MARCH 2003

FINAL

ENVIRONMENTAL ASSESSMENT FOR VARIOUS ROAD IMPROVEMENTS FROM CANYON CITY, CALIFORNIA TO THE IMPERIAL COUNTY LINE SAN DIEGO COUNTY, CALIFORNIA

U.S. BORDER PATROL

FINDING OF NO SIGNIFICANT IMPACT
VARIOUS INFRASTRUCTURE AND ROAD IMPROVEMENTS FROM CANYON CITY TO THE IMPERIAL COUNTY LINE SAN DIEGO COUNTY, CALIFORNIA

PROJECT HISTORY: Illegal migrant traffic into the U.S. causes detrimental impacts to natural and cultural resources as well as increases the risks to the health and safety of U.S. Border Patrol (USBP) agents and the general public. The remote and isolated region of southeastern San Diego County, California, and the proximity of the Mexican border has made this area a main artery for smuggling illegal migrants and contraband into the U.S. Near constant illegal foot traffic occurs in this area by illegal migrants and leads to the destruction of sensitive species, fragmentation of landscape, and disturbance to wildlife.

In the past, little emphasis was placed on the importance of infrastructure (e.g., lights and fences) along the border area. As illicit trafficking increased, the area that the USBP patrols has also increased. The USBP's inability to deter or contain illegal migration resulted in an increase in the geographic footprint of enforcement activities and their subsequent potential for environmental impacts. These increases have posed a continuous border enforcement challenge and compound the need for tactical infrastructure.

PURPOSE AND NEED: Undocumented aliens (UDAs) pass through the border areas, threaten public lands, historical structures, and Federal and state protected species and habitat. Vehicles used by smugglers are continuously abandoned in National Parks and other natural and sensitive areas. Dealing with the detrimental effects of UDAs is an ever-increasing burden on Federal and state land managers, private landowners, and the USBP. The UDAs have trampled vegetation, started wildland fires, left litter, and abandoned vehicles throughout the entire border region.

The combination of the proposed actions would aid the USBP in gaining and maintaining more control of the U.S.-Mexico border. The creation of new vantage points, safer driving conditions, improved access, and better protection of the border would all benefit the USBP in protecting the border. Each of the following project components would aid the USBP in fulfilling their mission:

- Night vision scope pads and access roads will allow the USBP to quickly and effectively detect and apprehend illegal aliens and smugglers. These capabilities provide the necessary and more effective surveillance to a larger area, improve response time, and enhance the safety of the USBP agents.
- Drainage structure repair or installation will reduce erosion and provide a safer, more environmentally sound water crossing. Repairs or installations also improve USBP response time, reduce vehicle maintenance downtime due to poor road conditions, and provide safer driving conditions.
- Portable lights will provide deterrence through the certainty of detection and apprehension. The lighting systems deny UDAs the cover of darkness, create a safer working environment for USBP agents, improve efficiency of agents, and aid in the protection of neighborhoods, businesses, and sensitive environments north of the lights through deterrence.

- With the 300-foot extension of the bollard fence, the USBP will have enhanced response to UDA apprehension that are presently able to escape agents by running around the end of the existing landing mat fence.
- Roadbed demolition activities will facilitate the maintenance and leveling of existing roads and allow for the completion of road projects. Realigning the road along the border gives the USBP agents a more direct route to observe UDA activities, greatly improves response time, provides safer driving conditions, and reduces the amount of concealment opportunities for UDAs.
- Water wells and holding tanks would serve as non-potable water sources for construction efforts within the project area. This would eliminate the need to travel miles from the project sites to obtain water from existing wells. By having an on-site or nearby source of water, and the ability to store large quantities of water and quickly fill water trucks, large vehicles and equipment would be able to remain in or near the staging areas and would greatly reduce the potential for accidents.

PROPOSED ACTION: The proposed action would allow USBP to (1) place up to 50 portable lights, as needed, within 60 feet of the U.S.-Mexico border from the Pacific Crest Trail to the Imperial County line; (2) construct three night vision scope pads and access roads; (3) install or repair four drainage structures; (4) install approximately 300 feet of bollard fence near Jacumba; (5) conduct blasting activities at 14 sites; and (6) install two water wells and holding tanks.

ALTERNATIVES: Alternatives addressed in the Environmental Assessment (EA) include a No Action Alternative and the Proposed Action Alternative described above. The No Action Alternative would not allow any of the above-mentioned projects to occur at this time. The Proposed Action Alternative would allow the above projects to be completed. Other alternatives considered but eliminated from further discussion include the use of permanent lighting, remote video surveillance systems, solar powered lighting systems, the use of lower wattage bulbs in the portable lighting systems, and an alternate access route for the Mountain Empire night vision scope pad.

This EA addresses new actions and updates alternatives addressed in previous National Environmental Policy Act documents, and evaluates additional alternatives selected for this project. Therefore, this EA is tiered from the 2001 Final Supplemental Programmatic Environmental Impact Statement for INS and Joint Task Force-Six Activities, and supplements the 1997 Final EA for Border Road Maintenance and Construction, Tecate to Campo, San Diego County, California; the 1994 Final EA for Border Road and Fence: Construction and Repair from Campo to Jacumba, San Diego County, California; and the 1993 Final EA for Border Road and Fence: Construction and Repair from Tecate to Canyon City, San Diego County, California.

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ENVIRONMENTAL CONSEQUENCES: No significant adverse effects to the natural or human environment are expected upon implementation of the Proposed Action Alternative. Ground disturbance would be required, but would not affect land use, aesthetics, threatened and endangered species and critical habitat, air quality, socioeconomics, and cultural resources. Since some of the proposed actions would involve ground disturbance, some effects are expected to vegetation, wildlife habitat, soils, and water resources. However, the total project is expected to disturb a maximum of 10 acres, much of which has been previously disturbed; therefore, the effects would not be considered significant.

ENVIRONMENTAL DESIGN MEASURES: Environmental design measures will be implemented and supervised by the USBP managers at the Campo Station. These measures include:

1. Using standard construction procedures to minimize the potential for erosion and sedimentation and control fugitive dust during construction by the implementation of Best Management Practices.

2. Proper routine maintenance of all vehicles and equipment would be implemented to ensure efficient operation. No equipment or vehicles would be maintained or stored in or near water resources.

3. Any major fuel spills would be contained immediately by constructing an earthen dike and applying a petroleum absorbent to contain the spill.

4. Secondary containment (e.g., catch pans) will be used during placement and regular maintenance of the portable light generators to avoid the potential for soil contamination.

5. Any demolition activities near riparian areas and drainage structure repair or installation would occur outside of the least Bell's vireo and southwestern willow flycatcher nesting season (15 February and 30 August). Migratory bird surveys will be conducted before any blasting occurs and before any ground disturbing activities would occur during the nesting/breeding season.

6. Prior to any blasting activities, loose rock and other larger debris will be removed from the site to reduce the potential for flying material. Blasting mats or soil overburdens will be used, where necessary, to reduce the amount of noise generated.

7. No portable lighting systems will be placed within designated critical habitat for the Quino checkerspot butterfly or within drainage areas.

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8. Areas temporarily disturbed from construction related activities would be revegetated upon the completion of the project.

FINDING: Based upon the results of the EA and the environmental design measures to be incorporated as part of the proposed action, it has been concluded that the Proposed Action Alternative would not have a significant adverse effect on the environment.

James Caffrey, Acting Director
Headquarters, Facilities and Engineering Division

3-27-05
Date

FINAL REPORT

Environmental Assessment for Various Infrastructure and Road Improvements from Canyon City, California to the Imperial County Line San Diego County, California

March 2003

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EXECUTIVE SUMMARY

PROPOSED ACTIONS:	The proposed actions consists of: 1) the placement of up to 50 portable lights, as needed, within 60 feet of the border from the Pacific Crest Trail to the Imperial County line; 2) night vision scope pad and access road construction; 3) installation/repair of four drainage structures; 4) the installation of a 300-foot bollard fence section near Jacumba; 5) blasting activities; and 6) the installation of two water wells and holding tanks by the U.S. Border Patrol (USBP). All activities would take place between Canyon City, California and the Imperial County line in San Diego County, California.
PURPOSE AND NEED FOR THE PROPOSED ACTIONS:	The combination of the proposed actions would aid the USBP in gaining and maintaining control of the U.S.-Mexico border. The creation of new vantage points, safer driving conditions, faster access, and better protection of the border would all benefit the USBP in protecting the border from illegal aliens and smugglers.
ALTERNATIVES ADDRESSED:	Two alternatives are evaluated in this Environmental Assessment: the Proposed Action and No Action. The Proposed Action Alternative includes implementing all of the actions listed above. The No Action Alternative would not allow for the expansion of USBP operations and would eliminate all proposed actions addressed in this document.
ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTIONS:	No significant adverse effects to the natural or human environment are expected upon implementation of the proposed action. In addition, no adverse effects to cultural resources are predicted. Approximately 9.7 acres of soil, vegetation, and wildlife habitat would be disturbed with the Proposed Action Alterative.
CONCLUSION:	Based upon the findings of this analysis and assuming that all mitigation measures recommended herein are implemented, no significant adverse impacts would occur from the Proposed Action Alternative.

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SECTION 1.0
INTRODUCTION AND PURPOSE AND NEED

1.0 INTRODUCTION AND PURPOSE AND NEED

1.1 Introduction

This Environmental Assessment (EA) addresses the potential effects, beneficial and adverse, of the placement of up to 50 portable lights, as needed, within 60 feet of the United States (U.S.)-Mexico border from the Pacific Crest Trail (PCT) to the Imperial County line; the construction of three night vision scope pads and access roads; the installation or repair of four drainage structures; the installation of an approximately 300-foot long bollard fence section near Jacumba; blasting activities; and the installation of two water wells and holding tanks by the U.S. Border Patrol (USBP). All construction activities would take place between Canyon City, California and the Imperial County line in San Diego County. These improvements have been proposed by USBP in an effort to enhance the USBP's capability to gain, maintain, and extend control of the U.S.-Mexico border.

This EA will address new actions and update alternatives addressed in previous National Environmental Policy Act (NEPA) documents and evaluate additional alternatives selected for this project. Therefore, this document is tiered from the Final Supplemental Programmatic Environmental Impact Statement (EIS) for the Immigration and Naturalization Service (INS) and Joint Task Force-Six (JTF-6) Activities (INS 2001) and supplements the Final EA for Border Road Maintenance and Construction, Tecate to Campo, San Diego County, California (USACE 1997); the Final EA for Border Road and Fence: Construction and Repair from Campo to Jacumba, San Diego County, California (USACE 1994); and the Final EA for Border Road and Fence: Construction and Repair from Tecate to Canyon City, San Diego County, California (USACE 1993).

1.2 Background and History

1.2.1 INS Organization

The INS has the responsibility to regulate and control immigration into the United States. In 1924, the U.S. Congress created the USBP to be the law enforcement arm of the INS. The USBP's primary function is to detect and deter the unlawful entry of undocumented aliens (UDAs) and smuggling along the United States' land borders and between the

ports-of-entry (POEs). With the increase in illegal drug trafficking, the USBP also has become the leader for drug interdiction between land POEs. Since 1980, an average of 150,000 immigrants have been naturalized every year. At the same time, however, illegal aliens have become a significant issue. Apprehension rates for INS are currently averaging more than 1.5 million illegal aliens throughout the country per year. At present, the INS estimates that there are seven to nine million illegal aliens in the United States.

The INS has reported that the U.S.-Mexico border is breached more than any other international border in the world. It is a large, diverse, and difficult boundary to effectively enforce without the use of dedicated tactical infrastructure (fences, lights, roads, cameras and scopes, etc.).

Prior to the early 1990s, there was less awareness of southwest border issues and less national attention was given to illegal trans-boundary activity. As a result, the USBP's growth was nominal, funding for enforcement efforts fell short, and the USBP functioned under severe constraints. Events over the last decade, however, related to illegal immigration and smuggling have increased the Nation's awareness and generated substantial interest in controlling the U.S.-Mexico border. This has resulted in increased funding and staffing and created new opportunities in the development of proactive border control strategies as demonstrated in patrol and enforcement operations throughout the southwest border area (e.g., Operations Gatekeeper, Hold-the-Line, Safeguard, and Rio Grande).

The anti-terrorism role of the INS is an important function of the agency; however, since the September 11, 2001 attack, this role has increased and is now more important than ever. This increased function to fight terrorism requires more vigilance along the borders. All enforcement activities, subsequent infrastructure, and technological improvements such as roads, fencing, remote video surveillance (RVS) systems, and lighting, are necessary elements in securing our borders.

Past enforcement strategies were reactive, and little emphasis was placed on the importance of infrastructure (e.g., lights and fences) along the U.S.-Mexico border. As illicit trafficking increased, the area that the USBP patrols has also increased. The

USBP's inability to deter or contain illegal migration resulted in an increase in the geographic footprint and their subsequent potential for environmental impacts.

In recent years, the USBP significantly increased its emphasis on deterrence. Deterrence is achieved only when the USBP has the ability to create the immediate, credible, and absolute certainty of detection and apprehension. Tactical infrastructure components, such as fences, scope sites, RVS, and lighting, are a critical element in the current enforcement strategy. The continued urbanization and industrialization of the immediate border, the recognition of environmental preservation concerns, the movement of illegal activities as a result of other border infrastructure projects along the southwest border, and the increase of criminal trans-boundary activities (including trafficking in people and drugs) and counter terrorism efforts continue to pose a border enforcement challenge and compound the need for tactical infrastructure.

1.2.2 Regulatory Authority

The primary sources of authority granted to officers of the INS are the Immigration and Nationality Act (INA), found in Title 8 of the United States Code (USC), and other statutes relating to the immigration and naturalization of aliens. Secondary sources of authority are administrative regulations implementing those statutes, primarily those found in Title 8 of the Code of Federal Regulations (8 [CFR] Section 287), judicial decisions, and administrative decisions of the Board of Immigration Appeals. In addition, the Illegal Immigration Reform and Immigrant Responsibility Act mandates INS to acquire and/or improve equipment and technology along the border, hire and train new agents for the border region, and develop effective border enforcement strategies.

Subject to constitutional limitations, INS officers may exercise the authority granted to them in the INA. The statutory provisions related to enforcement authority are found in Sections 287(a), 287(b), 287(c), and 287(e) [8 USC § 1357(a,b,c,e)]; Section 235(a) [8 USC § 1225]; Sections 274(b) and 274(c) [8 USC § 1324(b,c)]; Section 274(a) [8 USC § 1324(a)]; and Section 274(c) [8 USC § 1324(c)] of the INA. Other statutory sources of authority are Title 18 of the United States Code (18 USC), which has several provisions that specifically relate to enforcement of the immigration and nationality laws; Title 19 [19 USC § 1401(i)], relating to U.S. Customs Service cross-designation of INS officers; and Title 21 [21 USC § 878], relating to Drug Enforcement Agency cross-designation of INS

officers. Effective 1 March 2003, the USBP and INS were transferred to the Department of Homeland Security.

1.2.3 San Diego Sector

The mission of the USBP San Diego Sector is to protect the U.S.-Mexico border through the detection and prevention of smuggling and illegal entry of aliens into the U.S. The San Diego Sector is responsible for approximately 7,000 square miles and more than 66 linear miles along the U.S.-Mexico border. Although geographically the San Diego Sector is the smallest of the USBP sectors, it is responsible for approximately 40% of all apprehensions nationwide. The San Diego Sector consists of seven USBP stations: Brown Field, Campo, Chula Vista, El Cajon, Imperial Beach, San Clemente, and Temecula. The proposed project would occur within the Campo Station's Area of Operation (AO).

The San Diego Sector uses a variety of methods to detect and deter UDAs and smugglers. Deterrence is accomplished through the presence (24 hours per day, seven days per week) of the USBP agents on the border, fences, and other physical barriers (natural and man-made), lighting, and the knowledge that the illegal entrants will be detected and apprehended. Detection of the UDAs and illegal traffickers is accomplished through a variety of low and high technology resources. These include observing physical signs of illegal entry (vehicle tracks and footprints, clothes, etc.), visual observation of the illegal entries from the ground or from aerial reconnaissance, information provided by private landowners or the general public, ground sensors, and RVS systems and other night vision scope sites.

The San Diego Sector is currently employing a border enforcement program called Operation Gatekeeper. Operation Gatekeeper is a complex and diverse program that uses increased surveillance, remote sensing methods and technologies, search and rescue missions, personnel deployment, and other related tasks to detect and deter UDAs and smugglers from entering the U.S. Since the inception of Operation Gatekeeper 7 years ago, record numbers of smugglers have been prosecuted, alien traffic has been deterred from the area, and the border enforcement strategy has disrupted smuggling operations.

Table 1-1 shows the total number of apprehensions from fiscal year (FY) 1996 through December 17, 2002. This table shows the number of apprehensions decreasing due, in part, to continuous improvements to the border enforcement programs.

Table 1-1: San Diego Sector Apprehensions from FY 1996 through December 2002

Fiscal Year	Total Number of Apprehensions in the San Diego Sector
FY 1996	441,541
FY 1997	258,777
FY 1998	246,871
FY 1999	176,201
FY 2000	147,865
FY 2001	102,138
Oct 01, 2002 - Dec 02, 2002	104,903

Source: USBP 2002a

1.2.4 Campo Station

The Campo Station is responsible for approximately 32.5 miles of international border between the U.S. and Mexico and has an AO that encompasses over 1,061 square miles. The AO extends from just east of Tecate, California, and continues east to the Imperial County line. The northern boundaries for the AO run from Mount Laguna, California, west to Alpine, California (USBP 2002b).

There are currently about 250 agents and staff assigned to the Campo Station and it is projected to have 350 agents by the end of FY 2003. The station is also responsible for the sub-station located in Boulevard, California with approximately 59 agents staffed there.

1.2.5 Bureau of Land Management (BLM)

Revised

The Bureau of Land Management (BLM) is a Federal agency within the Department of the Interior and manages approximately 262 million acres of land in the western U.S. The primary law by which the BLM manages public lands, or land set aside by the Federal government for natural resource management and recreation, is through the Federal Land Policy and Management Act (FLPMA) of 1976. This law grants the BLM authority to give permission to the USBP to maintain roads on public lands.

The California Desert Conservation Area (CDCA), a 25 million-acre area in southern California, was set aside though the FLPMA for the protection and use of the desert. The BLM manages approximately 10 million acres of this conservation area. The CDCA has been divided into five resource areas. Several of the proposed project components fall within the South Coast Resource Area.

