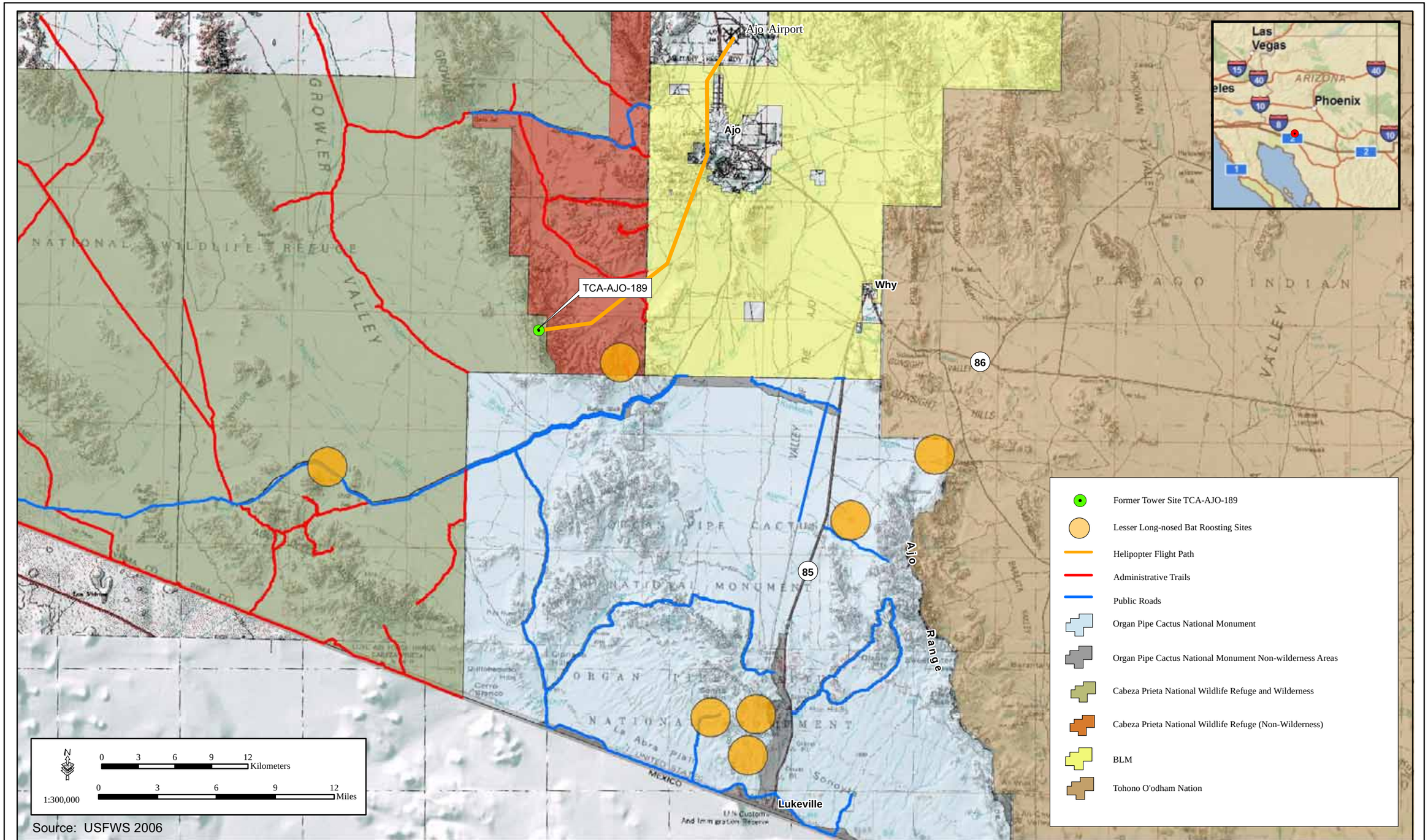

Figure 3-6: Lesser Long-nosed Bat Roosting Sites

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are located in a 6-foot diameter area. The second isolated occurrence consists of an additional chipping station of fine-grained gray basalt. One core, one core fragment, and 38 flakes are located in a 6-foot x 9-foot area. The third isolated occurrence consists of a broken tabular tool. No significant cultural resources were identified during the survey, and NRI determined that no additional archaeological investigations are necessary at the site (Hart 2009).

3.10.2 Environmental Consequences

3.10.2.1 No Action Alternative

The No Action Alternative would have no effect, either beneficial or adverse, on cultural resources beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.10.2.2 Proposed Action

No impacts on cultural resources would be anticipated under the Proposed Action. Previous cultural resources surveys of the former tower site identified no significant cultural resources. If previously unidentified cultural resources are encountered during restoration activities, the contractor will stop all ground-disturbing activities in the vicinity of the discovery until an archaeologist is notified and the nature and significance of the find is evaluated. If human remains are encountered during construction activities, the OTIA environmental manager, CPNWR refuge manager, and law enforcement officials would be contacted immediately.

3.11 AIR QUALITY

3.11.1 Affected Environment

Air quality within the SBI*net* Ajo-1 Tower Project was described in the 2009 Ajo-1 EA, and that discussion is incorporated herein by reference (CBP 2009). In summary, EPA considers Pima County as a moderate non-attainment area for particulate matter less than 10 microns (PM-10). The de minimis threshold for moderate non-attainment for PM-10 is 100 tons of PM-10 air emissions per year (40-CFR 51.853).