1.3 Location of the Proposed Action

The project area covers various sites between Canyon City, just east of Tecate, California and the Imperial County line (Figure 1-1). Some of the actions (i.e., portable lights and blasting) addressed in this document would occur within the 60-foot Roosevelt Easement along the international border. Other items such as the construction of night vision scope pads and access roads would occur within one mile north of the international border. Two of the proposed drainage structures, five blasting sites, one scope pad and approximately 211 feet of access road construction at Airport Mesa, and the two water well and concrete holding tank sites would be located on public land managed by the BLM; the rest of the proposed actions would occur on private landholdings.

Revised

1.4 Purpose and Need

The USBP are charged with the responsibility of protecting the sovereign borders of the U.S. The USBP has reported that the U.S.-Mexico border is breached more than any other international border in the world. It is a large, diverse, and difficult boundary to effectively enforce without the use of dedicated tactical infrastructure (fences, lights, roads, scope sites, etc.).

The purpose of these proposed actions is to create safer working conditions for the USBP and in so doing, deter UDA activities. These UDAs pass through the border areas, threaten public lands, historical structures, and Federal and state protected species and habitat. Vehicles used by smugglers are continuously abandoned in National Parks and other natural and sensitive areas. Dealing with the detrimental effects of UDAs is becoming an ever-increasing burden on Federal and state land managers, private

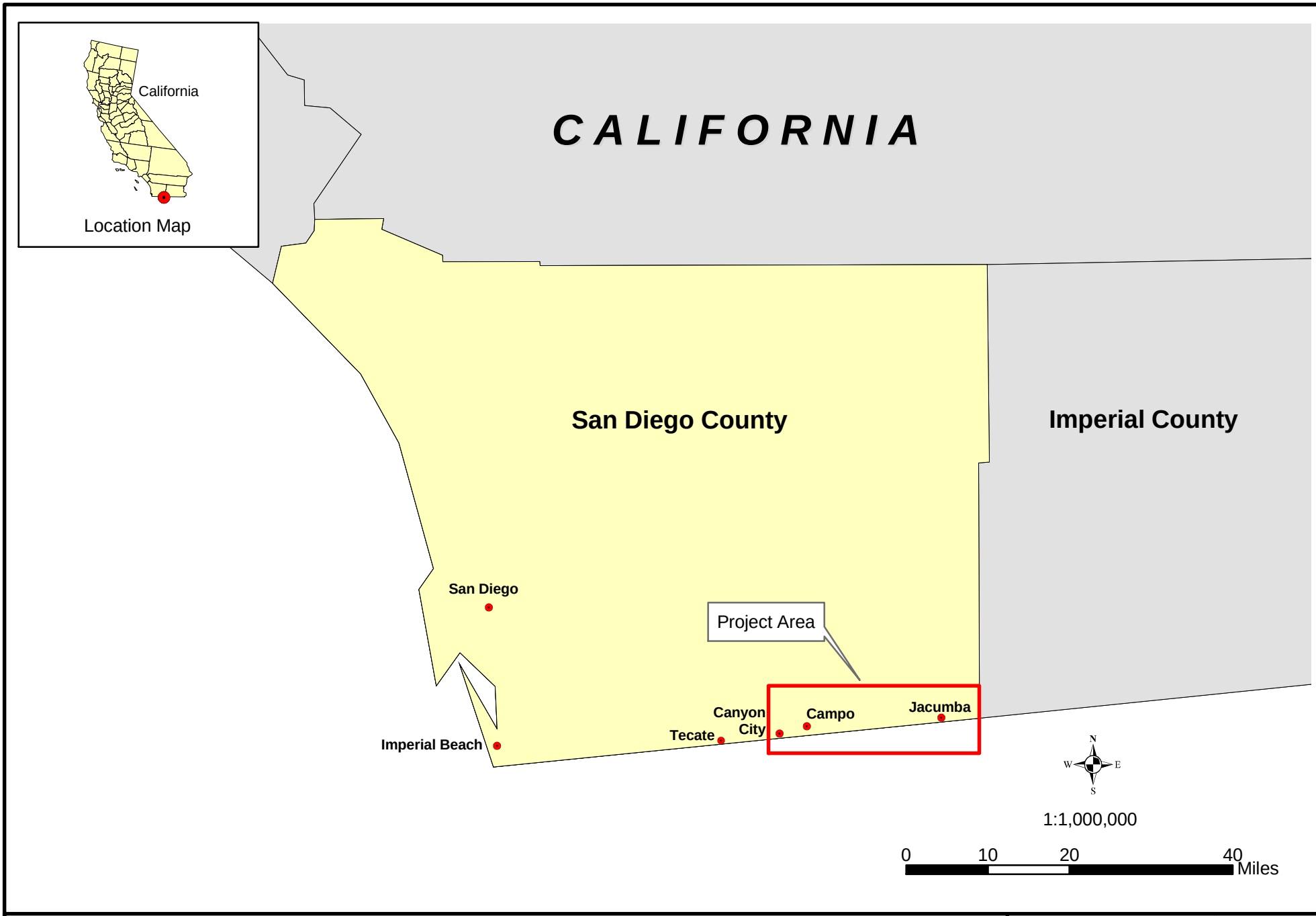

Figure 1-1: Vicinity Map

gsrc GULF SOUTH RESEARCH CORPORATION

Date: December 2002

landowners, as well as the USBP. UDAs have trampled vegetation, started wildland fires, left litter, and abandoned vehicles throughout the entire border region.

Furthermore, many UDAs attempt to enter the U.S. through harsh environments with dangerous conditions. Many areas of the border are vast, undeveloped areas that represent a danger to the UDAs from exposure to high temperatures in the summer and below freezing temperatures in the winter. The USBP agents are increasingly responsible for rescuing UDAs from heatstroke, snakebites, dehydration, hypothermia, or from being lost. Detection of UDAs before they access these harsh environments will reduce injuries and help prevent the loss of life.

- Night Vision Scope Pad and Access Road Construction

There is a need to provide surveillance capabilities that would allow the USBP to quickly and effectively detect and apprehend illegal aliens and drug traffickers. The purpose of the proposed night vision scope pads, and associated access road construction, is to provide necessary, more effective surveillance to a larger area, improve response time, and enhance the safety of the USBP agents. This is especially important at night when illegal entry attempts are highest. These night vision scope pads allow one agent to monitor an area with a much-improved field of vision. The scope pads and access roads also facilitate the USBP's mission to better gain and maintain control of the U.S.-Mexico border.

The need for the proposed scope pads and access roads is based on increased border activity and the limited manpower available to the USBP. Sites selected for scope pads provide a high-ground lookout in remote, hilly areas for the USBP to monitor larger areas.

- Drainage Structures

The USBP agents patrol hundreds of border road miles each day using 4-wheel drive vehicles, all-terrain vehicles, horses, and on foot. Most roads have wind and water erosion that has resulted in long, impassable stretches. The current conditions of some drainage structures do not allow efficient use of the roads by the USBP. Drainage structures proposed for installation or repair would reduce erosion and provide a safer, more environmentally sound drainage crossing. These drainage structures would provide safer

driving conditions for the USBP agents, improve their response time, and reduce vehicle maintenance downtime resulting from poor road conditions. Drainage structures will also enhance the stability of the local environment.

- Portable Lights

It is critical to integrate lights with the current deployment of agents within the proposed action area to maximize the deterrent enforcement capability and facilitate border control by affecting a permanent state of deterrence through certainty of detection and apprehension. The lights will:

1. deny illegal entrants the cover of darkness,
2. create a safer environment during the hours of darkness for both the agents and illegal entrants,
3. improve the efficiency of agents to patrol the same area during hours of darkness, allowing the USBP maximum patrol flexibility and efficiency, and,
4. substantially aid in the protection of neighborhoods, business districts, and sensitive environmental areas that are north of the light's location through deterrence and consequent reduction in illegal traffic.

Illegal entries are often accomplished using the cover of darkness. While night vision capability and RVS systems greatly aid in detecting nighttime border activity, these technologies alone are not as effective as lighting in the creation of a credible sense of deterrence. Lighting immediately and visibly alters the operational environment and effectively communicates to migrants/smugglers the continuous presence of law enforcement agents.

The use of lighting immediately facilitates a safer border environment in four ways:

1. it allows agents to better observe changing and dangerous terrain,
2. it helps agents prevent aliens from reaching the remote, unsafe areas of the desert where deaths are common by deterring illegal entries and facilitating apprehension,
3. it creates a sense of deterrence, it denies border bandits, who prey upon migrants, the cover of darkness, and
4. it creates a safer working environment for USBP agents.

- Bollard Fence

A combination of landing mat fence and vehicle barriers was constructed at Jacumba in the mid-1990s. The eastern end of the existing landing mat fence is located in an area that affords ample concealment opportunities and quick access to public roads. Thus, UDAs can quickly escape from USBP agents by running around the end of this fence. By extending the fence using the bollard style fencing, USBP would have an enhanced response time to apprehend the UDAs. The use of the bollard style fence would ensure that sheet water flow would not be impeded during major storm events.

- Blasting

Several road projects covered under previous NEPA documents have not been completed due to large rocks and boulders that occur in the road rights-of-way (ROWs). Other roadways that have been constructed were built around boulders resulting in sharp turns, large humps in the road, or blocked routes. These meanders provide many areas for UDAs to hide and opportunities to avoid apprehension. Detours around these boulders typically result in the use of private landholdings. The purpose for blasting activities is to realign or smooth out roads that have required USBP agents to patrol on private land and allow for the completion of road projects. Realigning the road along the border gives the USBP agents a more direct route to observe UDA activities, greatly improves response time, provides safer driving conditions, and reduces the amount of concealment opportunities for UDAs. The blasting will be minimal and only enough to fracture the rocks and boulders for later removal.

- Water Wells and Concrete Holding Tanks

Areas along the border have limited water access, especially outside of developed or urban areas near the POEs. This limited access forces water trucks to travel two to three times the distance necessary to find a water source. Water sources are needed for the project to provide water for equipment uses and dust control activities. Several water truck accidents occur every year in the east San Diego County area, resulting in additional costs for repairs or truck replacements and the loss of productive work time. Most accidents are vehicle rollovers (no one has been killed or seriously injured yet); however, there is always the potential for loss of life or serious injury in an accident of this type. The proposed water wells and holding tanks would serve as non-potable water

sources for construction efforts within the project area. This would eliminate the need to travel miles from the project sites to obtain water from existing wells. By having an on-site or nearby source of water, and the ability to store large quantities of water and quickly fill water trucks, large vehicles and equipment would be able to remain in or near the staging areas and would greatly reduce the potential for accidents.

The creation of the water wells and holding tanks would also benefit the BLM and the California Department of Forestry (CDF) in their efforts to suppress wildland fire. The opportunity to have a nearby water supply would greatly enhance the agencies' abilities to react in an emergency fire situation.

1.5 Environmental Regulations

The work outlined in this report is to be conducted in accordance with and in partial fulfillment of the USBP and U.S. Army Corps of Engineers (USACE) obligations under the National Historical Preservation Act of 1966, as amended (PL-96-515); the Archaeological and Historical Preservation Act of 1974, as amended (PL-93-291); Executive Order #11593, "Protection and Enhancement of the Cultural Environment"; and the Endangered Species Act of 1973, as amended. This EA was prepared in accordance with the NEPA of 1969 (PL-90-190), the President's Council on Environmental Quality (CEQ) Regulations for the Implementation of the NEPA, and the INS's Procedures for Implementing NEPA (28 CFR 61). Table 1-2 summarizes the pertinent environmental requirements that guided the development of this EA.

Table 1-2: Applicable Environmental Statutes and Regulations

Federal Statutes
Archaeological and Historical Preservation Act of 1974
Clean Air Act of 1955, as amended
Clean Water Act of 1977, as amended
Endangered Species Act of 1973, as amended
Farmland Protection Policy Act of 1980
Migratory Bird Treaty Act of 1972
National Historic Preservation Act of 1966, as amended
National Environmental Policy Act of 1969, as amended
Native American Graves Protection and Repatriation Act of 1900
Watershed Protection and Flood Prevention Act of 1954
Wild and Scenic Rivers Act of 1968, as amended
Executive Orders, Memorandums, etc.
Consultation and Coordination with Indian Tribal Governments (E.O. 13175) of 2000
Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (E.O. 12898) of 1994
Floodplain Management (E.O. 11988) of 1977
Government-to-Government Relations with Native American Tribal Governments (Presidential Memorandum) of 1994
Indian Sacred Sites (E.O. 13007) of 1996
Protection of Children from Environmental Health Risks (E.O. 13045) of 1997
Protection of Migratory Birds & Game Mammals (E.O. 11629) of 2001
Protection of Wetlands (E.O. 11990) of 1977

SECTION 2.0
ALTERNATIVES

2.0 ALTERNATIVES

This section describes the alternatives considered in this EA, relative to their ability to satisfy the USBP's purpose, mission, and need. Two alternatives will be addressed:

1. the Proposed Action Alternative; and
2. the No Action Alternative.

These two alternatives are discussed below along with alternatives considered but eliminated from further analysis.

2.1 Proposed Action Alternative

The Proposed Action Alternative consists of the construction of night vision scope pads and access roads, installation or repair of drainage structures, placement of portable lights, installation of bollard style fence, blasting activities, and the installation of water wells and concrete holding tanks between Canyon City, California and the Imperial County line.

2.1.1 Night Vision Scope Pad and Access Road Construction

Two night vision scope pads are proposed on top of Airport Mesa and one near the Mountain Empire Campground off Highway 94 (hereafter referred to as Mountain Empire). Approximately 1.45 total miles of road construction is required to install and operate the three scope pads. Designs for the proposed road construction are included in Appendix A.

2.1.1.1 Airport Mesa

New road construction (approximately 1.2 miles) is proposed to the top of Airport Mesa just east of Jacumba, California (Figure 2-1). This roadwork is planned so USBP can access the top of the mesa for two proposed scope pads. The finished road surface will be approximately 14-feet wide with a 2- to 5-foot ditch/safety berm on either side of the proposed road. Cut and fill activities would be required for these activities; consequently, the permanent impact area would be approximately 50-feet wide. Due to the slope on Airport Mesa, nuisance drainage culverts (i.e., one pipe) would be required

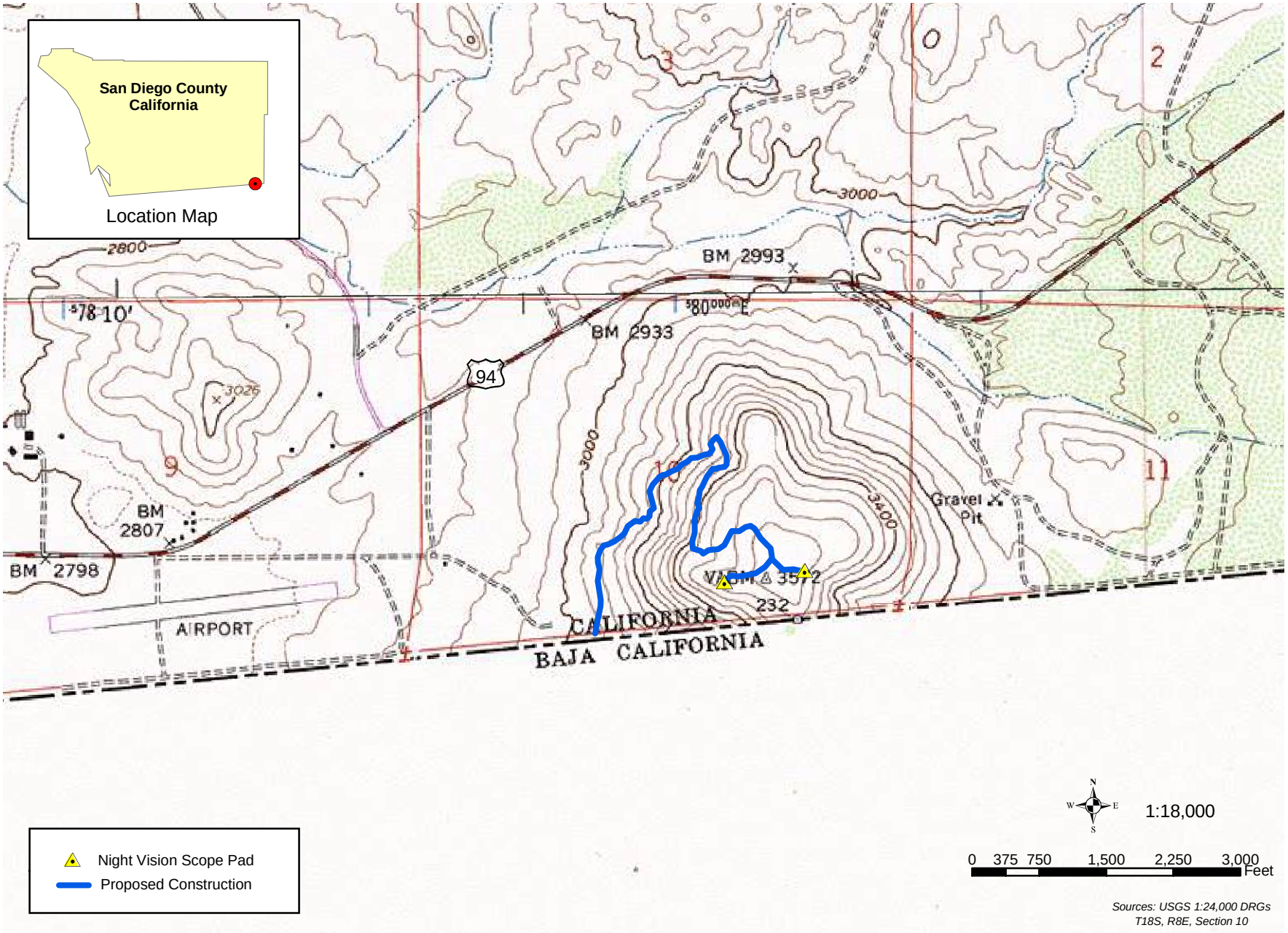

Figure 2-1: Proposed Road Construction and
Night Vision Scope Pads for Airport Mesa

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approximately every 300-linear feet under the road and would remain within the proposed road's footprint. These culverts would be installed to drain the road surface and to handle small concentrations of stormwater.

Approximately four small, ephemeral drainages would be impacted with the proposed road construction and would require culverts. Approximately 0.02 acre would be affected from the four culverts; however, the effects from installing the four culverts would remain within the proposed roads' footprint. Approximately 7.3 acres would be permanently affected by the road construction on Airport Mesa, including the installation of the four culverts.