3.11.2 Environmental Consequences

3.11.2.1 No Action Alternative

The No Action Alternative would not result in any directs impacts on air quality because there would be no construction activities beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.11.2.2 Proposed Action

Restoration Activities

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 the restoration of former tower site TCA-AJO-189. Potential effects on air quality would be minimized through the implementation of BMPs listed in Section 5.0. Additionally, construction plans would include a Pima County Fugitive Dust Control Construction Permit for surface disturbances and demolition, if required.

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 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 backhoes and power generators. 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 (Appendix D).

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

The total air quality emissions were calculated for the proposed construction activities occurring in Pima County to be compared to the General Conformity Rule's de minimis threshold. The de minimis threshold (100 tons per year) is the point at which air emissions are significant. If air emissions exceed the 100 tons per year threshold, they are considered a significant impact. Summaries of the total emissions for the Proposed Action are presented in Table 3-1.

Table 3-1. Total Air Emissions (tons/year) from Construction Activities vs. *de minimis* Levels

Pollutant	Total (tons/year)	*de minimis* Thresholds (tons/year)[1]
Carbon Monoxide	4.12	100
Volatile Organic Compounds	0.54	100
Nitrous Oxides	1.49	100
Particulate Matter <10 microns	3.17	100
Particulate Matter <2.5 microns	0.43	100
Sulfur Dioxide	0.10	100
Carbon Dioxide Equivalency	658	27,557

Source: EPA 2010b, 40 CFR 51.853, and GSRC modeled air emissions (Appendix D).
[1] Pima County is in moderate non-attainment for PM-10 (EPA 2010b).

Several sources of air pollutants contribute to the overall air impacts of the construction project. The air calculations in Appendix D and in the summary table included emissions from:

1. Combustible engines of construction equipment
2. Construction workers' commute to and from work
3. Supply trucks delivering materials to the Ajo airport
4. Fugitive dust from job-site ground disturbances
5. Post-restoration site maintenance

As can be seen from the table above, the proposed restoration activities do not exceed the de minimis threshold for PM-10 in Pima County and, thus, do not require a Conformity Determination. As there are no violations of air quality standards and no conflicts with the state implementation plans, impacts on air quality would not be considered in the context of the General Conformity Rule.

During the restoration of the project site, 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. Water would be applied to the project site to properly compact the backfill material placed in the hole. The use of water for compaction would also minimize the emissions of fugitive dust. By using these BMPs, air emissions from the restoration activities would be temporary, and potential effects on air quality in Pima County would be minor.

3.12 NOISE

3.12.1 Affected Environment

Noise is often described as unwanted sound. Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the dB scale is referred to as sound level. The A-weighted dB scale (dBA) takes this into account, emphasizing the frequencies, and is a measure of noise at a given, maximum level or constant state level. The threshold of perception of the human ear is approximately 3 dBA, which is considered barely perceptible. A 5 dBA change is considered to be clearly noticeable. A 10 dBA increase in the measured sound level is typically perceived as being twice as loud.

Former tower site TCA-AJO-189 is located within the Cabeza Prieta Wilderness. Designated wilderness is valued for its quietness and solitude. Anthropogenic noises can degrade the natural soundscape and adversely affect humans and wildlife. Natural soundscapes are composed completely of natural sounds without the presence of human-made sounds. The former tower site is located on lands where noise can adversely affect natural soundscapes. The natural ambient background noise levels on OPCNM were measured and averaged at 20 dBA over a 20-day period (NPS 2009). Background noise levels on CPNWR are assumed to be similar to those measured on OPCNM.

Designated Wilderness

Two important noise emission thresholds are considered in this wilderness noise analysis. First, Federal Highway Administration (FHWA) established a construction noise abatement criterion of 57 dBA for lands, such as National Parks, in which serenity and quiet are of extraordinary significance (23 CFR 722 Table 1). The 57 dBA criterion threshold is used to measure the impacts from short-term noise emissions associated with restoration activities that require the use of heavy equipment (e.g., backfilling).

3.12.2 Environmental Consequences

3.12.2.1 No Action Alternative

Under the No Action Alternative, sensitive noise receptors and wildlife would incur no additional impacts beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.12.2.2 Proposed Action

The following analysis focuses on short-term noise emissions, which include emissions from construction equipment and helicopter activities involved in the restoration of former tower site TCA-AJO-189. Long-term noise emissions would not occur at the former tower site since a tower is no longer proposed at the site.

Temporary Construction Noise

Temporary noise emissions include noise emissions from construction equipment used for restoration efforts at former tower site TCA-AJO-189. Construction equipment would be used to backfill the hole, compact soil, and grade the site. Table 3-2 describes noise emission levels at a distance of 50 feet for the type of construction equipment to be used for restoration efforts (FHWA 2007). Noise would have to travel up to 1,000 feet before it would be attenuated to an acceptable level of 57 dBA. However, noise emissions associated with construction equipment would be temporary (approximately 10 days) and localized to TCA-AJO-189. Noise emissions, with the exception of intermittent helicopter generated noise, are anticipated to return to ambient levels following the completion of backfilling and grading activities. The Proposed Action would have a temporary, minor adverse effect on designated wilderness.

Table 3-2. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances[1]

Noise Source	50 feet	500 feet	1,000 feet	2,000 feet	3,000 feet
Backhoe / Bobcat	78	57	51	44	39

Source: FHWA 2007 and GSRC

[1] The dBA at 50 feet is a measured noise emission (FHWA 2007). The 500 to 3,000 foot results are GSRC modeled estimates.

Helicopter Noise Emissions

Restoration of TCA-AJO-189 would require the use of a helicopter, and CBP estimates that restoration would require up to 85 total lifts for equipment and materials.

A Kaman K-MAX or similar cargo helicopter would be used to transport equipment, materials, and personnel to restore former tower site TCA-AJO-189. According to the manufacturer's data, the K-MAX helicopter produces noise emissions of 82 dBA at a distance of 300 feet. The noise model predicted that noise emissions of 82 dBA would have to travel 3,838 feet before they would attenuate to acceptable levels of 57 dBA (Figure 3-7). The 57 dBA noise contour produced by helicopter noise would encompass approximately 1,062 acres of land. The model predicts noise levels based on horizontal surfaces and does not take into account slope and altitude. Thus, the acreage potentially impacted by noise emissions is a worst case scenario. Effects from helicopter noise emissions would be localized and considered a temporary, minor adverse effect on designated wilderness.

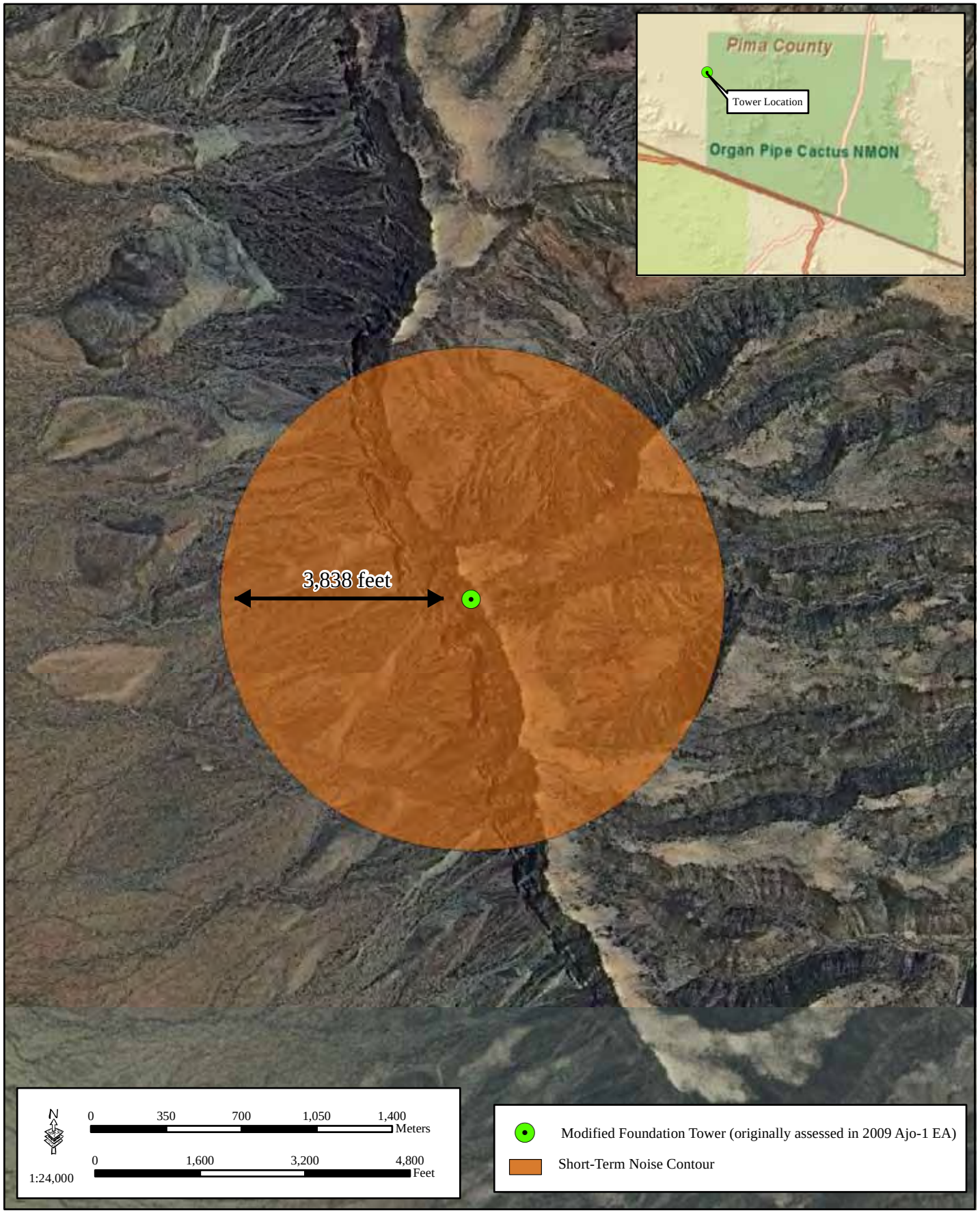

Figure 3-7: Short-term Noise Contours at TCA-AJO-189

3.13 AESTHETIC AND VISUAL RESOURCES

3.13.1 Affected Environment

Sensor and communication towers, as well as general commercial, General Services Administration, CBP-Office of Information and Technology (OIT), U.S. Air Force and USFWS communications towers currently exist adjacent to former tower site TCA-AJO-189. The existing towers affect the aesthetic and visual resources in the project area.

Aesthetic resources vary throughout the project area and include vast open areas of arid desert land, lava flows, mountains, and areas of unique native vegetation. Areas within the project area visited for their natural setting and aesthetic values include OPCNM and CPNWR and their associated wilderness. Former tower site TCA-AJO-189 is located in the Growler Mountains within Cabeza Prieta Wilderness.