The two proposed night vision scope pads would be at the ends of the road and would consist of a 20-foot by 20-foot permanent clearing—the minimal area to turn a USBP vehicle around—with an additional 20-foot by 20-foot temporary impact zone required during construction. Each site would be mechanically and hand cleared of rock, vegetation, and debris to make room for a vehicle. The total area permanently impacted by each scope site would be 400-square feet (ft^2).

2.1.1.2 Mountain Empire

Approximately 0.25 mile of road construction is proposed for the Mountain Empire scope pad. This access road would lead to a night vision scope pad at the top of a hill north of the Mountain Empire Campground near Canyon City, California (Figure 2-2). New road construction would begin at the San Diego and Arizona Eastern Railroad, and trend north to the top of the hill. The finished road surface would use the same design as discussed for the Airport Mesa scope pad and access road. Nuisance drainage culverts would also be required approximately every 300 linear feet under the road and would remain within the proposed road's footprint. These culverts would be installed to drain the road surface and to handle small concentrations of storm water from uphill of the road. Approximately 1.5 acres would be permanently impacted from the road construction.

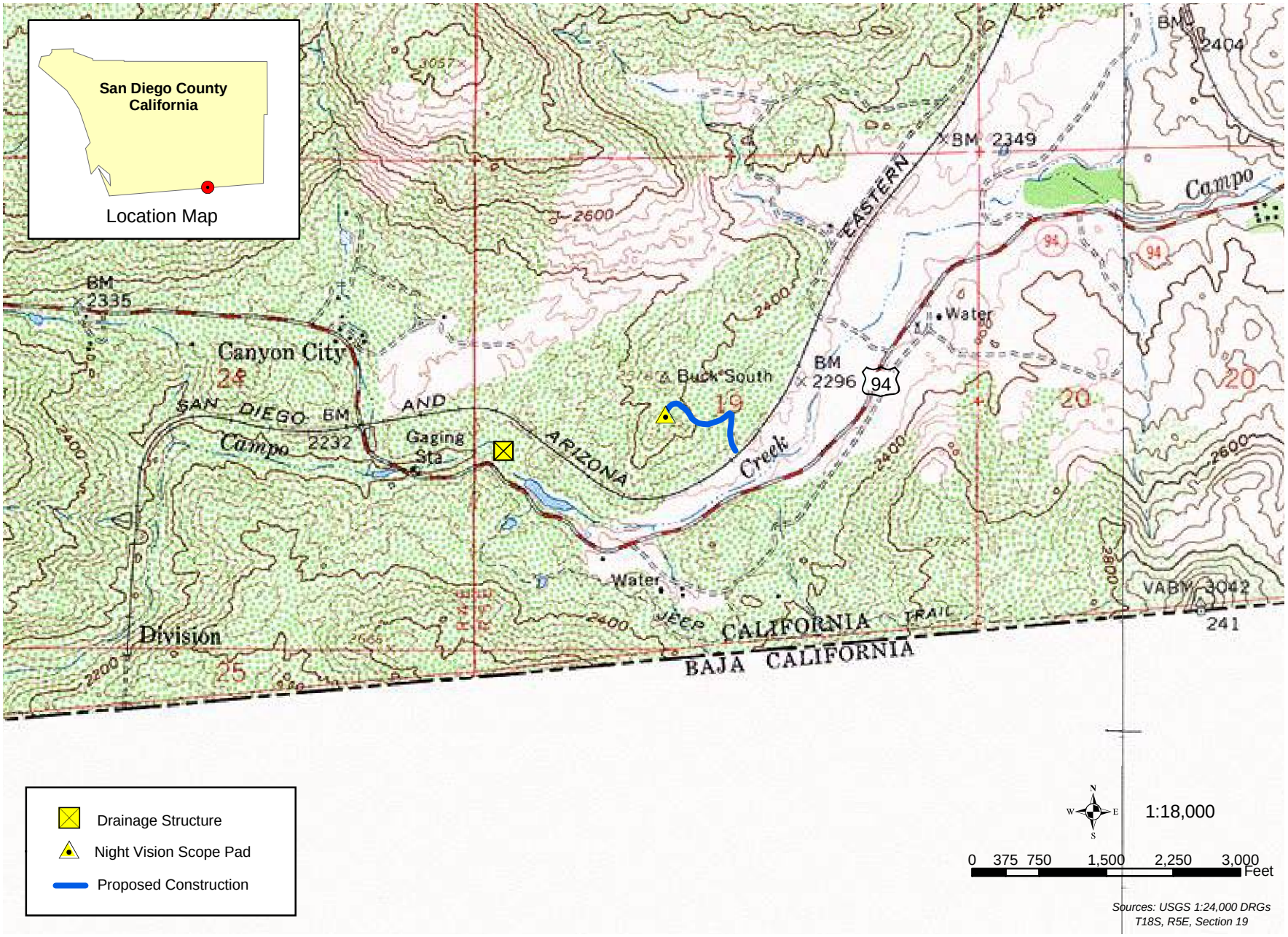

Figure 2-2: Proposed Road Construction, Night Vision Scope Pad, and Drainage Structure for Mountain Empire

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A night vision scope pad like the two discussed above for the Airport Mesa road would be placed on top of the hill at Mountain Empire Campground. The total area permanently impacted by the scope site would be 400 ft^2; an additional temporary impact zone of 400 ft^2 would be expected during construction. The existing road, adjacent to the Mountain Empire Campground, which leads to the proposed Mountain Empire scope pad access road, would be gate-restricted.

The Mountain Empire project is dependant on the repair of an existing drainage structure at Campo Creek. The repair of the existing crossing at Campo Creek (Figure 2-2) to access the proposed Mountain Empire scope pad would be a single 6-foot box culvert. The existing structure is used by the owners and visitors of the Mountain Empire Campground on a daily basis. Repair/improvement of the existing structure would allow access by the USBP and prevent an additional crossing further upstream. The repair of this drainage structure would permanently impact approximately 0.03 acre with an additional 0.07 acre temporary impact area. The new drainage structure design would remain within the footprint of the existing crossing. Designs for the drainage structure are included in Appendix A.

In summary, road construction in the two areas would consist of a 14-foot wide roadbed with a 2 to 5 foot ditch or safety berm on each side of the road (18-24 foot total width). With the required cut-and-fill activities along the slopes, the permanent impact area is expected to be 50 feet wide; there is no intent to create major roadways. All culverts placed along the road beds would remain within the proposed road footprint and are included in the impacts. These roads would give the USBP agents sufficient room to safely access the scope sites. The total area permanently impacted by the road construction would be approximately 8.8 acres for the two roads. The total area permanently impacted from the placement of three night vision scope pads would be approximately 1,200 ft^2 (0.03 acre). An additional 1,200-ft^2 (0.03 acre) total temporary impact area would be produced; however, this area would be revegetated upon completion of the construction activities.

The night vision scope pads addressed for the proposed action would be created with the idea of converting the scope pads to RVS sites in the future. These future RVS sites would require separate NEPA documentation.

2.1.2 Drainage Structures

Four drainage structures are proposed for repair or installation under this alternative. Three crossings are proposed for installation along existing roadways, while one existing crossing at Campo Creek would be repaired. The repair of the drainage structure at Campo Creek is contingent on the proposed road construction to the top of Mountain Empire, as discussed above in Section 2.1.1. Designs for each of the drainage structures are included in Appendix A.

The basic designs for all-weather drainage crossings at Smith Canyon (Figure 2-3), La Gloria Canyon (Figure 2-3), and Maupins (Figure 2-4) would consist of grading the stream crossings and laying a concrete platform across the drain. Concrete footers would be placed on either side of the stream crossing to support the platform. Due to site-specific hydrology and geomorphology, the proposed drainage structure for Smith Canyon would be more substantial that the other two. This drainage structure would require a 12-foot retaining wall under the center of the platform, as well as the two footers on each end.

Concrete approach ramps would also be installed along the existing roadbed. Environmental design measures (i.e., installing rip-rap) downstream of the drainage structures would be implemented to reduce any erosion or runoff effects from the construction; other mitigation measures and Best Management Practices (BMPs) are discussed in Section 5.0. No additional or new roadwork would be associated with the installation of these three drainage structures. Ongoing road improvements were addressed under previous NEPA documentation identified in Section 1.1. At the time the road improvements were first planned, the need for permanent drainage structures at these crossings was not identified. The improvements to these water crossings would greatly improve the USPB's ability to patrol the border safely and improve water quality in the drainages.

Expected permanent and temporary impacts associated with each of the three proposed drainage structures are shown in Table 2-1.

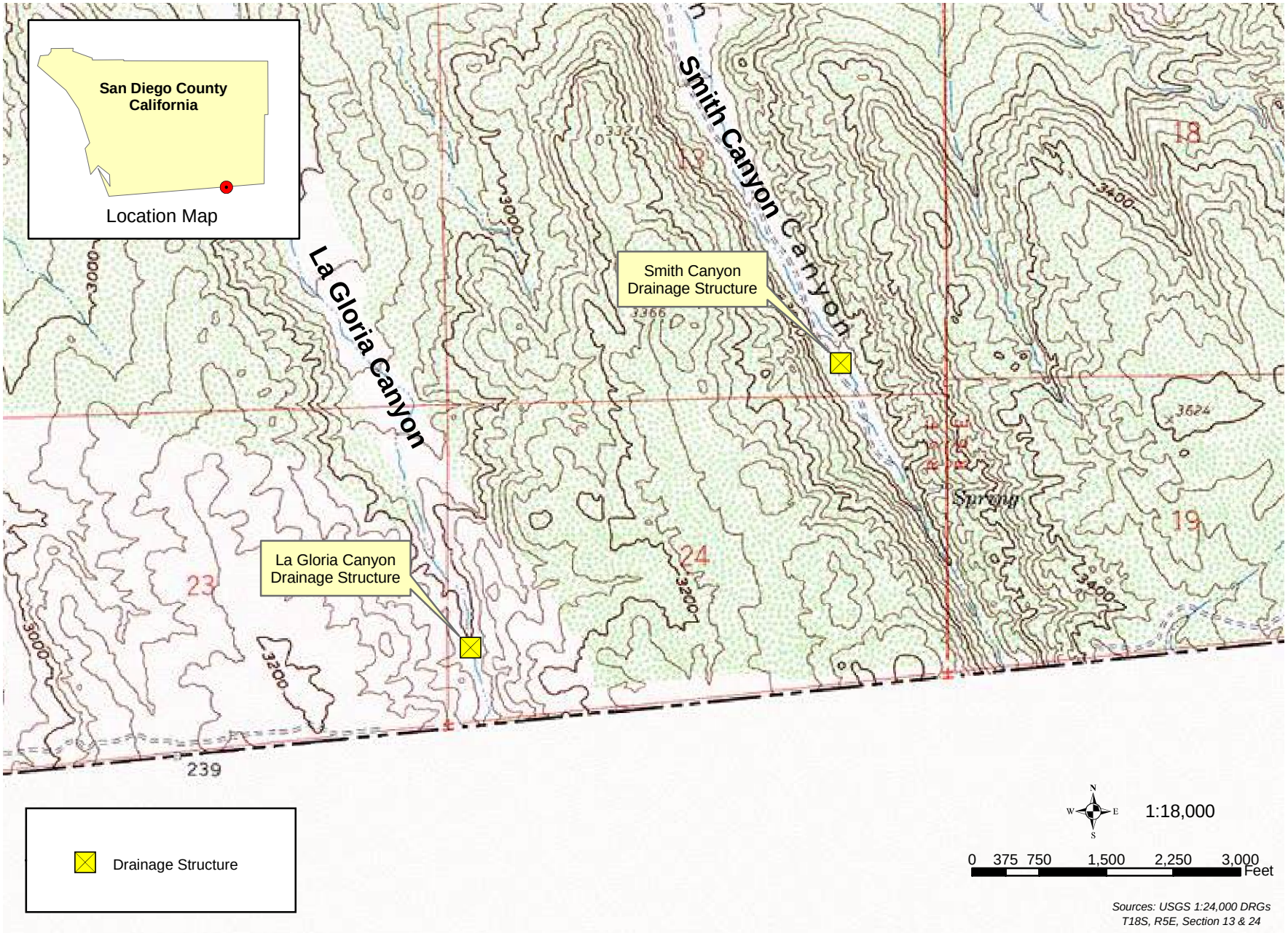

Figure 2-3: Proposed Drainage Structures at Smith and La Gloria Canyons

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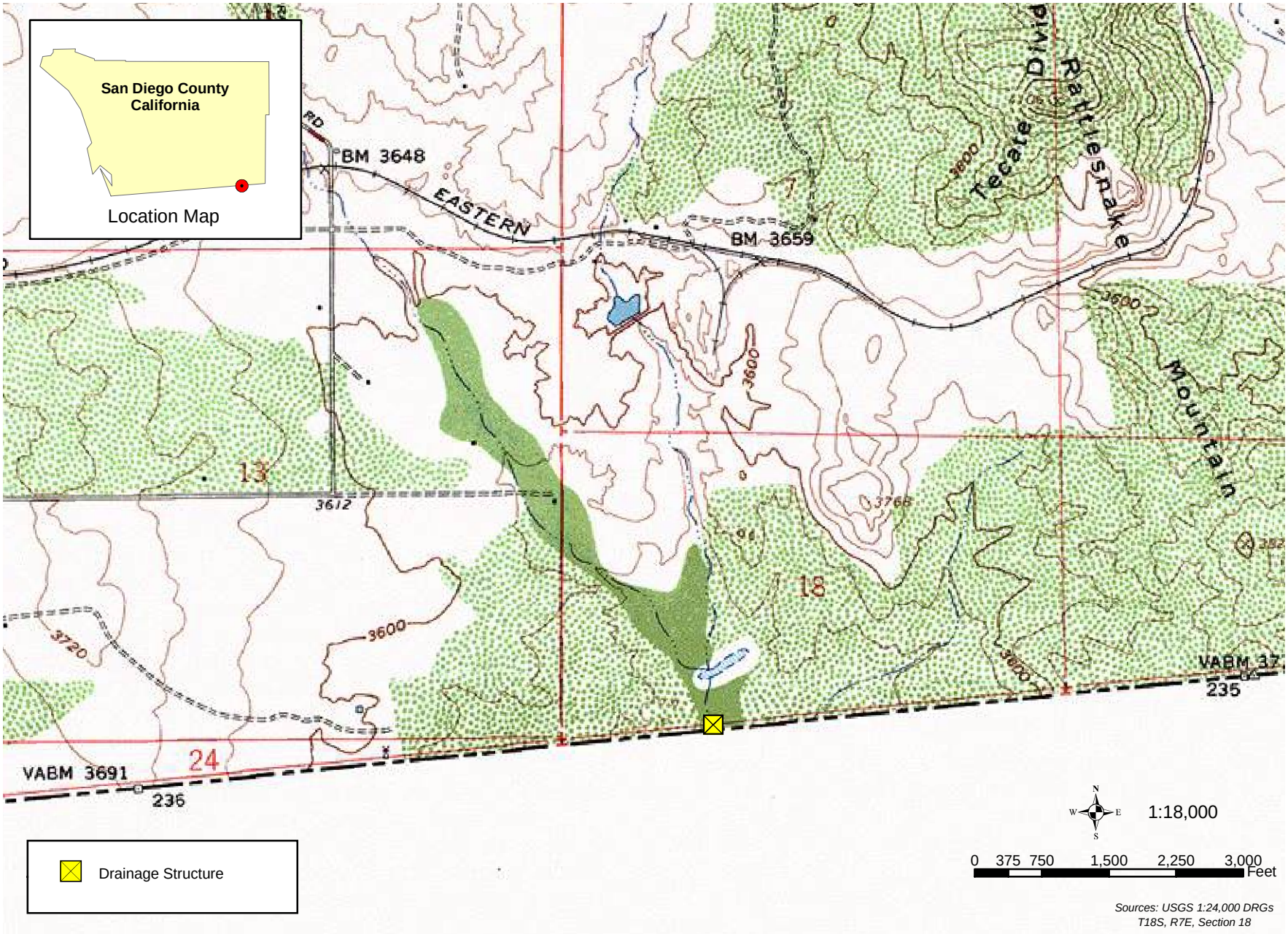

Figure 2-4: Maupins Drainage Structure

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Table 2-1: Impacts from Drainage Structures (in acres)

	Permanent Impacts	Temporary Impacts	Total
Maupins	0.22		0.22
La Gloria Canyon	0.05	0.03	0.08
Smith Canyon	0.31	0.18	0.49
Total	0.58	0.21	0.79

2.1.3 Portable Lights

The acquisition and operation of up to 50 portable lights along a 20-mile stretch of border road between the PCT to the Imperial County line is proposed under this alternative (Figure 2-5). These lights would remain within the 60-foot Roosevelt Easement and would be placed along existing roadways; no vegetation removal, ground disturbance, or road construction would be required for the placement of these portable lighting systems. No lighting systems would be placed within the Quino checkerspot butterfly (*Euphydryas editha quino*) critical habitat area, which lies just west of Jacumba (see Figure 2-5). The location and duration of light placement would be dependant upon illegal activities in the area. Portable lights would be placed in areas where USBP intelligence indicates increases in UDA and smuggling activities may occur, outside of the designated critical habitat area.

The portable lights are powered by a 6-kilowatt self-contained diesel generator and contain four 1,000-watt, metal halide light bulbs (Photograph 1). The lights would generally operate continuously every night and would require refueling every day prior to the next night's operation. The portable light systems can be towed to the desired location by USBP vehicles, and are typically spaced approximately 100 to 400 feet apart, depending upon topography and known UDA traffic areas. Placement of the portable lights is estimated to affect no more than 100 ft^2 per generator, while the area affected by illumination from the lights is expected to be 200 feet from each light source, mostly in a southerly direction. The lighting systems would have shields placed over the lamps to reduce or eliminate the effects of backlighting.

Photograph 1: Portable Light

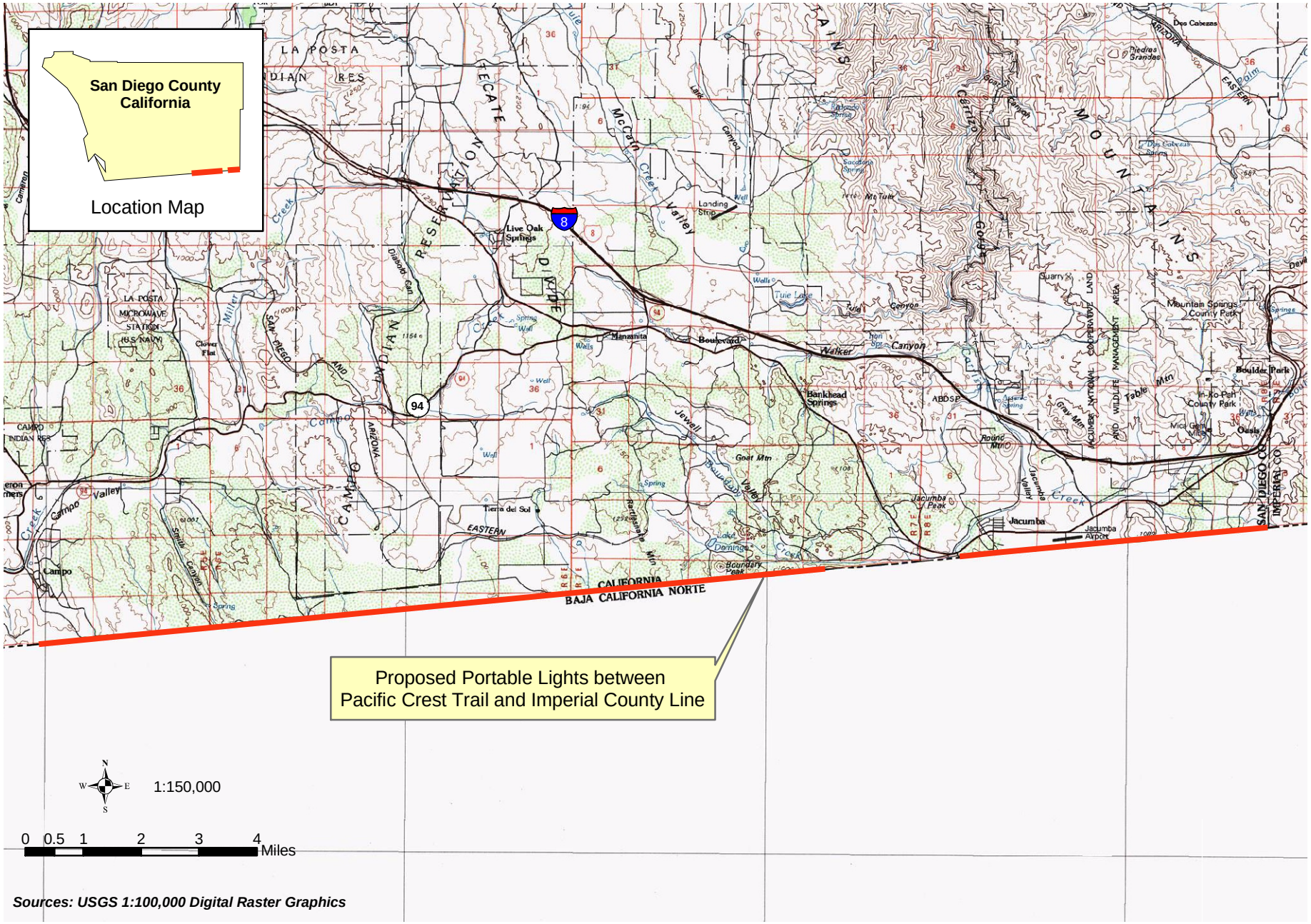

Figure 2-5: Proposed Portable Lights

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Effects from the lighting are considered to occur along the entire corridor where they could be placed; however, only part(s) of the corridor would be illuminated at a given time since the portable lights would be periodically relocated to provide the most effective deterrent and enforcement strategy. Illumination from the portable lights would typically not overlap, leaving areas of darkness between them. The use of secondary containment (e.g., catch pans) during installation and regular maintenance of the generators would aid in preventing any accidental diesel fuel or lubricant spills.

2.1.4 Bollard Fence

Approximately 300 feet of bollard fence would be installed to replace vehicle barriers at the end of the existing landing mat fence on the east side of Jacumba (Figure 2-6). A bollard fence consists of a double row of 10- to 15-foot high steel pipe poles, approximately six inches in diameter, placed on 8.5-inch centers (Photograph 2). The pipes would be filled with concrete for added strength and security. The two rows are offset, such that the gaps between the poles would be filled by the poles of the other row. A concrete footer is required to anchor the poles – approximately 20 inches wide and three feet deep, permanently affecting approximately 0.01 acre. All fence construction would stay within the 60-foot Roosevelt Easement and a temporary impact area would be expected approximately five feet on either side of the fence (approximately 0.06 acre) for a total of 0.07 acre affected from the installation of bollard fence.

Photograph 2: Bollard Fence

2.1.5 Blasting

Fifteen sites are proposed for blasting activities along the U.S.-Mexico border (Figure 2-7). All actions would take place within the existing road ROW and most within the 60-foot Roosevelt Easement. The sites selected have large rocks or boulders in areas where sharp curves or unsafe humps need to be eliminated. Holes would be drilled into the center of the larger rocks and detonating material would be placed in the hole. The detonating material would be activated in order to split or fracture the rock into smaller,

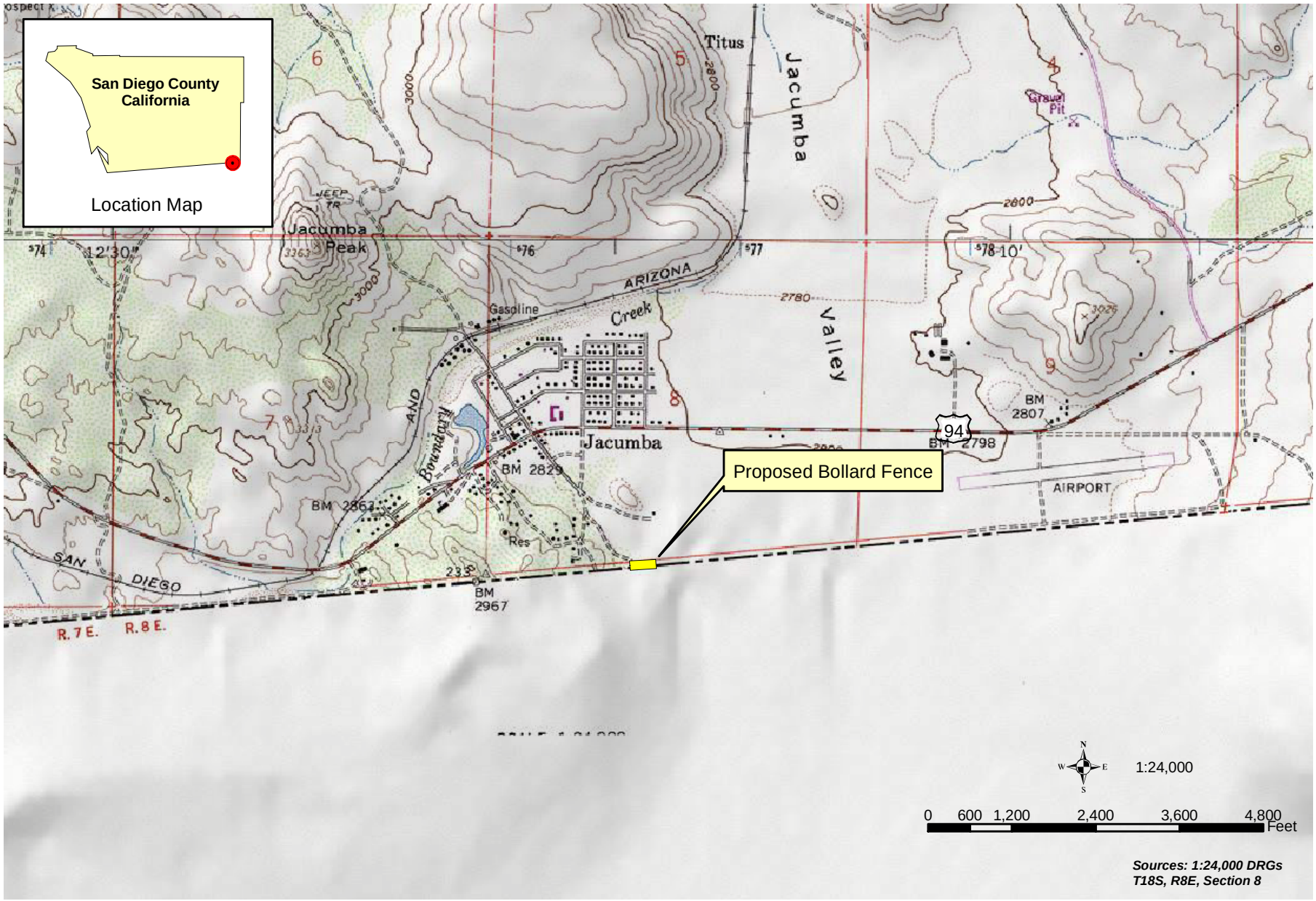

Figure 2-6: Proposed Bollard Fence

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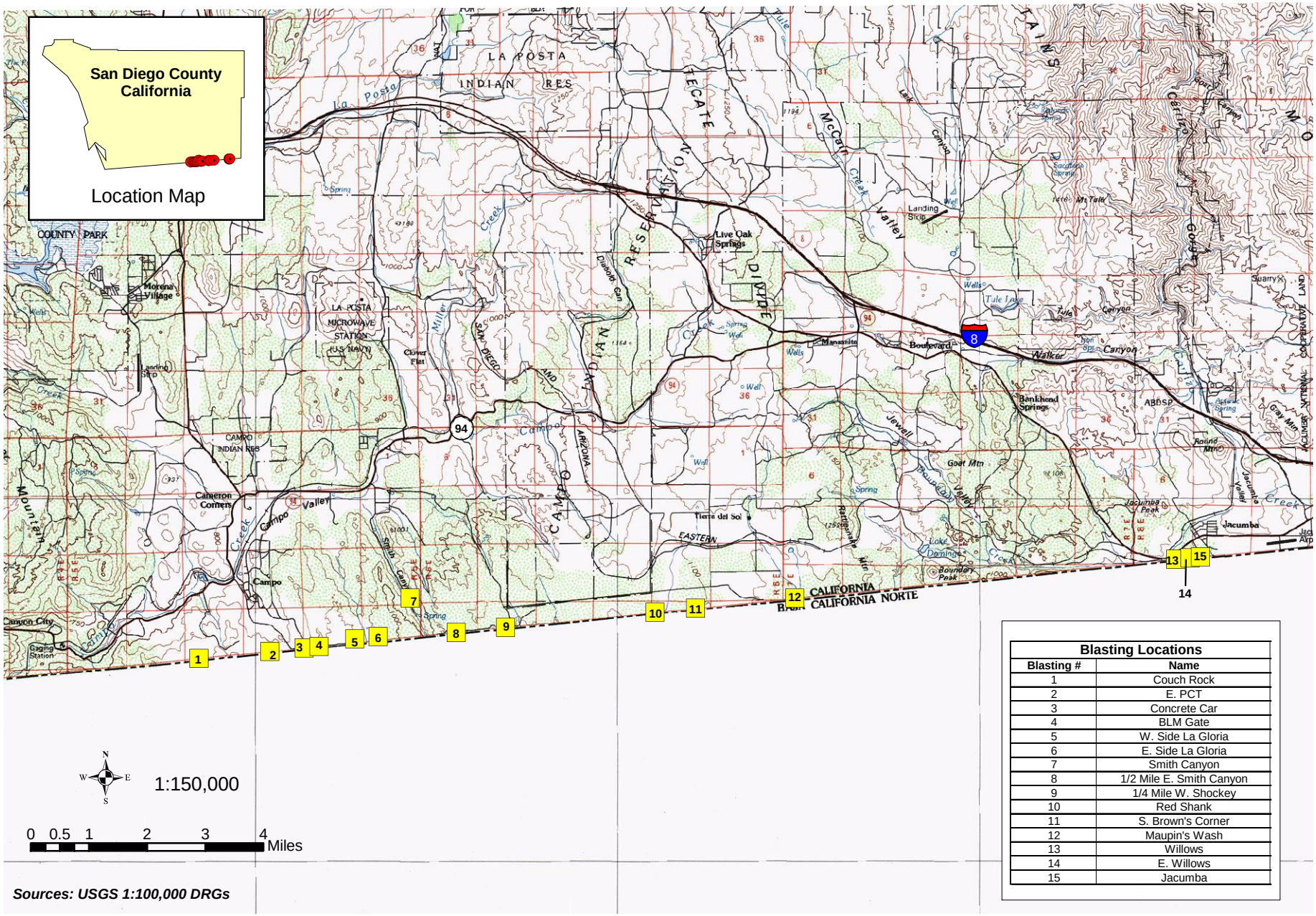

Sources: USGS 1:100,000 DRGs

Blasting Locations

Blasting #	Name
1	Couch Rock
2	E. PCT
3	Concrete Car
4	BLM Gate
5	W. Side La Gloria
6	E. Side La Gloria
7	Smith Canyon
8	1/2 Mile E. Smith Canyon
9	1/4 Mile W. Shockey
10	Red Shank
11	S. Brown's Corner
12	Maupin's Wash
13	Willows
14	E. Willows
15	Jacumba

Figure 2-7: Proposed Blasting Sites

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more manageable pieces for removal. This process would create low-level noise. All roadwork associated with the 15 blasting sites has been addressed under previous NEPA documents (INS 2001 and USACE 1997, 1994).

2.1.6 Water Wells and Concrete Holding Tanks

Two water well and concrete holding tank sites along the U.S.-Mexico border are proposed for installation (Figure 2-8). Drilling would occur to depths adequate to pump water for project related uses, such as dust prevention activities and construction equipment needs. Water collected from these wells would be non-potable and used for construction purposes only. Concrete holding tanks would be placed near the well sites to collect and hold water, and would be equipped with valve boxes. The holding tanks would be placed on a 20-foot by 20-foot concrete slab and would have a 10,000-gallon capacity. Sides would be made of reinforcing steel and the top would be concrete. Once the water sources are no longer needed, the valve boxes would be covered and locked, but remain functional for future use by the USBP, BLM, or CDF. In addition, each well and holding tank would temporarily impact an area no more than 20 feet by 20 feet around each well and holding tank site.

2.1.7 Summary

In summary, although the Proposed Action Alternative would have some minor impacts, it would significantly enhance the USBP's mission to gain and maintain control of the border. This alternative would also enhance the ability of the USBP to deter and apprehend illegal entrants near the border and therefore result in less trans-border traffic and reduce the amount of enforcement actions that occur outside the immediate border vicinity. The Proposed Action Alternative is comprised of all of the following components/actions. The general locations of each of these actions are depicted in Figure 2-9.

1. Two night vision scope pads on Airport Mesa, and 1.2 miles of access road construction,
2. The construction of one scope pad, repair of one drainage structure at Mountain Empire Campground, and 0.25 mile of access road construction,
3. Installation or repair of three drainage structures: Maupins, La Gloria Canyon, and Smith Canyon,