3.13.2 Environmental Consequences

3.13.2.1 No Action Alternative

The 2009 Ajo-1 EA indicated that the temporarily disturbed areas associated with the construction of TCA-AJO-189 would be restored following construction (CBP 2009). Under the No Action Alternative, the disturbed area would not be restored and would remain in a degraded state. Currently, the site detracts from the aesthetic values of designated wilderness. However, potential impacts on aesthetics are negligible due to the juxtaposition of the disturbed site to existing P-25 and other agencies' communications equipment currently located on Growler Mountain. The No Action Alternative would have a permanent, moderate adverse effect on aesthetic resources in the project area.

3.13.2.2 Proposed Action

The site would be restored in accordance with the Restoration Plan (CBP 2011) prepared by CBP and approved by USFWS (Appendix B). With completion of the Proposed Action, native vegetation would be reestablished on the approximately 35- x 35-foot disturbance area following the backfilling of the existing hole. The restored site would be similar in appearance and vegetation characteristics (e.g., plant species and plant density) to the adjacent landscape.

Furthermore, the Proposed Action would have an indirect, beneficial impact on aesthetics as a result of eliminating a tower at the former tower site. A viewshed analysis conducted as part of the 2009 Ajo-1 EA indicated that TCA-AJO-189 would have been visible from the Growler Valley within both CPNWR and OPCNM (CBP 2009). The tower would have also been visible from portions of the Valley of the Ajo on OPCNM. The Proposed Action would have a permanent, moderate beneficial impact on aesthetics.

3.14 HAZARDOUS MATERIALS

3.14.1 Affected Environment

Hazardous materials were discussed in the 2009 Ajo-1 EA and are incorporated herein by reference (CBP 2009). Solid and hazardous wastes are regulated in Arizona by a combination of laws promulgated by the Federal, state, and regional Councils of Government. A search of the SBI*net* Ajo-1 Tower Project area was conducted on EPA's Comprehensive Environmental

Response, Compensation, and Liability Information System (CERCLIS). CERCLIS contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities, including sites that are on the National Priorities List (NPL) or being considered for the NPL. The search found no active NPL sites within a 1-mile radius of any of the proposed tower sites located in Pima County, Arizona.

3.14.2 Environmental Consequences

3.14.2.1 No Action Alternative

The No Action Alternative would not contribute any additional hazardous waste or materials to the project area beyond those described in the 2009 Ajo-1 EA (CBP 2009).

3.14.2.2 Proposed Action

The Proposed Action would not result in the exposures of the environment or public to any hazardous materials. During the backfilling and grading of the project site, a potential exists for POL contamination at former tower site TCA-AJO-189 and the Ajo Airport due to the storage of POL material for maintenance and refueling of construction equipment and the helicopter. The quantity of POLs maintained at the project site would be minimal, as construction equipment would be present on-site for no more than 10 days during the backfilling and grading of the site. POLs would be delivered to the Ajo Airport via a fuel truck for the purpose of servicing and refueling the helicopter. The storage of POLs would include primary and secondary containment measures. Cleanup materials (e.g., oil mops) would be maintained on-site for appropriate spill response and cleanup in case an accidental spill occurs. Drip pans would be provided for all on-site stationary construction equipment to capture any POL that is accidentally spilled during maintenance. Containment measures would be used during refueling to capture any fuel spilled during refueling. To ensure oil pollution prevention, the construction contractor would have a Spill Prevention Control and Countermeasure Plan (SPCCP) in place prior to the start of restoration activities as outlined in Section 5.0. The Proposed Action would have a temporary, minor potential to contaminate the environment with hazardous materials.

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SECTION 4.0
CUMULATIVE IMPACTS

4.0 CUMULATIVE IMPACTS

The NEPA regulations define a cumulative impact as an "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time by various agencies (Federal, state, and local) or individuals. Informed decision making is served by consideration of cumulative impacts resulting from activities that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

4.1 HISTORICAL IMPACTS ON THE SONORAN DESERT

The Sonoran Desert Ecosystem has been impacted by historical and ongoing activities such as ranching, agricultural and urban development, Federal land use including military operations, management for recreation and wildlife, and law enforcement activities. All of these actions have, to a greater or lesser extent, contributed to several ongoing threats to the ecosystem, including loss and degradation of habitat for both common and rare wildlife and plants, and the proliferation of roads and trails. The most substantial impacts of these activities were not or are not regulated by NEPA and did not include efforts to minimize impacts. These include the loss of lesser long-nosed bat maternity roosts, restriction of the Sonoran pronghorn range, the establishment of non-native plants, and the proliferation of roads and trails.

4.2 REASONABLY FORESEEABLE CBP PROJECTS WITHIN AND NEAR THE TUCSON SECTOR

USBP has been conducting law enforcement actions along the United States/Mexico 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 hundreds of acres of resources associated with the Sonoran Desert, including the climate and landscapes which support native plants and animals, as well as socioeconomic conditions in border communities.

In recent years, Congress expressed its interest in border security through various legislative enactments and by consistently appropriating significant funds for the construction of fencing, infrastructure, and technology along the border. In FYs 2008, 2009, and 2010, CBP completed construction of up to approximately 358 miles of primary fence in the CBP Sectors of Rio Grande Valley, Marfa, Del Rio, and El Paso, Texas; Tucson and Yuma, Arizona; and El Centro and San Diego, California (SBI 2010). Approximately 5 miles of pedestrian fence was constructed on OPCNM in 2008.