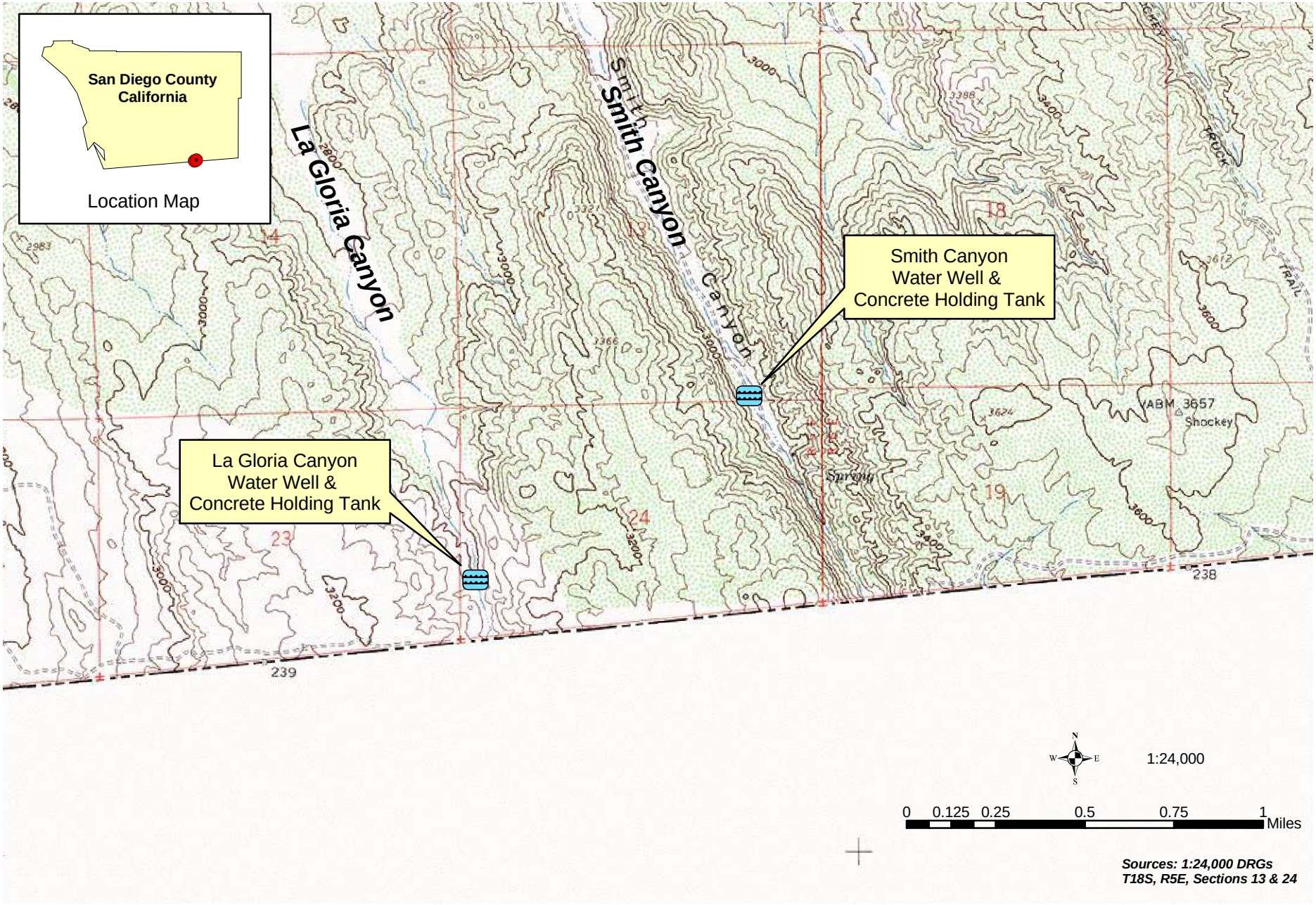

Figure 2-8: Proposed Water Wells and Concrete Holding Tanks

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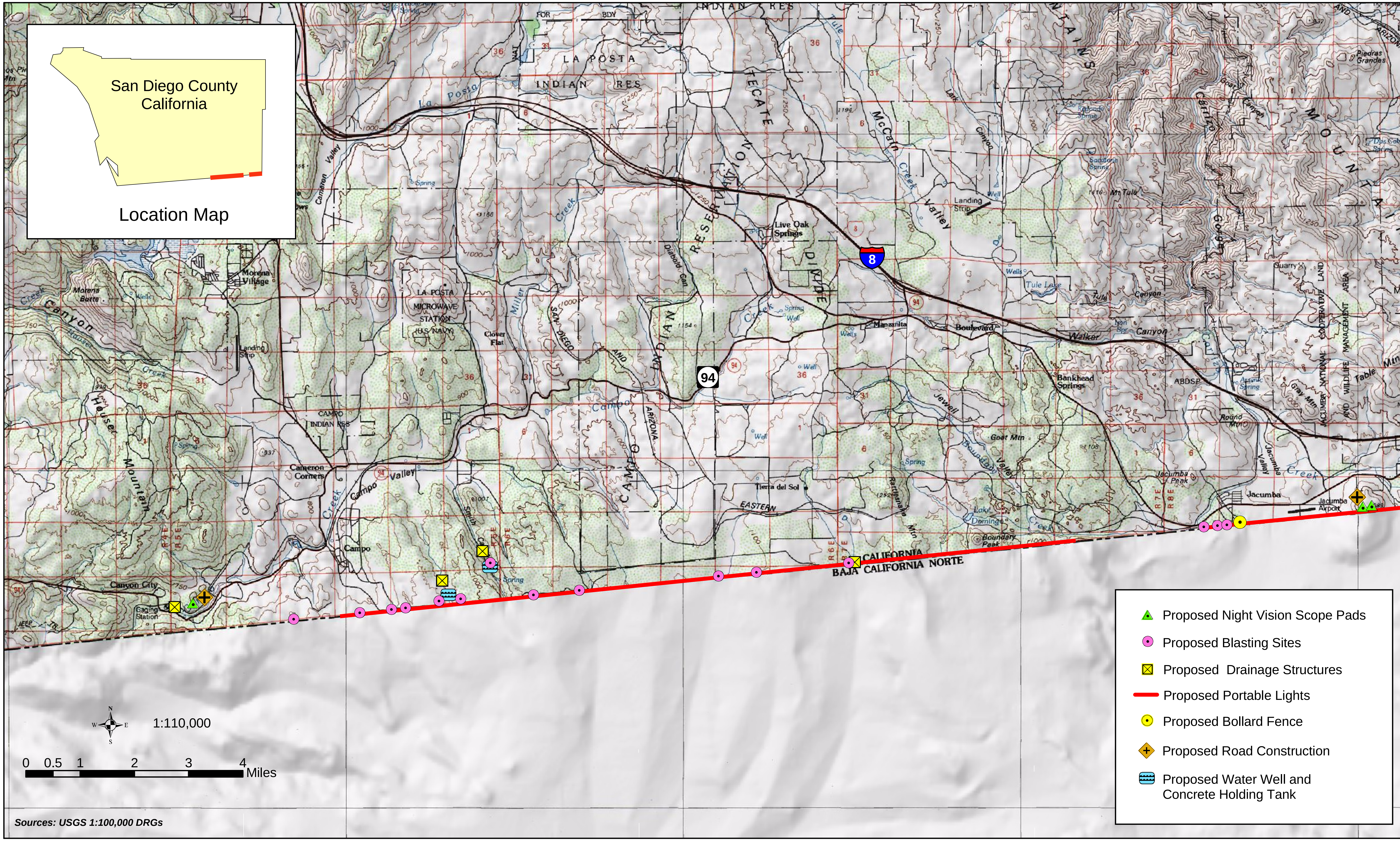

Figure 2-9: All Proposed Activities in the Project Area

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4. Replacement of 300-foot section of vehicle barrier with bollard fence,
5. Two water wells and concrete holding tanks, and
6. 15 blasting sites.

2.2 No Action Alternative

The No Action Alternative would not allow for the expansion of USBP operations and would eliminate all proposed actions addressed in this document. This alternative would, however, allow all ongoing infrastructure projects and any normal maintenance and operation requirements associated with existing infrastructure to continue. The No Action Alternative would halt any additional direct impacts that may occur with the implementation of the proposed actions, and would eliminate the potential for future effects, beneficial or adverse, to the natural environment. While this alternative would reduce direct, unavoidable impacts and irretrievable losses of resources, it would greatly hinder the USBP's mission to gain and maintain control of the border.

2.3 Alternatives Considered but Eliminated from Further Analysis

Several other actions were considered as part of the alternative selection process. These were all eliminated from further analysis due to unnecessary environmental impacts, not fulfilling the purpose and need requirements for the project, and/or cost. One of the actions considered was the placement of portable lights outside of the 60-foot Roosevelt Easement. This alternative was eliminated because vegetation would have to be cleared to place the lights. The installation of RVS systems and permanent lights were also considered. While these two options would require the removal of some vegetation and ground disturbance to install poles, the cost of installation is the main limiting factor at this time. Similar actions could be considered at some point in the future since permanent lights have proven to be an effective deterrence to illegal traffic.

Revised

Other lighting alternatives considered for this project include solar powered lights and lower wattage bulbs. The use of solar power to run the portable light systems was eliminated from further consideration due to the potential for vandalism to the solar panels by illegal immigrants and smugglers and the cost of the solar systems. The use of lower wattage light bulbs in the portable light systems was eliminated due to the

lighting systems not covering enough area to allow for the detection of UDAs and smugglers and the safety of the USBP agents.

One other alternative considered was the reconstruction of an existing road near the Mountain Empire Campground and the installation of a new drainage structure in Campo Creek. This alternative was eliminated from the analysis due to the adverse environmental impacts associated with installing a new drainage structure in Campo Creek and the extra cost of reconstructing a road. By using an existing road and repairing an existing drainage structure in Campo Creek, unnecessary environmental impacts and costs would be avoided.

2.4 Summary

Two alternatives were carried forward for analysis: the Proposed Action Alternative and the No Action Alternative. Other alternatives were considered but eliminated due to not fully meeting the purpose and need requirements for the project. A summary of the two alternatives, in comparison to the purpose and need for the action, is presented in Table 2-2.

Table 2-2: Alternative Matrix

Purpose and Need Requirements	Proposed Action Alternative	No Action Alternative
Enhance the detection of illegal activities, and ability to gain and maintain control of the U.S.-Mexico border	Yes	No
Ability to monitor a large area	Yes	No
Deterrence of illegal aliens	Yes	No
Improve USBP access and thus response time	Yes	No
Enhance the safety of USBP agents	Yes	No
Provide flexibility in deployment of field agents	Yes	No
Reduction of erosion at existing water crossings	Yes	No
Reduction of vehicle downtime and maintenance	Yes	No
Protection to neighborhoods, businesses, and environmentally and culturally sensitive areas near the project area	Yes	No
Provide on-site source of water and keep large equipment and vehicles off public roads	Yes	No

Due to the disturbed nature of the project corridor, the fact that the majority of the road network is already in place, and several actions would occur within the 60-foot Roosevelt

Easement or existing road ROWs, negligible impacts to the human and natural environment would occur as a result of the Proposed Action Alternative (Table 2-3). While the proposed road construction, scope pads, and drainage structures would remove some vegetation and potential wildlife habitat, the overall benefits of reducing the numbers of UDAs and drug traffickers trekking through the area and the consequent USBP enforcement actions would be very beneficial.

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Table 2-3: Matrix of Potential Impacts

Affected Environment	Proposed Action Alternative	No Action Alternative
Land Use	New scope pad and access road construction would make Airport Mesa and Mountain Empire active USBP patrol areas	No impacts
Aesthetics	Scope pads would be placed on top of hill at Mountain Empire and Airport Mesa; contours along the border would change with blasting activities; temporary negative effects from on-site construction equipment; long-term effects from the placement of portable lights along the border; placement of a concrete water holding tanks would be along the road	No direct impacts; UDAs would continue to cause long term indirect impacts from the creation of trails, littering, and wildland fires
Soils and Prime Farmland	Scope pad and access road construction would permanently disturb soils; the repair/installation of four drainage structures would temporarily disturb soils; the drainage structures would improve soil conditions in the long-term by replacing/repairing the old culvert and implementing mitigation measures; installation of water wells and a holding tanks would temporarily disturb soils; installation of bollard fence would remove soils; a total of 9.9 acres of soil is expected to be permanently disturbed; no prime farmlands would be impacted	Soil conditions would continue to deteriorate where four drainage structures would be repaired or installed with the Proposed Action; no mitigation measures would be incorporated and soil would continue to erode
Water Resources	Installation of drainage structures and mitigation measures would improve condition of surface water in the long-term; installation of water wells have no impacts to groundwater; blasting activities would remain near the surface and not occur deep enough to have an effect on surface or groundwater resources	Water quality would continue to deteriorate where four drainage structures would be installed or repaired with the Proposed Action; no mitigation measures would be incorporated that would improve stream channel conditions
Vegetation Communities	Approximately 9.8 acres of vegetation would be disturbed with the Proposed Action Alternative: 8.9 acres for road and scope pad construction, 0.89 acre for four drainage structures, and 0.08 acre for two well and concrete holding tank sites; there would be no vegetation disturbance for the placement of portable lights, blasting, or the 300-foot section of bollard fence	No vegetation would be directly disturbed; indirect effects would continue from UDAs

Table 2-3: Matrix of Potential Impacts

Affected Environment	Proposed Action Alternative	No Action Alternative
Wildlife and Aquatic Resources	Actions that require vegetation disturbance would remove wildlife habitat; road and scope pad construction, well sites and holding tanks, and drainage structures would remove 9.8 acres of habitat; drainage structures would improve surface waters for aquatic species; temporary impacts from blasting activities could disrupt wildlife; long-term effects associated with the illumination of portable lights	Surface waters would continue to degrade at the water crossings, potentially effecting aquatic resources; heavy UDA traffic would continue across valuable wildlife habitat
Threatened and Endangered Species and Critical Habitat	No threatened or endangered species or critical habitat would be disturbed; potential habitat for the least Bell's vireo and southwestern willow flycatcher could occur in riparian areas; this habitat is either highly disturbed or would not be altered with the proposed actions; no portable lights, or other proposed actions, would occur along the 2.3 mile corridor of Quino checkerspot butterfly critical habitat just west of Jacumba; no portable lights would be placed in riparian areas capable of supporting the protected vireo and flycatcher	Surface waters would continue to degrade at the water crossings, potentially effecting aquatic resources; heavy UDA traffic would continue across valuable wildlife habitat in which protected species rely on
Air Quality	Short-term degradation in local air quality from construction equipment; however, impacts considered insignificant; indirect beneficial impacts due to reduced number and duration of trips to find water; long-term, minor impacts to air from portable light generators	No additional impacts
Noise	Temporary increase in noise levels due to construction and blasting activities; long-term noise associated with portable light generators	No additional impacts
Cultural Resources	No impacts	Heavy UDA traffic would continue across irreplaceable cultural resource sites
Socioeconomics	Beneficial impacts would be expected to socioeconomics in the project area; increased safety to neighborhoods and surrounding communities	No impacts to housing and income. Adverse impacts to the surrounding border towns and communities will continue
Environmental Justice and Protection of the Children	No impacts	No impacts

SECTION 3.0
AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This section of the EA describes the natural and human environment that exists in the Campo and Jacumba regions, as well as site-specific conditions, as appropriate. Only those parameters that have the potential to be affected by the proposed action are described, as per CEQ guidance (40 CFR 1501.7). Therefore, discussions of resources such as transportation, unique/sensitive areas, climate, hazardous material, and coastal zone management are limited in scope and are not addressed further due to the lack of effect from the project on the resource, or because that particular resource is not located within the project area.

3.1 Land Use

In general, land use is indicative of the land ownership. The major land uses in San Diego County include agriculture, rangeland, urban, forest, recreation/special use, and waterbodies. The total area of San Diego County is about 4,255 square miles with a population of 2,813,833 (U.S. Census Bureau 2001). The major land use in the county is special land use with 1,508,100 acres (70%). This category consists of parks, wildlife management areas, military installations, and Native American lands. California State Parks and the U.S. Forest Service are the primary landholders/managers in the county. The City of San Diego and surrounding communities are the primary urban center of the county. Agricultural land encompasses approximately 205,600 acres (9%), and is used for producing vegetables, fruits, flowers, eggs, and milk. Rangeland accounts for approximately 152,100 acres (7%) and is used primarily for grazing livestock. Waterbodies (1%) encompasses approximately 13,800 acres of the county's total land area.

Revised

Land within the proposed project areas is predominately undeveloped. Ownership of land is divided between private ownership, Federal lands, state lands, and local government. Privately owned land is the largest group of land owners and is typically developed as single-residence ranch land or remains undeveloped and held for occasional use (i.e., recreation).

3.2 Aesthetics

Aesthetic resources consist of the natural and man-made landscape features that appear indigenous to the area and give a particular environment its visual characteristics. It is essentially based on an individual or group of individuals' judgment as to whether or not an object is pleasing, and/or would affect quality of life. With the exception of small residential communities near Canyon City, Campo, and Jacumba, the project area is characterized by undeveloped, open landscapes. The major appeal of the area is its vast areas of naturally occurring landscape. At a closer look, past UDA traffic has created a large number of trails, unpaved tracks and roads, damage from human-induced wildland fires, and litter left behind by UDAs can be found throughout the project area and detract from the region's natural beauty. There are no unique, natural, or manmade features in the project area that create any different visual landscapes than those described above.

3.3 Soils and Prime Farmland

Several different soil associations are located along the international border between Canyon City and Jacumba. The western portion of the project corridor consists of the Las Posas association, the Stony association, and the Rock land association. The Las Posas association consists of well-drained stony fine sandy loams that have clay subsoils. Exposed bedrock and large boulders dominate the Rock land association. The central portion of the project corridor consists of the Tollhouse-La Posta-Rock land association (eroded); the La Posta-Kitchen Creek association (rocky, eroded); and the Mottsville-Calpine association. The Tollhouse-La Posta-Rock land association is described as excessively drained and coarse sandy loams over granitic rock and areas of rock land. The La Posta-Kitchen Creek association is somewhat excessively drained loamy coarse sands over decomposed granodiorite; the Mottsville-Calpine association is similar, but is associated with alluvial fans. The eastern portion of the project, near Jacumba, is comprised of the Mecca-Indio association and the Rock land association. The Mecco-Indio association is described as well-drained sandy and silt loams on alluvial fans (USDA 1973).

More information on specific soils can be found in previous documents addressing projects in the area (INS 2001, USACE 1994); however, specific soils located in each of the projects that would require ground-disturbing activities are described in the following paragraphs.

3.3.1 Soil Types

3.3.1.1 Night Vision Scope Pad and Access Road Construction

The soil type associated with the Airport Mesa scope pad and access road construction is Stony land. This soil type consists of rocks and boulders with little vegetation. It is strongly sloping and very steep with a severe erodibility rating (USDA 1973).

Scope pad and access road construction associated with Mountain Empire is Tollhouse rocky coarse sandy loam, 5 to 30% slopes, eroded near the top of the hill at the Mountain Empire Campground. The drainage structure repair near Mountain Empire at Campo Creek would occur on La Posta rocky loamy coarse sand, 5 to 30% slopes. The Tollhouse, 5 to 30%, soil is formed of excessively drained, shallow coarse sandy loams. The La Posta, 5 to 30%, soil consists of excessively drained sands that are formed from granodiorite. Both the Tollhouse and La Posta soils have a severe erodibility rating (USDA 1973).

3.3.1.2 Drainage Structures

Drainage structures proposed for La Gloria Canyon and Smith Canyon would be installed in Tollhouse rocky coarse sandy loam, 30-65% slopes. The Maupins drainage structure would be installed in Mottsville loamy coarse sand, 2 to 9% slopes. Mottsville loamy coarse sand, 2 to 9% slopes, Mottsville, 2 to 9%, soil is excessively drained, deep loamy coarse sand found in alluvial areas. The Mottsville soil has a severe erodibility rating (USDA 1973). The Tollhouse soil type is described above in Section 3.3.1.1.

3.3.1.3 Bollard Fence

Three soil types are located near the proposed bollard fencing site: the Rositas loamy coarse sand, 2 to 9% slopes; the Reiff fine sandy loam, 0 to 2% slopes; and the La Posta rocky loamy coarse sand, 5 to 30% slopes. The Rositas soil type is somewhat excessively drained and deep. These soils are found on alluvial fans and have an erodibility rating of severe. The Reiff soil type is a well-drained, deep fine sandy loam

formed in alluvium derived granite rock. This soil type is classified as severely erodable (USDA 1973). The La Posta soil type has been described above in Section 3.3.1.1.

3.3.1.4 Blasting

The individual sites designated for blasting consist of large rocks and boulders. No soil would be disturbed for the blasting activities. All roadwork associated with the blasting activities is addressed in previous NEPA documents (INS 2001; USACE 1997, 1994).

3.3.1.5 Water Wells and Concrete Holding Tanks

Soil types would be the same as those discussed for the Smith and La Gloria Canyon drainage structures.

3.3.2 Hydric Soils

There are no hydric soils located within the footprint of any of the project components (Hydric Soils of California 2002).

3.3.3 Prime Farmland

The Reiff fine sandy loam, 0 to 2% slopes located within the proposed bollard fence corridor is the only soil type classified as prime farmland in the project areas; however, it is only classified as such if it is irrigated for farmland use (USDA 1973). Urban or built-up areas that contain listed soils are not considered prime farmland. Therefore, the Reiff soil type in the project corridor would not be considered a prime farmland soil type due to the present land use and proximity to an urban area.

3.4 Geology

The entire project corridor is located within the Peninsular Range Geomorphic Province, which is mostly made of granitic rock (Nyman 2002). The Peninsular Ranges Province was formed by the Southern California Batholith, a composite of several bodies of igneous rock formed in the subsurface (Demere 1997). These bodies of igneous rock, having varying chemical composition, shifted from gabbro to granodiorite. In the Cretaceous period, the Nevadan Orogeny caused major upward thrusting in southern California (Sharp 1976).

Additional information on the geology in the project area can be found in the project-specific hydrology report found in Appendix B.

3.5 Water Resources

The primary Federal law that protects waters of the United States is the Clean Water Act (CWA) of 1972. This Act was passed by Congress with two major goals: 1) to prohibit the discharge of pollutants into waters, and 2) to improve water quality levels to where they are safe for recreation and wildlife and fisheries purposes. This Act protects all waters of the U.S. from streams and rivers to lakes, reservoirs, and even aquifers. Each state has a water resources division that is required to identify waterbodies that do not meet U.S. Environmental Protection Agency (EPA) standards. Along with implementing Federal regulations, the California Department of Water Resources offers further protection to the local water resources.

Another Federal law that protects water resources is the Safe Drinking Water Act (SDWA), which was passed by Congress in 1974, as amended. This Act was designed to regulate all public drinking water supplies, such as public wells, springs, lakes, and rivers, to protect public health. The EPA is responsible for setting drinking water standards.

3.5.1 Groundwater

The project area lies within the Peninsular Range geomorphic province. This province covers a large portion of southern California, including all of San Diego County. Large quantities of water are stored in the granitic rock from which this area formed. Most of the groundwater stored moves through the area through cracks and fractures (Nyman 2002). Groundwater in this system is replenished through rain and snow events.

This particular province provides water to the Campo/Cottonwood Creek aquifer, which is the principal source of water for the project area between Canyon City and Boulevard (just west of Jacumba). This aquifer was designated as a Sole Source Aquifer by the EPA on 5 May 1993 under Section 1424(e) of the SDWA. The EPA defines a sole or principal source aquifer as “one which supplies at least 50% of the drinking water consumed in the area overlying the aquifer. These areas can have no alternative

drinking water source(s) which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water" (EPA 2002). Much of the project area is dependant on private wells for their drinking supply.

The USBP currently uses approximately 730,000 to 800,000 gallons of water per year, or roughly two acre-feet per year for on-going projects. Current estimates indicate that the aquifer contains about 7,000 acre-feet of water presently, even though the area has experienced significant droughts over the past four years. Pumping from the current wells would be substantially reduced or cease, once the new wells along the border were installed; therefore, no additional amounts of water would be pumped from the aquifer.

A project specific hydrology report is included in Appendix B, which provides specific details on the region's groundwater resources and the effects of installing the proposed water wells.

3.5.2 Surface Water

Due to the climate of the project area, most of the surface drainage channels are dry much of the year (including three of the four drainages addressed in this document). Since both sides of the international border are relatively undeveloped, there are few sources of surface water contaminates in the area.

Campo Creek is the only intermittent stream located within the proposed project area. In the U.S. Fish and Wildlife Service (USFWS) wetlands and aquatic habitats classification system, Campo Creek would be best classified as an "intermittent riverine streambed" (Cowardin 1979). This creek falls within the proposed Mountain Empire night vision scope pad and access road construction of the proposed action alternative (see Figure 2-2). Other drainages directly affected by the proposed projects would be considered ephemeral (i.e., water only flows during storm events).

3.5.3 Waters of the U.S. and Wetlands

Section 404 of the CWA of 1977 (P.L. 95-217) authorizes the Secretary of the Army, acting through the USACE, to issue permits for the discharge of dredged or fill material into Waters of the U.S. (WUS), including wetlands. WUS (Section 328.3[2] of the CWA)

are those waters used in interstate or foreign commerce, subject to ebb and flow of tide, and all interstate waters including interstate wetlands. WUS are further defined as all other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural ponds, or impoundments of waters, tributaries of waters, and territorial seas. Jurisdictional boundaries for WUS are defined in the field as the ordinary high water mark, which is that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Wetlands are those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987).

The USACE, acting under Section 404 of the CWA, provides a vital function in protecting our valuable aquatic resources, including wetlands. The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Under Section 404 of the CWA, the Secretary of the Army is responsible for administering a Regulatory Program that requires permits for the placement of dredged or fill materials into WUS, including wetlands.

Areas regulated under Section 404 are collectively referred to as "Waters of the United States." The Supreme Court ruling in the Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers case ("SWANCC," Case No. 99-1178) on January 9, 2001 restricted the EPA and USACE's regulatory authority under CWA. This ruling eliminates the CWA jurisdiction over isolated, non-navigable, and intrastate waters used as habitat by migratory birds. WUS specifically affected by the SWANCC ruling include small intrastate lakes, isolated rivers and streams (including intermittent streams), isolated wetlands, sloughs prairie potholes, wet meadows, playa lakes, or natural ponds.

The USACE has established Nationwide Permits (NWPs) to efficiently authorize common activities, which do not significantly impact WUS. The NWPs were modified and reissued by the USACE in the *Federal Register* on January 15, 2002. The USACE has the responsibility to authorize permitting under a NWP, or to require an Individual Permit.

3.5.4 Floodplains

A floodplain is the area adjacent to a river, creek, lake, stream, or other open waterway that is subject to flooding when there is a significant rain. If an area is in the 100-year flood plain, there is a 1-in-100 chance in any given year that the area will flood.

Executive Order (EO) 11988 (Flood Plain Management) (43 FR 6030) was enacted on May 24, 1977 to "avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. EO 11988 directs all Federal agencies to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains…" (USFWS 2002b).

The drainage structure proposed for repair at Campo Creek for the Mountain Empire scope site (Figure 3-1) is the only action that falls within the 100-year floodplain (FEMA 2002).

3.6 Vegetation

The major vegetation communities along the U.S.-Mexico border in eastern San Diego County are chaparral, desert transition chaparral, and creosote bush scrub (Beauchamp 1986). The predominant plant species in the chaparral community are chamise (*Adenostoma fasciculatum*), manzanita (*Xylococcus bicolor*), and California lilac (*Ceanothus tomentosa*). The predominant plant species in the desert transition chaparral include acacia (*Acacia greggii*), rabbitbrush (*Chrysothamnus* sp.), cholla (*Opuntia* sp.), barrel cactus (*Ferocactus cylindraceus*), telegraph weed (*Heterotheca grandiflora*), and tumbleweed (*Salsola tragus*). Common associates of the creosotebush scrub community include creosotebush (*Larrea tridentata*), sage (*Salvia columbariae*), four winged saltbush (*Atriplex canescens*), and acacia. Additional information on vegetation in the project can be found in previous NEPA documents (USACE 1993, 1994, 1997; INS 2001).

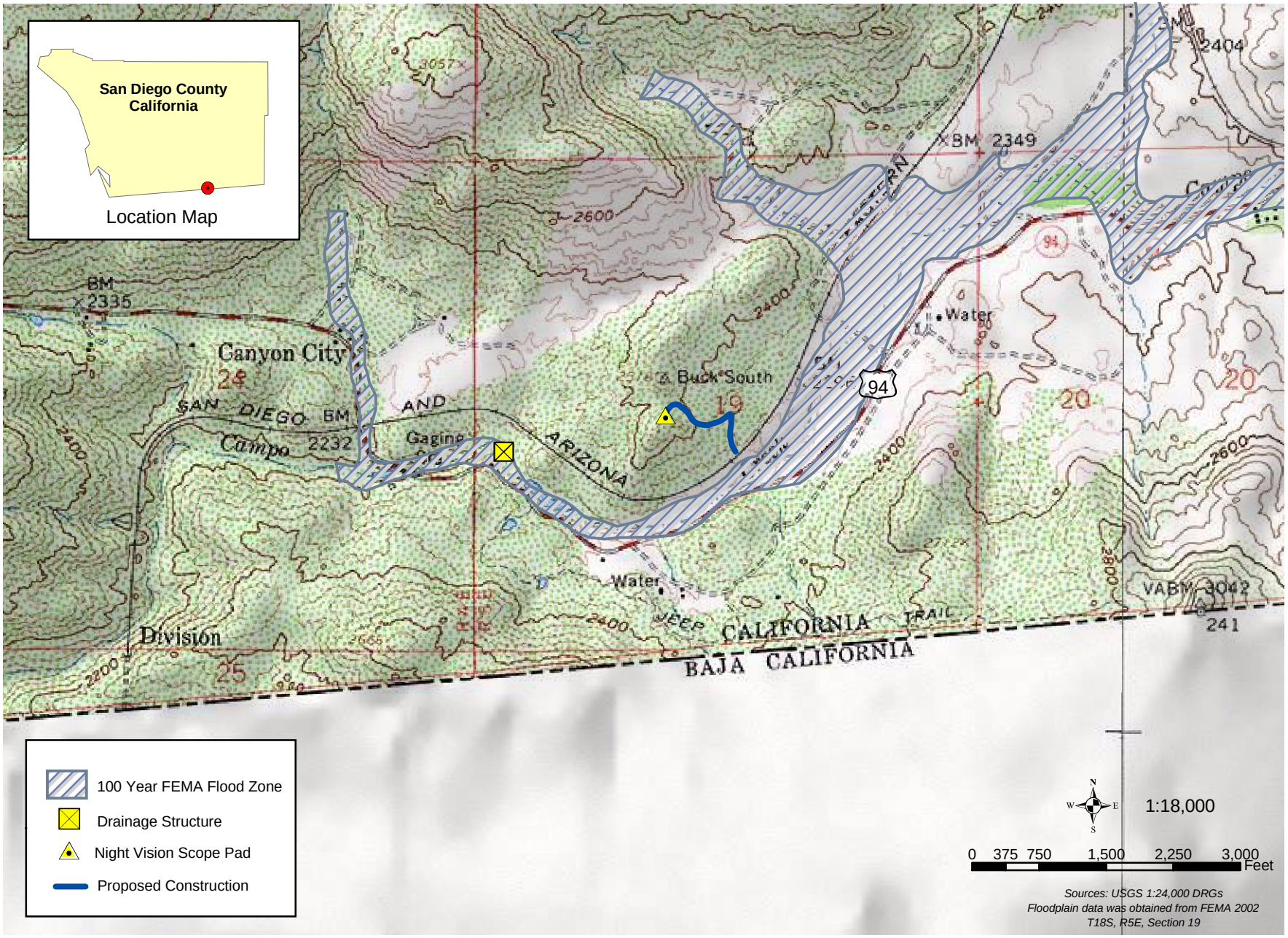


Figure 3-1: Proposed Drainage Structure for Mountain Empire within the 100 Year FEMA Flood Zone

gsrc / GULF SOUTH RESEARCH CORPORATION

Date: December 2002

Other vegetation recorded during a site visit performed in April 2002 by each project site outside of the 60-foot Roosevelt Easement is listed below. These species were observed in the vicinity of the impact area.

- Airport Mesa – Vegetation on Airport Mesa consisted of a desert scrub community. Ground cover density ranged from 60% in protected areas on the slopes to less than 15% on top of Airport Mesa. Predominate species included cholla, jojoba (*Simmondsia chinensis*), hedgehog cactus (*Echinocereus* sp.), creosotebush, soap-tree yucca (*Yucca elata*), Mormon tea (*Ephedra* sp.), prickly pear (*Opuntia* sp.), one-seed juniper (*Juniperus monosperma*), buckwheat (*Eriogonum* sp.), and four winged saltbush.
- Mountain Empire – The Mountain Empire scope site and access road would traverse a chamise chaparral community. Density in this area is high, sometimes ranging between 80 and 85%. Predominant shrubs in this community included chamise, Mormon tea, holly-leaf cherry (*Prunus ilicifolia*), sugar bush (*Rhus obata*), buckwheat, sage, and mountain mahogany (*Cercocarpus betuloides*). The riparian community along Campo Creek included species such as mulefat (*Baccharis viminea*), willow (*Salix* spp.), cottonwood (*Populus* sp.), dock (*Rumex* spp.), currant (*Ribes* sp.), wild celery (*Apiastrum angustifolium*), and water cress (*Rorippa* sp.); however, this community would not be affected by the proposed actions. The canopy cover is closed creating very low density and diversity of shrubs and ground cover. The potential area of impact for the drainage crossing consists of the existing road and culvert.
- La Gloria Canyon – The proposed drainage crossing is located within a riparian community consisting of large coast live oaks (*Quercus agrifolia*) and red willows (*Salix laevigata*).
- Smith Canyon – Smith Canyon supports a riparian community consisting of four winged saltbush, yerba santa (*Eriodictyon californicum*), elderberry (*Sambucus* sp.), and needle grass (*Achnatherum* sp.). Density in this streambed varies from 50 to 65%.
- Maupins – The vegetation at this proposed drainage structure consists of four winged saltbush, broom snakeweed (*Gutierrezia sarothrae*), and goldenrod (*Solidago* sp.). Coast live oak occurs on the eastern ridge, but would not be disturbed by the proposed action.

3.7 Wildlife and Aquatic Resources

California is one of the most biologically diverse areas in North America. Within its 160,000 square miles, California harbors more unique animals than any other state (Steinhart 1990).

The native faunal components of the Peninsular Range support 432 species of birds, which are dominated by woodwarblers (40 species), swans, geese, and ducks (34 species), sandpipers and phalaropes (30 species), gulls and terns (20 species), sparrows and towhees (20 species), and tyrant flycatchers (22 species). The majority of these species occur in spring and fall when neotropical migrants (e.g., flycatchers and warblers) pass through on their way to either summer breeding or wintering grounds and during winter when summer resident birds (i.e., robins, kinglets, and sparrows) from the north arrive to spend the winter. The majority of the 94 mammalian species found in the Peninsular Range are evening bats and rodents, with rodents being the most common. Only 17 species of amphibians are found within this province, with frogs being the most abundant and common. A total of 54 species of reptiles inhabit the Peninsular Range, with the iguanid lizards and colubrid snakes being dominant (Ingles 1957; Stebbins 1985; Holt 1990).

Very few fauna species were observed during the site visit in April 2002. Wildlife species seen in the various project areas were Steller's jay, Abert's towhee, acorn woodpecker, scrub jay, phoebe, western rufous-sided towhee, and Wilson's warbler.

3.8 Threatened and Endangered Species and Critical Habitat

The Endangered Species Act (ESA) [16 U.S.C. 1532 et. seq.] of 1973, as amended, was enacted to provide a program for the preservation of endangered and threatened species and to provide protection for the ecosystems upon which these species depend for their survival. All Federal agencies are required to implement protection programs for designated species and to use their authorities to further the purposes of the Act. Responsibility for the identification of a threatened or endangered species and development of any potential recovery plans lies with the Secretary of the Interior and the Secretary of Commerce.

The USFWS and the National Marine Fisheries Service are the primary agencies responsible for implementing the ESA. The USFWS's responsibilities under the ESA include: (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

An endangered species is a species in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species are those, which have been formally submitted to Congress for official listing as threatened or endangered. Species may be considered endangered or threatened when any of the five following criteria occurs: (1) the current/imminent destruction, modification, or curtailment of their habitat or range; (2) overuse of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or human-induced factors affect continued existence.

In addition, the USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which the USFWS has sufficient information on hand to support proposals to list as endangered or threatened under the ESA. However, proposed rules have not yet been issued because such actions are precluded at present by other listing activity.

3.8.1 Federal

A total of 46 Federally protected species have the potential to occur in San Diego County. This list includes three amphibians, 11 birds, four fish, four invertebrates, four mammals, and 20 plants. A total of 33 species are listed as endangered, 11 as threatened, one as candidate, and one as proposed threatened. Information pertaining to species identified by the USFWS as well as all other Federally protected species in San Diego County, is included in Table 3-1.

Table 3-1: Threatened and Endangered Species in San Diego County, California

Common Name/ Scientific Name	Federal Status	Critical Habitat	Habitat
AMPHIBIANS			
Arroyo toad *Bufo microscaphus californicus*	E	Yes	Found exclusively in streams in southern California and northern Baja California
California red-legged frog *Rana aurora draytonii*	T	Yes	Occupies rocky and shaded streams with cool waters originating from springs and snowmelt
Mountain yellow-legged frog *Rana muscosa*	E	No	High-elevation streams in the high Sierra Mountains and western Nevada
BIRDS			
Bald eagle *Haliaeetus leucocephalus*	T	No	Near large bodies of open water such as lakes, marshes, seacoasts and rivers, and tall trees
Brown pelican *Pelecanus occidentalis*	E	No	Found in coastal areas; on rocky shores and cliffs, in sloughs, and coastal river deltas.
California least tern *Sterna antillarum browni*	E	No	Nest in colonies on sandy beaches that are usually associated with river mouths or estuaries
Coastal California gnatcatcher *Polioptila californica californica*	T	Yes	Commonly occurs in coastal sage scrub
Least Bell's vireo *Vireo bellii pusillus*	E	Yes	Occurs in riparian habitats with well-developed overstories and understories
Light-footed clapper rail *Rallus longirostris levipes*	E	No	Found in dense vegetation within coastal salt and brackish marshes
Mountain plover *Charadrius montanus*	PT	Yes	Open arid plains, short-grass prairie.
Short-tailed albatross *Phoevastria albatrus*	E	No	Oceanic
Southwestern willow flycatcher *Empidonax traillii extimus*	E	No	Occurs in dense riparian habitats with tamarisk or willow species and medium sized shrubs
Western snowy plover *Charadrius alexandrinus nivosus*	T	Yes	Occurs on coastal beaches for nesting and wintering

Table 3-1: Threatened and Endangered Species in San Diego County, California

Common Name/ Scientific Name	Federal Status	Critical Habitat	Habitat
Yellow-billed cuckoo *Coccyzus americanus*	C	No	Forest to open woodlands, those areas with dense undergrowth such as parks, riparian woodlands and thickets
FISH			
Desert pupfish *Cyprinodon macularius*	E	Yes	Found in warm desert pools, marshes, streams and springs
Mohave tui chub *Gila bicolor mohavensis*	E	No	Streams and lakes
Tidewater goby *Eucyclogobius newberryi*	E	Yes	Endemic to California, and is unique in that it is restricted to coastal brackish water habitats.
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	E	Yes	Prefers slow moving reaches or quiet water microhabitats of streams and rivers
INVERTEBRATES			
Laguna Mountains skipper *Pyrgus ruralis lagunae*	E	No	Forest clearings, meadows, pastures, streamsides; from sea level to 10,000 feet
Quino checkerspot butterfly *Euphydryas editha quino*	E	Yes	Found on open grasslands near meadows, vernal pools, or lakes; also coastal sage scrub
Riverside fairy shrimp *Streptocephalus woottoni*	E	Yes	Occurs in vernal pools
San Diego fairy shrimp *Branchinecta sandiegonensis*	E	Yes	Occurs in vernal pools
MAMMALS			
Peninsular bighorn sheep *Ovis Canadensis cremnobates*	E	Yes	Dry, rocky, low-elevation desert slopes, canyons, and washes
Pacific pocket mouse *Perognathus longimembris pacificus*	E	No	Fine-grain, sandy substrates near Pacific Ocean
Southern sea otter *Enhydra lutris nereis*	T/X*	No	Narrow band along the coast, and rarely venture much more than about 1 1/2 miles offshore