Another CBP initiative, entitled Vehicle Fence 300, constructed approximately 320 miles of vehicle fence in Arizona and California as of September 2010 (SBI 2010). Approximately 15 miles of vehicle fence was constructed on CPNWR. CBP projects recently completed or

reasonably foreseeable in the near future in the Tucson Sector are presented in Table 4-1. OTIA projects which include the construction of towers are currently in the planning phase for Arizona and would include tower construction and access roads in the Naco, Douglas, and Wilcox stations' Areas of Responsibility (Tucson East, 29 towers proposed), Tohono O'odham Nation (30 proposed towers), and in the Ajo and Yuma Sector's Wellton Station Area of Responsibility (CPNWR, 11 proposed towers). The number of proposed towers for these projects may change based on the development of final planning and analysis designs.

Table 4-1. Recently Completed or Reasonably Foreseeable CBP projects within and near the Tucson Sector

Project	Approximate Acres Permanently Impacted
Recent construction of nine communication and sensor towers as part of the SBInet Ajo-1 Tower Project	19
Construction of 15 communication and sensor towers as part of the SBInet Tucson-1 Tower Deployment in 2009.	8
Recent construction of 36 miles of hybrid barrier and the proposed construction of 35 miles of patrol and drag road, eight water wells, two new temporary staging areas, five existing staging areas, and approximately 7.5 miles of improvements to north-south access roads on the BMGR.	189
Recent expansion of the USBP Ajo Station in Why, Arizona (including one tower).	30
Construction of approximately 15 miles of vehicle fence and north-south access road improvements on the CPNWR (VF 300).	115
Construction of approximately 37 miles of permanent vehicle barrier, improvements to approximately 37 miles of access road, construction of 1 mile of new road, and installation of approximately 1.5 miles of temporary vehicle barriers on the CPNWR.	186
Recent construction of 80 miles of all-weather patrol road and construction of 50 miles of PVBs on TON, as well as a construction access road for the installation and maintenance of the PVBs.	72
Recent relocation of the USBP FOB from Bates Well to the western boundary of the OPCNM.	1
Proposed expansion of the FOB near tower sites TCA-AJO-302 from 1 acre to 3 acres. The FOB would have two modular buildings for agent support and detention of CBVs and would be similar to the existing facility at Papago Farms on the Tohono O'odham Nation.	3
Ongoing Land Mobile Radio Modernization Project – installed 68 communications antennas throughout AZ on existing structures.	0
Proposed installation of four-antenna sites on CPNWR (3) and Coronado National Forest (1) as part of the Land Mobile Radio Modernization Project.	1
Installation of 26 emergency beacons within the CPNWR and BMGR.	0
Proposed construction of vehicle fence on the Tohono O'odham Nation (VF 300).	41
Proposed tower construction and access roads for SBI*net* Yuma/BMGR project.	9*
Proposed tower construction and access roads for SBI*net* CPNWR project.	2*
Proposed tower construction and access roads for SBI*net* Tucson East project.	5*
Proposed tower construction and access roads for SBI*net* Tohono O'odham project.	30*

* These are only initial planning estimates based on tower impacts and currently does not include roads.

All CBP actions have been in support of the agency's mission to gain and maintain control of the United States border. Infrastructure projects have supported the operational methods determined to be the most effective approach to achieving the agency's mission. Each of these projects has

been compliant with NEPA, and measures to avoid, minimize, or mitigate for the adverse effects on the human and natural environments have been developed and implemented on a project-specific basis. With continued funding and implementation of BMPs developed as part of past, ongoing, and future actions, including environmental education and training of CBP agents and officers, as well as the use of biological and archaeological monitors, wildlife water systems, wildlife forage plots, and restoration activities, the direct impacts of these projects have been and would be prevented or minimized.

Operational impacts have also occurred as part of required CBV interdiction activities. USBP agents patrol the United States/Mexico international border and adjacent lands in the United States using a variety of transportation, including foot, horse, ATV, trucks, and aircraft. Both CBV traffic and resulting required law enforcement traffic have disturbed existing roads, and off-road travel has affected natural resources. Traffic volume and travel speed has increased on existing OPCNM and CPNWR authorized roads. These changes have necessitated increased road maintenance and road widening. However, infrastructure (i.e., vehicle barriers) and technology (i.e., Mobile Surveillance Systems) projects serve as force multipliers, allowing for increasingly efficient interdiction activities and consequent increased deterrence of CBVs, thereby reducing the level of cross-border crime and thus reducing the required enforcement footprint.

An example of the effectiveness of this application of force multipliers is seen in the USBP enhanced operations in Yuma Sector in 2007. At that time, Yuma Sector was one of the busiest locations for illegal entry into the United States. Within one year of enhancing operations, Yuma Sector saw a decrease in activity from 33,405 arrests to 7,077. Since 2005 (when the traffic was highest) there has been a 95 percent decrease in cross-border violations in the sector (99,491 arrests in 2005 vs. 5,287 in 2009) (CBP 2009). Yuma Sector's strategy involved the balanced deployment of personnel, technology, and infrastructure specific to the operational environment. Following implementation, illegal entries declined drastically and were effectively confined to the immediate border. USBP's presence within rural and remote areas did not decrease significantly initially, but rather was focused on patrolling the immediate border area. Their presence was significantly concentrated as opposed to being scattered over a larger area. This concentration of patrol efforts to the immediate border area has reduced the patrol area of the USBP and consequently reduced the environmental impacts associated with USBP operations (CBP 2009).

4.3 OTHER AGENCY/ORGANIZATIONS PROJECTS

Projects are currently being planned by other Federal entities which may affect areas in use by CBP. CBP maintains close coordination with these agencies to ensure that CBP activities do not conflict with other agencies' policies or management plans. CBP would consult with applicable state and Federal agencies prior to performing any construction activities and would coordinate operations so that they do not inappropriately impact the mission of other agencies. Other agencies, such as BLM, U.S. Air Force, NPS, and USFWS, routinely prepare or update Resource Management Plans for the resources they manage. The following is a list of projects other Federal agencies and tribes are conducting or have completed within the last 4 years within the United States/Mexico border region.

OPCNM

- Construction of parking at OPCNM entrance sign
- Realignment of the Alamo Canyon Road
- Repair of the Kuakatch berm
- Construction of a USBP horse trailer pull-out off of SR 85
- Construction of corridor access to TCA-AJO-170
- Construction of an access road to Tower 310
- Proposed installation of approximately 2 miles of new water line from the Visitor Center to the campgrounds
- Ongoing efforts to reduce water loss from Quitobaquito Pond
- Ongoing facilities maintenance projects including installation of gates along park administrative roads, reconstruction of picnic ramadas, rehabilitation of the campground dump station, and culvert replacement
- Construction of two new office buildings for law enforcement operations and the resource division.
- Construction of 30 miles of vehicle fence on OPCNM

Marine Corps Air Station (MCAS)-Yuma

MCAS-Yuma conducts military flights over CPNWR and Barry M. Goldwater Range, operates various training facilities, such as landing strips and a rifle range, and conducts Weapons Tactics Instructor courses. The courses are conducted twice a year and involve overflights and ground-based activities such as movement of troops and vehicles at ground-support areas. Ordnance delivery occurs in two locations within the range of Sonoran pronghorn. MCAS-Yuma implements measures to minimize destruction and degradation of habitat and closely monitors all activities which may disturb or harm pronghorn.

Luke Air Force Base, Barry M. Goldwater Range

Military activities within BMGR-east (the area nearest CPNWR and the Sonoran pronghorns range) include: use of airspace, four manned air-to-ground ranges, three tactical air-to-ground target areas, four auxiliary airfields, use of Stoval Airfield, and an explosive ordnance disposal burn area. Luke Air Force Base has committed to implementing measures to minimize impacts on Sonoran pronghorn and to implementing recovery projects recommended by the Sonoran Pronghorn Recovery Team.

CPNWR

Activities on CPNWR include the construction of forage-enhancement plots and waters as part of Sonoran pronghorn recovery efforts. Additionally, a semi-captive breeding pen is maintained on CPNWR as part of an emergency recovery program for Sonoran pronghorn.

4.4 IDENTIFICATION OF CUMULATIVE EFFECTS ISSUES

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. These intensity thresholds were previously defined in Section 3.1.

Cumulative impacts associated with the implementation of the SBI*net* Ajo-1 Tower Project were analyzed in the 2009 Ajo-1 EA for the SBI*net* Ajo-1 Tower Project (CBP 2009). Due to the short time period between release of the 2009 Ajo-1 EA (CBP 2009) and preparation of this SEA, the cumulative impacts presented in the 2009 Ajo-1 EA (CBP 2009) are still valid and herein incorporated by reference (CBP 2009). Further, the restoration of tower site TCA-AJO-189 to pre-project conditions would not change the significance of cumulative impact findings presented in the 2009 Ajo-1 EA (CBP 2009). Therefore, the Proposed Action analyzed in this SEA would have no to negligible cumulative effects on radio frequency environment, utilities and infrastructure, floodplains, surface waters and waters of the U.S., vegetation, hazardous materials, cultural resources, protected species (i.e., lesser long-nosed bat), socioeconomics, roadway and traffic, environmental justice issues, and sustainability and greening would be anticipated under the Proposed Action. A minor cumulative effect on soils, air quality, wildlife, and protected species (i.e., Sonoran pronghorn) would also be anticipated. The Proposed Action would result in a moderate cumulative effect on land use, noise, wilderness, groundwater, and aesthetics.

4.5 SUMMARY

No potentially major cumulative effects have been identified for further analysis. When combined with the beneficial effects of other similar measures, the proposed project would ultimately result in cumulative beneficial effects on these resources.

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SECTION 5.0
MITIGATION MEASURES

5.0 MITIGATION MEASURES

It is CBP's policy to reduce impacts through a sequence of avoidance, minimization, mitigation, and compensation. This chapter describes those measures that would be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. Environmental design measures are presented for each resource category potentially affected. These are general mitigation measures; the development of specific mitigation measures would be required for certain activities implemented under the Proposed Action. The specific mitigation measures would be coordinated through appropriate agencies and land managers or administrators, as required. Mitigations vary and include activities such as restoration of habitat in other areas, acquisition of lands, implementation of BMPs, and typically are coordinated with the USFWS and other appropriate Federal and state resource agencies.

5.1 PROJECT PLANNING/DESIGN – GENERAL CONSTRUCTION

CBP will ensure that restoration efforts follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

A CBP-approved SPCCP will be developed and implemented at restoration and maintenance sites to ensure that any toxic substances are properly handled and that escape into the environment is prevented. Agency standard protocols will be used. Drip pans will be placed underneath parked or stationary equipment, containment zones will be used when refueling vehicles or equipment, and other measures will be included.

All BMPs to be implemented by the project contractor will be included in the contract.

5.2 GENERAL CONSTRUCTION ACTIVITIES

CBP will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. Storage tanks must have proper air space (to avoid rainfall-induced overtopping), be on-ground containers, and be located in upland areas instead of washes.