Table 3-1: Threatened and Endangered Species in San Diego County, California

Common Name/ Scientific Name	Federal Status	Critical Habitat	Habitat
Stephen's kangaroo rat *Dipodomys stephensi*	E	No	Restricted to dry grasslands and scrub of Southern California
PLANTS			
California Orcutt grass *Orcuttia californica*	E	No	Occurs in vernal pools
Coastal dunes milk-vetch *Astragalus tener* var. *titi*	E	No	Occurs on a relatively flat coastal terrace within 100 feet of the ocean beach
Del Mar manzanita *Arctostaphylos glandulosa* spp. *crassifolia*	E	No	Occurs in southern maritime chaparral and dense southern mixed chaparral
Encinitas baccharis *Baccharis vanessae*	T	No	Occurs in southern maritime chaparral and dense southern mixed chaparral
Gambel's water cress *Rorippa gambelii*	E	No	Marshes, swamps, and the borders of lakes
Mexican flannelbush *Fremontodendron mexicanum*	E	No	Found in coniferous forests
Nevin's barberry *Berberis nevinii*	E	No	Found in chaparral and alluvial scrub associated with rocky slopes and sediments and sandy washes
Orcutt's spineflower *Chorizanthe orcuttiana*	E	No	Found in coastal chaparral openings in chamise
Otay mesa mint *Pogogyne nudiuscula*	E	No	Occurs in vernal pools
Otay tarplant *Hemizonia conjugens*	T	No	Typically found in grassland or coastal sage scrub
Peirson's milk-vetch *Astragalus magdalenae var. peirsonii*	T	No	Desert dunes
Salt marsh bird's beak *Cordylanthus maritimus maritimus*	E	No	Found exclusively in coastal salt marshes
San Bernardino blue grass *Poa atropurpurea*	E	No	Found in meadow habitats
San Diego ambrosia *Ambrosia pumila*	E	No	Restricted to flat or sloping grasslands, often along valley bottoms or areas adjacent to vernal pools

Table 3-1: Threatened and Endangered Species in San Diego County, California

Common Name/ Scientific Name	Federal Status	Critical Habitat	Habitat
San Diego button-celery *Erynginum aristulatum* var. *parishii*	E	No	Occurs in vernal pools
San Diego mesa mint *Pogogyne abramsii*	E	No	Occurs in vernal pools
San Diego thornmint *Acanthomintha ilicifolia*	T	No	Occurs in coastal sage scrub, chaparral, and native grassland
Spreading navarretia *Navarretia fossalis*	T	No	Occurs in vernal pools
Thread-leaved brodiaea *Brodiaea filifolia*	T	No	Vernally moist grasslands and the periphery of vernal pools
Willowy monardella *Monardella linoides* spp. *viminea*	E	No	Riparian scrub, usually at sandy locales in seasonally dry washes

Source: USFWS 2001, 2002a; CNDDB 2002

P=Proposed
T=Threatened
E=Endangered
C=Candidate
T/X*=Threatened (experimental population)

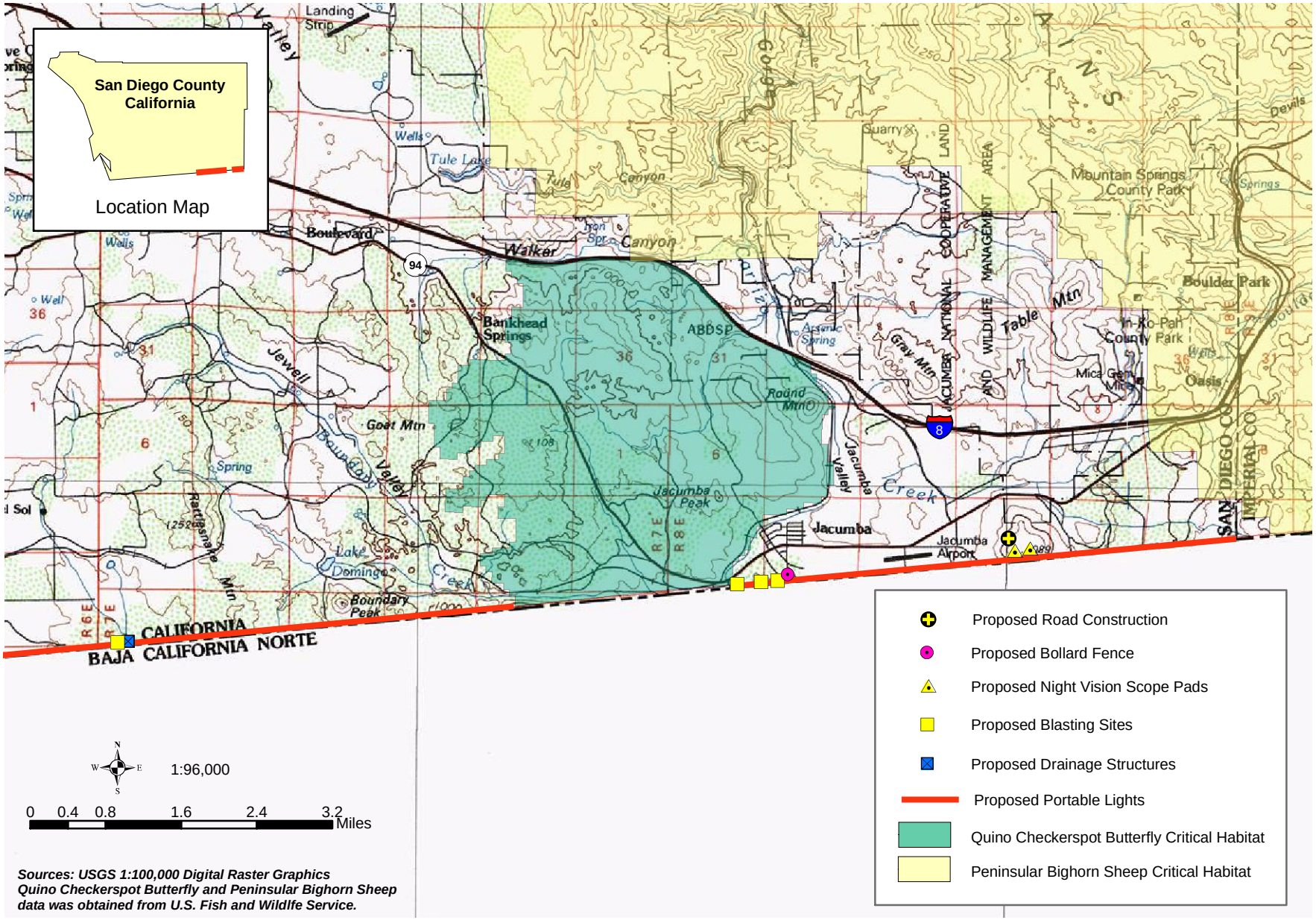
A 100% pedestrian survey was completed for each portion of the proposed project in April 2002 to determine the presence of any protected species. No Federally listed threatened or endangered species were observed during the biological surveys for this project or from past surveys in the area (USACE 1994, 1997). Much of the project area would not be suited for any protected species due to the disturbed nature of the area. The potential for the southwestern willow flycatcher and least Bell's vireo to be found in the riparian habitats for the Campo Creek (Mountain Empire) and La Gloria drainage structure repairs is possible; however, the footprint for the two drainage structures would remain the same as they are now. No riparian habitat would be lost due to the repair/replacement of the drainage structures.

The California Natural Diversity Database (CNDDB) shows one location for the Federally protected least Bell's vireo approximately 1.5 miles to the northeast of Mountain Empire (CNDDB 2002). The database showed no other Federally protected species in or near the project areas.

3.8.2 Critical Habitat

The ESA also calls for the conservation of what is termed Critical Habitat - the areas of land, water, and air space that an endangered species needs for survival. Critical habitat also includes such things as food, 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 or modification of essential habitat by uncontrolled land and water development.

While 13 species have designated critical habitats in San Diego County, none fall within the project areas. One area of critical habitat for the Quino checkerspot butterfly falls along the border just to the west of blasting sites 13, 14, 15, and the 300-foot section of bollard fence. The proposed portable lights would be placed starting at the PCT and continue to the Imperial County line; no lighting systems would be placed within the Quino critical habitat area. Critical habitat for the peninsular bighorn sheep (*Ovis canadensis cremnobates*) begins just east of the project area across the Imperial County line. Figure 3-2 shows the designated critical habitats for the Quino and sheep in relation to the proposed actions.



Sources: USGS 1:100,000 Digital Raster Graphics
Quino Checkerspot Butterfly and Peninsular Bighorn Sheep data was obtained from U.S. Fish and Wildlife Service.

Figure 3-2: Proposed Projects, Peninsular Bighorn Sheep and Quino Checkerspot Butterfly Critical Habitat Location

gsrc / GULF SOUTH RESEARCH CORPORATION

Date: December 2002

3.8.3 State

The Wildlife and Habitat Data Analysis Branch of the California Department of Fish and Game (CDFG) Department maintains lists of Wildlife of Special Concern. This list includes species whose occurrence in California is or may be in jeopardy, or with known or perceived threats or population declines. The CNDDB is a statewide inventory of the locations and condition of the state's rare species and natural communities. These species are not necessarily the same as those protected by the Federal government under the ESA.

The CDFG currently list 44 species that are considered endangered, threatened, rare, or candidate within San Diego County (CNDDB 2002). A full list of those species that are potentially occurring within San Diego County can be found in Appendix C.

3.9 Air Quality

The Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Act established two types of national air quality standards. Primary standards set limits to protect the public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The EPA Office of Air Quality Planning and Standards have set NAAQS for six criteria pollutants (Table 3-2). In addition to adopting the Federal NAAQS, the California Air Resources Board (CARB) has adopted more stringent California Ambient Air Quality Standards (CAAQS). The NAAQS and CAAQS are shown in Table 3-2 along with the newly adopted 8-hour standard for ozone. The new 8-hour standard will be implemented within the next few years and air districts are considering their status with respect to both the 1- and 8-hour standard. However, air districts must first reach attainment of the 1-hour ozone standard before being required to implement any additional controls that may be needed to achieve the 8-hour standard.

Table 3-2: California and National Ambient Air Quality Standards

POLLUTANT	California Standards	National Standards	
	CONCENTRATION	CONCENTRATION	STANDARD TYPE
Carbon Monoxide (CO) 1-hour average 8-hour average	9 ppm (10 mg/m^3)* 20 ppm (23 mg/m^3)*	9 ppm (10 mg/m^3)* 35 ppm (40 mg/m^3)*	None
Nitrogen Dioxide (NO_2) Annual arithmetic mean 1-hour average	-- 0.25 ppm (470 ug/m^3)*	0.053 ppm (100 ug/m^3)* --	Same as Primary
Ozone (O_3) 1-hour average 8-hour average	0.09 ppm (180 ug/m^3)* --	0.12 ppm (235 ug/m^3)* 0.08 ppm (157 ug/m^3)*	Same as Primary
Lead (Pb) 30 days average Quarterly average	1.5 ug/m^3 --	-- 1.5 ug/m^3	Same as Primary
Particulate Matter <10 micrometers (PM_{10}) Annual geometric mean Annual arithmetic mean 24-hour average	30 ug/m^3 -- 50 ug/m^3	-- 50 ug/m^3 150 ug/m^3	Same as Primary
Particulate Matter <2.5 micrometers ($PM_{2.5}$) Annual arithmetic mean 24-hour average	Same Same	65 ug/m^3 15 ug/m^3	Same as Primary
Sulfates 24-hour average	25 ug/m^3	No Federal Standards	
Hydrogen sulfide 1-hour average	0.03 ppm (42 ug/m^3)*		

Source: CARB 1999

Legend
ppm = parts per million
mg/m^3 = milligrams per cubic meter
ug/m^3 = micrograms per cubic meter
* Parenthetical value is an approximate equivalent concentration

The San Diego County Air Pollution Control District (SDAPCD) is the local agency responsible for air quality management matters (e.g., permitting) in San Diego County. The CARB is the state-level agency responsible for administration of state and Federal air quality regulations. The EPA San Diego Air Quality Control Region encompasses San Diego County in its entirety (40 CFR Part 81).

Emissions that would result from the construction and operation of the proposed action should comply with the rules and regulations of the SDAPCD. The rules and regulations of this agency are designed to achieve the Federal NAAQS and CAAQS that are protective of public health. The air quality assessment consists of identifying applicable state and NAAQS, the current attainment status of the area of the proposed action, and any current emissions at the site.

3.9.1 Attainment Status

Based on measured ambient criteria pollutant data, areas are designated as having air quality better than the standard (attainment) or worse than the standard (nonattainment).

In California, attainment is classified for both NAAQS and CAAQS. In addition to being classified as “nonattainment,” the degrees of nonattainment are divided into categories indicating the severity. Degrees of nonattainment include marginal, moderate, serious, severe, or extreme. Areas are often designated as unclassified when ambient criteria pollutant data are insufficient for the EPA to determine attainment status.

A maintenance area is an area that was previously designated as a nonattainment area and has been redesignated as attainment. The assignment of an attainment category is based on the measured criteria pollutant concentration in a given location and varies for each pollutant of concern.

San Diego County has been designated as a nonattainment area for the NAAQS and CAAQS for ozone, with a classification of “serious” in both cases. In addition, San Diego County operates under a maintenance plan for carbon monoxide (CO), since a portion of San Diego County was previously a moderate CO nonattainment area. This former nonattainment area encompassed the western portion of the county. San Diego County has not violated the Federal standard since 1990; however, the state’s 8-hour standard

was violated once in downtown San Diego in 1990. San Diego County is also in nonattainment of state standards for particulate matter less than 10 microns in diameter (PM_{10}). The attainment status of San Diego County with regard to both state and Federal standards is summarized in Table 3-3.

Table 3-3: Air Quality Designations in the San Diego Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O_3)	Nonattainment (Serious)	Nonattainment (Serious)
Carbon Monoxide (CO)	Attainment	Attainment
Particulate matter (PM_{10})	Unclassified	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment
Sulfates	*(No Federal standard)*	Attainment
Hydrogen Sulfide	*(No Federal standard)*	Unclassified
Visibility Reducing Particles	*(No Federal standard)*	Unclassified

Source: SDAPCD 2001

3.9.2 Local Ambient Air Quality Monitoring

As a result of the ozone pollution problems within San Diego County's urban areas, there is a network of ambient air monitoring stations collecting data on the six criteria pollutants. Ambient air quality data collected from these monitoring stations are used to determine compliance with the NAAQS. The closest monitoring station (to the project area) is located in Alpine, which is approximately 30 miles northwest of Campo. Air quality in the Alpine area meets all Federal standards, but will occasionally exceed the state 1-hour standard for ozone.

Air quality is consistently improving in San Diego County, and in 1999, for the first time, San Diego County had no exceedances of the Federal 1-hour ozone standard. Monitoring data in 2000 supports this trend; however, the county remains classified as a serious nonattainment area for ozone.

3.10 Noise

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (community annoyance). Sound is usually represented on a logarithmic scale with a unit called the

decibel (dB). Sound on the decibel scale is referred to as a sound level. The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Noise levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise metric recommended by the EPA and has been adopted by most Federal agencies (EPA 1972; FICON 1992).

Several examples of noise pressure levels in dBA are listed in Table 3-4. A DNL of 65 dBA is the level most commonly used for noise planning purposes and represents a compromise between community impacts and the need for activities like construction, which do cause noise. Areas exposed to DNL above 65 dBA are generally not considered suitable for residential use. A DNL of 55 dBA was identified by the EPA as a level below which there is effectively no adverse impact (EPA 1972).

Table 3-4: A-Weighted (dBA) Sound Levels of Typical Noise Environments

dBA	Overall Level	Noise Environment
120	Uncomfortably Loud (32 times as loud as 70 dBA)	Military jet takeoff at 50 ft
100	Very loud (8 times as loud as 70 dBA)	Jet flyover at 1,000 ft
80	Loud (2 times as loud as 70 dBA)	Propeller plane flyover at 1,000 ft Diesel truck 40 mph at 50 ft
70	Moderately loud	Freeway at 50 ft from pavement edge Vacuum cleaner (indoor)
60	Relatively quiet (1/2 as loud as 70 dBA)	Air condition unit at 10 ft Dishwasher at 10 ft (indoor)
50	Quiet (1/4 as loud as 70 dBA)	Large transformers Small private office (indoor)
40	Very quiet (1/8 as loud as 70 dBA)	Bird calls Lowest limit of urban ambient sound
10	Extremely quiet (1/64 as loud as 70 dBA)	Just audible
0	Threshold of hearing	

Some noise levels are continuous sounds (i.e., air conditioner, vacuum cleaner) whose levels are constant for some time. Other noise levels like the automobile or heavy truck

are the maximum sound during a vehicle passby. Noise levels, such as urban daytime and urban nighttime, are averages over some extended period.

3.11 Cultural Resources

3.11.1 Cultural History

The archaeological record in southern California begins approximately 12,000 years ago. Chartkoff and Chartkoff recognize four major periods: Paleoindian, Archaic, "Pacific" (herein referred as Late Prehistoric consistent with Erlandson 1994; Moratto 1984), and Historic (Vargas et al. 2002a).

The Paleoindian Period (12,000 – 8,000 B.P.) is characterized by small, mobile bands of hunter-gatherers. Their economy was centered on big-game hunting. The environment during this time was wetter and cooler than at present. Their material culture consisted of a variety of generalized flaked stone tools, including large, well-made projectile points (Vargas et al. 2002a). There is only sparse evidence of terminal Paleoindian occupation in the San Diego area. Lasting from the terminal Pleistocene to the Altithermal in the San Diego region is a series of cultures termed the Western Pluvial Lakes Tradition (WPLT). Typically WPLT sites are associated with pluvial lakes, and the associated lake, marsh, and grassland environments. Artifact assemblages from WPLT sites typically have percussion flaked tools, lack groundstone, and have crescent knives and other unique components to the toolset. In the San Diego region the cultural expression of that parallels the WPLT has been classified by Moratto as a "Paleo-Coastal Tradition," which is seen as including the San Dieguito Complex (Moratto 1984; Vargas et al. 2002a).