CBP will avoid nighttime lighting impacts by conducting restoration activities during daylight hours only.

CBP will not use natural sources of water for restoration or irrigation purposes to avoid transmitting disease vectors, introducing invasive non-native species, and depleting natural aquatic systems.

All irrigation components will be temporary and removed when the restoration goals are met. Irrigation equipment will be removed from the site after 1 year following the initial planting if the site is accepted by USFWS.

CBP and its contractor will minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.

CBP will notify the USFWS 2 weeks before any construction activities begin, and within 1 week after project construction activities are completed.

All BMPs to be implemented by the project contractor will be included in the contract.

5.3 SOILS

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work shall cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material.

CBP will implement environmental design measures, such as straw wattles and wetting compounds to decrease erosion and sedimentation.

CBP will implement erosion control measures and appropriate BMPs before and during restoration activities, as appropriate.

CBP will place drip pans under stationary equipment and use containment zones when refueling vehicles or equipment.

5.4 VEGETATIVE HABITAT

Salvage, transplantation, and container planting will be done in accordance with a restoration plan approved by the land manager and USFWS that includes success criteria and monitoring.

All plant material will be obtained from the CPNWR to maintain a local plant source. Plant material will be obtained by harvesting cuttings from donor plants at locations identified by CPNWR personnel.

Fill material (gravel and topsoil) brought in from outside the project area will be identified by its source location. Sources will be used that are clean and weed-free.

Certified weed and weed-seed free natural materials (e.g., straw) will be used for on-site erosion control to avoid the spread of non-native plants.

The site will be surveyed for the presence of exotic plant species. If exotic plant species that are not already established in the surrounding landscape are encountered within the restoration action area, they will be documented and OTIA will coordinate with USFWS concerning corrective actions.

CBP will avoid the spread of non-native plants by using certified weed and weed-seed free natural materials (e.g., straw) for on-site erosion control if natural materials must be used.

5.5 WILDLIFE AND AQUATIC RESOURCES

The Migratory Bird Treaty Act (16 U.S.C. 703-712, [1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989]) requires that Federal agencies coordinate with the USFWS if a construction activity would result in the take of a migratory bird. If restoration activities are scheduled during nesting seasons (February 15 through August 31), surveys will be performed to identify active nests. If restoration activities result in the take of a migratory bird, then coordination with the USFWS will be required and applicable permits would be obtained prior to construction or clearing activities. Another mitigation measure that may be employed is to schedule all restoration activities outside nesting seasons, negating the requirement for nesting bird surveys.

CBP will not permit any pets inside the project area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

Biological monitors will check underneath construction equipment for wildlife species (e.g., desert tortoise) prior to moving equipment that has been idle for more than 1 hour.

5.6 PROTECTED SPECIES

CBP will minimize impacts on Sonoran pronghorn and their habitat by using flagging or temporary fencing to clearly demarcate project construction area perimeters. Soil and vegetation outside the construction area perimeter will not be disturbed.

CBP will minimize impacts on listed species and their habitats by using areas already disturbed by past activities for staging, parking, laydown, and equipment storage. If site disturbance is unavoidable, CBP will minimize the area of disturbance by scheduling deliveries of materials and equipment to only those items needed for ongoing project implementation.

CBP will minimize impacts on listed species and their habitats by limiting grading or topsoil removal to areas where this activity is absolutely necessary for construction, staging, or maintenance activities.

CBP will minimize impacts on listed species and their habitats by obtaining materials that are clean, such as gravel or topsoil, from existing developed or previously used sources, not from undisturbed areas adjacent to the project area.

CBP will minimize the number of construction and maintenance trips to the tower site.

To minimize impacts on endangered species, CBP will follow a helicopter ingress/egress route to the project site that avoids or minimizes flight activity in Sonoran pronghorn habitat as specified by USFWS. The Restoration Plan has been designed to include the minimum number of helicopter lifts necessary.

All vehicular traffic associated with restoration efforts will use designated/authorized roads to access the sites, and avoiding off-road vehicle activity outside of the project footprint.

CBP will minimize potential animal collisions, particularly with Sonoran pronghorn, by not exceeding speed limits of 25 mph on all unpaved roads.

Any collisions with Sonoran pronghorn will be reported to USFWS-AESO via telephone and electronic mail as soon as practicable, but no later than 12 hours after the collision. Information to be relayed will include: a) location of the collision, b) date and time of the collision, c) type of vehicle, and d) a description of the collision to include the outcome and a photograph of the Sonoran pronghorn (if available).

CBP will place restrictions on restoration activities during the Sonoran pronghorn fawning season (March 15 to July 31) to avoid and minimize disturbance to females and fawns.

CBP will provide for an on-site biological monitor to be present during work activities for all construction activities. The biological monitor will have the following duties: ensure and document that agreed-upon measures to minimize and avoid impacts on listed species and BMPs are properly implemented, send a weekly summary report via electronic mail to the CPNWR and USFWS-AESO following CBP review, and notify the construction manager (who has the authority to temporarily suspend activities) when construction activities are not in compliance with all agreed-upon BMPs.

The biological monitor shall report all detections of Sonoran pronghorn via electronic mail or phone to USFWS-AESO and the CPNWR within 24 hours of any detection. The electronic mail will include the following details: a) if known, the coordinates and a description of the locations where the pronghorn was detected, b) the date and time of the detection, c) the method used to make the detection, and d) as available, other pertinent details, such as the behavior of the Sonoran pronghorn (i.e. standing, foraging or running).

All project personnel will report detections of Sonoran pronghorn to the biological monitor.

5.7 WATER RESOURCES

Standard construction procedures will be implemented to minimize potential for erosion and sedimentation during restoration activities. All work shall cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material.

All fuels, waste oils, and solvents will be collected and stored in tanks or drums within secondary containment areas consisting of an impervious floor and bermed sidewalls capable of holding the volume of the largest container stored therein. The refueling of machinery will be completed following accepted guidelines, and all vehicles will have drip pans during storage and parking to contain minor spills and drips.

CBP will avoid impacts on groundwater by obtaining treated water from outside the immediate area for restoration use.

5.8 CULTURAL RESOURCES

If human remains are encountered, the OTIA Environmental Manager, the CPNWR refuge manager, and the appropriate law enforcement authorities per the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq., 43 CFR 10, as updated) will be contacted. Descendant tribal communities will be notified of the inadvertent discovery, and consultation will be initiated through CPNWR.

5.9 AIR QUALITY

Mitigation measures will be incorporated to ensure that fugitive dust and other air quality constituents' emission levels do not rise above the minimum threshold as required per 40 CFR 51.853(b)(1), (2). Standard construction BMPs such as routine watering of the construction site will be used to control fugitive dust and thereby assist in limiting potential PM-10 emissions during restoration of the site. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions.

5.10 NOISE

During backfilling and grading, temporary noise impacts are possible. All applicable Occupational Safety and Health Administration regulations and requirements will be followed. Construction equipment will possess properly working mufflers and will be kept properly tuned to reduce backfires. Implementation of these measures will reduce the potential temporary noise impacts to an insignificant level in and around the construction site.

CBP will avoid noise impacts during the nighttime by conducting restoration activities during daylight hours only.

5.11 HAZARDOUS MATERIALS

BMPs will be implemented as standard operating procedures during all restoration activities, and will include proper handling, storage, and/or disposal of hazardous and/or regulated materials.

To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein.

Refueling of machinery will be completed in accordance with accepted industry and regulatory guidelines.

Any spills will be contained immediately and cleaned up using the appropriate methods for the spill.

To ensure pollution prevention, an SPCCP will be in place prior to the start of restoration activities and all personnel will be briefed on the implementation and responsibilities of this

plan. All spills will be reported to the OTIA environmental manager and the CPNWR refuge manager. Furthermore, a spill of any petroleum liquids (e.g., fuel) or material listed in 40 CFR 302 Table 302.4 of a reportable quantity will be cleaned up and reported to the appropriate Federal and state agencies.

CBP and its contractor(s) will contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the restoration site.

CBP and its contractor(s) will recycle all waste oil and solvents. All non-recyclable hazardous and regulated wastes will be collected, characterized, labeled, stored, transported, and disposed of in accordance with all applicable Federal, state, and local regulations, including proper waste-manifesting procedures.

CBP and its contractor(s) will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. Storage tanks will be on-ground containers, have proper air space to avoid rainfall-induced overtopping, and be located in upland areas instead of washes.

All construction will follow DHS *Directive 025-01* for Sustainable Practices for Environmental, Energy, and Transportation Management.

SECTION 6.0
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6.0 REFERENCES

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SECTION 7.0
ACRONYMS AND ABBREVIATIONS

7.0 ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ADA	Arizona Department of Agriculture
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
AESO	Arizona Ecological Services Office
AGFD	Arizona Game and Fish Department
amsl	above mean sea level
AZDC	Arizona Department of Commerce
BLM	Bureau of Land Management
BMGR	Barry M. Goldwater Range
BMP	best management practices
BO	Biological Opinion
CBP	U.S. Customs and Border Protection
CBV	cross-border violator
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CPNWR	Cabeza Prieta National Wildlife Refuge
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DHS	Department of Homeland Security
DOI	Department of Interior
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FOB	forward operating base
FR	Federal Register
GSRC	Gulf South Research Corporation
INS	Immigration and Naturalization Service
LOS	line of sight
MCAS	Marine Corps Air Station
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRA	Minimum Requirement Analysis
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NPL	National Priorities List
NPS	National Park Service
NRCS	Natural Resource Conservation Service

NRHP	National Register of Historic Places
NRI	Northland Research Incorporated
OIT	Office of Information and Technology
OTIA	Office of Technology Innovation and Acquisition
OPCNM	Organ Pipe Cactus National Monument
P-25	Project 25
PM-10	particulate matter measuring less than 10 microns
P.L.	Public Law
POE	port of entry
POL	petroleum, oil, and lubricants
SBI	Secure Border Initiative
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office
SPCCP	Spill Prevention Control and Countermeasure Plan
SR 85	State Highway 85
TI	tactical infrastructure
U.S.	United States
U.S.C.	U.S. Code
USACE	U.S. Army Corps of Engineers
USBP	U.S. Border Patrol
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service
USIBWC	U.S. Section, International Boundary and Water Commission
WSC	Wildlife of Special Concern

SECTION 8.0
LIST OF PREPARERS

8.0 LIST OF PREPARERS

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

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Howard Nass	GSRC	Forestry/Wildlife	20 years of natural resources studies and NEPA	Project Manager - SEA preparation (Wilderness and Aesthetics) and review
Shanna McCarty	GSRC	Forestry	3 years natural resource studies, 2 years NEPA	SEA preparation (Socioeconomics, Land Use, Radio Frequency, Sustainability/Greening, Vegetation, Wildlife, and Protected Species) and biological surveys
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