The Archaic Period (8,000 – 2500 B.P.) occupations that followed the San Dieguito Complex were originally defined as the *Shell Midden Culture* and were later renamed the La Jolla Complex (Vargas et al. 2002a). The La Jolla tool kits include ceramics, large-stemmed and indented-based points, and unique discoidal and cogged stones of unknown function and sites of this complex are frequent recognized by milling stone assemblages associated with shell middens (Vargas et al. 2002a).

The Late Prehistoric Period (2500 – 200 B.P.) arose gradually from the Archaic and is characterized by a shift to a more local economy and the development of complex

societies. Changes during this period differed from region to region but generally included shifts from lagoon-based shellfish acquisition to land based, an increasing importance upon acorn processing, and the introduction of cremation versus flexed burials (Vargas et al. 2002a). Both True (1966, 1970) and Moratto (1984) suggest that for the San Diego Area the La Jolla evolved into the Cuyamaca Complex, which in turn evolved into the historic Digueño speakers.

The Historic Period (200 B.P. – present) marks the advent of European settlement in California. The first Spanish Explorer in San Diego County was Juan Rodigro Cabrillo in 1542. Spanish settlement in the area began in 1769 with the founding of the first presidio and mission. Soon afterwards, other missions and presidios were established farther north along the coast of California. The mission complexes sought to convert the indigenous Yuman-speaking inhabitants to Christianity and make them loyal to the Spanish Crown. Mexico declared its independence in 1822 and replaced the colonial Spanish missions with the ranchero system. Mexico held this area of California until the end of the Mexican-American War with the signing of the Treaty of Guadalupe-Hidalgo in 1848 and ceded California to the United States. By the 1850-1870 interval, California became a state and San Diego became an American frontier town. The Mexican ranches were subdivided into smaller farms and ranches; this system is still in existence today. In the late 1860s, the center of San Diego was relocated from the old town to an adjoining area within present day San Diego, on the San Diego Bay. With its position on the San Diego Bay and plans for the construction of a railroad connection, San Diego became the regional economic center and a merchant port. In the 1880s, an economic boom further fostered economic diversification and urbanization of the area. It was during this time that the South Pacific Rail Road built a branch line southward to San Diego from its main line in Los Angeles (Vargas et al. 2002a). In 1919, the San Diego and Arizona Railroad was completed. Portions of the rail line cross near the current project area and through the Cities of Tecate and Campo. The rail line was beset with problems during construction and operation. The last passenger train operated in 1951 and the last freight train on the line operated in 1982. Recently there has been a renewed interest in opening the line to transport goods from Mexico to the Port of San Diego and for opening portions of the line for tourism (Vargas et al. 2002a).

3.11.2 Previous Investigations

A site records check was conducted for a 1-mile radius around all project areas. The records check was conducted at the South Coastal Information Center (SCIC) and the San Diego Museum of Man (SDMM). All known cultural resources, previous cultural resources studies, and historic properties were identified that lie within one mile of any of the proposed project areas. As a result, 72 archaeological sites, one historic district (Table Mountain Historic District), and 17 cultural resources studies were identified (Vargas et al. 2002b). Table 3-5 summarizes the archaeological sites found within one mile of all the proposed project sites. Two sites (CA-SDI-4458 and CA-SDI-177) were located close to the proposed construction at Airport Mesa. One site (CA-SDI-4460) would have been bisected by the road as originally planned. Consequently, the road was redesigned to avoid the site. Because of the realignment, all three previously recorded archaeological sites were avoided. Site CA-SDI-6035 is located near the proposed construction at Mountain Empire; however, the site is 200 feet away, a sufficient distance as to be avoided by construction activities (Vargas et al. 2002b).

3.11.3 Current Investigations

Prior to conducting the archaeological surveys, a record search was conducted at the SCIC and the SDMM. The results of that record search are summarized in Section 3.11.2. The BLM declined the need for a site file search at the Palms Springs-South Coast Field Office as their site records where duplicated at the SCIC. All areas that were not previously surveyed within the area of potential effect was surveyed by walking non-overlapping straight transects spaced no more than 49 feet apart. Ground surface visibility averaged about 80% across all areas surveyed. No previously recorded archaeological sites were encountered during the initial field surveys or during the survey of the revised road alignment outlined in Section 3.11.2. The four previously recorded sites (CA-SDI-177, CA-SDI-4458, CA-SDI-4460 and CA-SDI-6035) that were located close to the project area were revisited and evaluated. Sites CA-SDI-177 and CA-SDI-4460 were both found to be heavily impacted by foot traffic, past bulldozing disturbance and erosion. As a result, the potential for intact subsurface deposits at these

Table 3-5: Sites within One Mile of all Project Locations

Site Number	Temporal Affiliation	Site Type	Distance from Project Site (miles)
CA-SDI-176	Prehistoric	Large occupation area with rock art (extensively looted)	0.85
CA-SDI-177	Prehistoric	Surface Lithic Scatter	0.10
CA-SDI-178	Prehistoric	Surface Ceramic Scatter	0.25
CA-SDI-4448	Prehistoric	Small camp site with roasting pit	0.60
CA-SDI-4449	Prehistoric	Large lithic scatter (moderate density)	0.30
CA-SDI-4450	Record Missing from SCIC		
CA-SDI-4458	Unknown	Rock alignment, earthen depressions	0.10
CA-SDI-4460	Prehistoric	Lithic scatter	0.10
CA-SDI-4461	Prehistoric	Lithic scatter	0.20
CA-SDI-4462	Prehistoric	Milling slicks, small lithic scatter	0.50
CA-SDI-4465	Prehistoric	Lithic Scatter	0.35
CA-SDI-4467	Prehistoric	Lithic Scatter	0.65
CA-SDI-4468	Prehistoric	Artifact Scatter	0.30
CA-SDI-4470	Prehistoric	Artifact Scatter	0.40
CA-SDI-4472	Prehistoric	Lithic Scatter	0.45
CA-SDI-4477	Prehistoric	Surface scatter; lithics, sherd	0.60
CA-SDI-4478	Prehistoric	Lithic scatter	0.30
CA-SDI-4479	Prehistoric	Temporary camp; depressions, pits, rock alignments, lithic scatter	0.25
CA-SDI-5163	Prehistoric	Artifact scatter	0.35
CA-SDI-5164	Prehistoric	Lithic scatter	0.75
CA-SDI-5165	Prehistoric	Pulping station	0.80
CA-SDI-6035	Prehistoric	Large occupation site with extensive milling features	0.04
CA-SDI-6037	Prehistoric	Probably occupation site, bedrock milling	0.50
CA-SDI-6742	Prehistoric	Lithic scatter	0.25
CA-SDI-6776	Prehistoric	Rock shelter: lithics, ceramics	0.70
CA-SDI-6780	Prehistoric	Rock shelter – Heavily looted	1.0
CA-SDI-6781	Prehistoric	Rock shelter – Heavily looted	1.0
CA-SDI-6993	Historic-Euroamerican	Farming Storage Area and repair site (2 structures)	0.30
CA-SDI-6995	Prehistoric	Base Camp: Midden, grinding stones	0.20
CA-SDI-6996	Prehistoric	Small lithic scatter	0.35
CA-SDI-7005	Late Prehistoric	Ceramic Concentration	0.50
CA-SDI-7039	Prehistoric	Lithic scatter	0.85
CS-SDI-7040	Prehistoric	Lithic scatter	0.80
CA-SDI-7041	Prehistoric	Lithic Scatter	0.85
CA-SDI-7042	Prehistoric	Lithic scatter	0.85
CA-SDI-7043	Historic	Possible mining camp – historic component of 7044	0.75
CA-SDI-7044	Prehistoric	Lithic scatter	0.75
CA-SDI-7045	Prehistoric	Lithic scatter	0.50
CA-SDI-7946	Prehistoric	Quarry and lithic scatter	0.70

Table 3-5 continued.

Site Number	Temporal Affiliation	Site Type	Distance from Project Site (miles)
CA-SDI-7051	Prehistoric	Rockshelter, artifact scatter: lithics, ceramics (boundaries extended to include 7063)	0.65
CA-SDI-7052	Prehistoric	Lithic scatter	0.75
CA-SDI-7053	Prehistoric	Lithic scatter	0.75
CA-SDI-7054	Prehistoric/Historic	Lithic scatter quarry, historic artifact scatter	0.65
CA-SDI-7057	Unknown	Rock cairn	0.70
CA-SDI-7058	Prehistoric	Lithic scatter	0.75
CA-SDI-7059	Prehistoric	Base camp: lithics, pottery, milling, midden, rockshelters	0.75
CA-SDI-7060	Prehistoric	Base camp: lithics, pottery, milling, midden, rockshelters	0.90
CA-SDI-7062	Prehistoric	Lithic scatter (2 flakes)	0.65
CA-SDI-7063	Prehistoric	Temporary camp: rockshelter, flakes, milling	0.70
CA-SDI-7084	Prehistoric	Lithic scatter	0.75
CA-SDI-7085	Prehistoric	Base camp: large milling complex, sherd and lithics scatter	0.75
CA-SDI-7086	Prehistoric	Sherd and lithic scatter	0.60
CA-SDI-7087	Prehistoric	Lithic scatter	0.70
CA-SDI-8304	Prehistoric	Artifact Scatter	0.75
CA-SDI-8430	Prehistoric	Quarry	0.35
CA-SDI-8431	Prehistoric	Lithic scatter	0.50
CA-SDI-8432	Prehistoric	Bedrock milling station, lithic and ceramic scatter	0.50
CA-SDI-9157	Prehistoric	Lithic scatter	0.60
CA-SDI-9159	Historic	Commercial “Bromo Seltzer” sign painted on granite boulders	0.60
CA-SDI-9160	Historic	Purple glass bottle bust	0.45
CA-SDI-9165	Historic	Historic glass bottle bust	0.50
CA-SDI-9167	Historic	Trash dump	0.40
CA-SDI-9174	Historic-Euroamerican	Well – Iron pipe in concrete foundation	0.75
CA-SDI-9275	Prehistoric	Lithic Scatter	0.35
CA-SDI-9276	Prehistoric	Ceramic Scatter	0.40
CA-SDI-9927	Prehistoric	Lithic scatter	0.80
CA-SDI-9928	Prehistoric	Lithic scatter	0.60
CA-SDI-9929	Prehistoric	Lithic scatter	0.60
CA-SDI-9930	Prehistoric	Ceramic and lithic scatter	0.60
CA-SDI-12866	Prehistoric	Small lithic scatter	0.75
CA-SDI-13249	Prehistoric	Small lithic scatter & two milling slicks	0.65
W-2893 (SDMM)	Prehistoric	Small milling site (3 slicks on rock outcrops)	0.10

sites is extremely low and they are recommended ineligible for inclusion on the National Register of Historic Places (NRHP). Sites CA-SDI-4458 and CA-SDI-6035 had a greater degree of integrity and both possess the potential for intact subsurface deposits that could have data potential. As a result, both sites are recommended as potentially eligible for inclusion on the NRHP (Vargas et al. 2002b).

3.12 Socioeconomics

3.12.1 Population

The Region of Influence (ROI) for the proposed project is San Diego County, which is part of the San Diego Metropolitan area. The region around Campo lies within the San Diego Regional Planning Agency (SANDAG) Mountain Empire subregion. The 2000 population of San Diego County was estimated to be 2,813,833, which ranked third in the State of California (U.S. Census Bureau 2001). This is an increase of 12.6% over the revised 1990 census population of 2,498,016. The racial mix of the San Diego County is mainly comprised of Caucasians (67%) and Asian and Pacific Islanders (8%). The remaining 25% is split among African-Americans, Native Americans, and other races. Less than half of the total population (27%) claim to be of Hispanic origin (U.S. Census Bureau 2001). The population of the Mountain Empire subregion is an estimated 6,420. This population is predominantly Caucasian (65%), followed by Hispanic (26%) with the remaining 9% divided between African-American, Asian, and other races (SANDAG 2001).

3.12.2 Employment, Poverty Levels, and Income

The total number of jobs in the study area was 1,664,791 in 1999, an increase of 18% over the 1989 number of jobs of 1,407,585 (Regional Economic Information System 2001). The services industry provided the most jobs followed by the government sector and the retail trade industry. The 1999 unemployment rate for San Diego County was 3.1%. This is lower than the unemployment rate for the State of California of 5.2% (California Employment Development Department, County Snapshot 2001). The total number of jobs within the Mountain Empire subregion was estimated to be 1,925 in 1995. Within this subregion the government furnished the most jobs, followed by the services and retail trade industries respectively (SANDAG 2001).

The 1999 annual total personal income (TPI) for the ROI was $83 billion. This TPI ranked third in the state of California and accounted for 8.4% of the state total (BEARFACTS 2001). In 1989, the TPI of San Diego County was $50 billion and ranked third in the state. Over the past 10 years the average annual growth rate of TPI was 5.2%. This is higher than the annual growth rate for the state of 5% and lower than that for the Nation of 5.6%. Per capita personal income (PCPI) for San Diego County was $29,489 in 1999. This PCPI ranked 14th in the state, and was 99% of the state average, $29,856, and 103% of the national average, $28,546. In 1989, the PCPI of San Diego County was $20,478 and ranked 14th in the state. The average annual growth rate of PCPI over the past 10 years was 3.7%, which was the same as the state's growth rate of 3.7% and lower than the national growth rate of 4.4%. The 1997 model based median household income for San Diego County is $29,427. The estimated number of people of all ages in poverty for San Diego County in 1997 was 386,232. This represented 14.2% of the county, which is lower than the estimated 16.5% of the state population that lives in poverty (BEARFACTS 2001). The median household income for the Mountain Empire subregion was estimated to be $33,009 in 2000 (SANDAG 2001).

3.12.3 Housing

The total number of housing units in San Diego County in 2000 was 1,040,149. This is a 9.9% increase over the 1990 total number of housing units of 946,240 (U.S. Census Bureau 2001). This represents 8.5% of the total housing units reported for the State of California in 2000. The home ownership rate in San Diego County for 2000 was 55.4%, which was lower than the home ownership rate for the State of California at 56.9%. The total number of owner occupied housing units in 2000 was 388,236 and renter occupied housing units totaled 407,321 (U.S. Census Bureau 2001). The estimated total number of housing units within the Mountain Empire subregion is 2,860, of which 2,092 are occupied, giving a vacancy rate of 26.9% (SANDAG 2001).

3.12.4 Environmental Justice (EO 12898)

The fair treatment of all races has been assuming an increasingly prominent role in environmental legislation and implementation of environmental statutes. In February 1994, President Clinton signed EO 12898 titled, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This action requires all Federal agencies to identify and address disproportionately high and

adverse effect of its programs, policies, and activities on minority and low-income populations.

While the border region between Canyon City and Jacumba has a high minority population, the project area itself is sparsely populated. The population within the project area is not grouped into neighborhoods or communities, only agricultural land holdings, industrial/commercial developments, and public lands. The area south of the border also has a high percentage of the population that claims Hispanic origins.

3.12.5 Protection of Children (EO 13245)

EO 13045 requires each Federal agency "to identify and assess environmental health risks and safety risks that may disproportionately affect children"; and "ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." This EO was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. Due to the sparse population of the border region between Canyon City and Jacumba, potential of impacts to children is low.

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SECTION 4.0
ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

This section of the EA describes the potential impacts, beneficial and adverse, of the Proposed Action Alternative and the No Action Alternative on the human and natural environment.

4.1 Land Use

4.1.1 Proposed Action Alternative

Much of the project corridor is currently used as open or rangeland areas and used by the USBP, and would continue to be used as such. The area near the proposed Mountain Empire scope pad is used as private recreation for the Mountain Empire Campground. Access road construction and drainage structure repair in the two proposed areas (Mountain Empire and Airport Mesa) would create new access routes and observation points for the USBP. The land use in these two specific areas would change from open area to areas used by the USBP. Public access to these three scope pads would continue to be restricted.

Three proposed drainage structures would be installed along roadways already patrolled by USBP, and fencing, portable lights, and blasting would occur along the existing border patrol roadway within the 60-foot Roosevelt Easement. The overall land use in the surrounding area would remain the same.

4.1.2 No Action Alternative

Under the No Action Alternative, no impacts, either beneficial or adverse, would occur to the area's land use.

4.2 Aesthetics

4.2.1 Proposed Action Alternative

- Night Vision Scope Pad and Access Road Construction

Potential short-term impacts to aesthetics during the construction phase could occur during road and scope pad construction. Long-term effects associated with new construction would be minor due to the disturbed nature of the area from excessive UDA

traffic and numerous foot trails. New roads would provide additional USBP support and aid in reducing the amount of UDAs creating new trails and leaving behind litter, which have negative effects on aesthetics. Roads currently located on private land do not afford aesthetic views to the public. The USBP scope pads would be used for observation points during the day, which could create a view of a parked vehicle during the day. This view may be considered by some to degrade the area's aesthetic value.

- Drainage Structures

Construction related impacts from equipment on aesthetics would be short-term. Long-term impacts to the areas would be negligible, since drainage structures would be placed or repaired along existing roads.

- Portable Lights

The placement of portable lights along the border could have some long-term effects on the region's aesthetics. These lights, however, would be spread out along the 20-mile section and used on an as-needed basis. Since much of the border region, especially where the lights would be placed, is already highly disturbed, the sporadic placement of lights would have minimal effect on aesthetics in the area. Shields would be placed on each lighting system to reduce the amount of stray light emitted.

- Bollard Fence

Effects to aesthetics from the installation of bollard fence would be insignificant since the 300-foot section of fence would replace an existing vehicle barrier and be attached to the existing landing mat fence. This area along the border is already disturbed from USBP patrols and UDA traffic. The addition of 300 feet on the existing fence would not have an impact on the area's aesthetics.

- Blasting

Blasting activities proposed for this alternative would be along roads that are being created or reconstructed. Aesthetic impacts would be similar to those discussed for roadwork. Boulders and large rocks at the 15 sites that are currently viewed as a part of the landscape would be removed to make way for new road alignments in previously disturbed areas.

- Water Wells and Concrete Holding Tanks

The placement of two 10,000-gallon concrete holding tanks would have some negative impacts on aesthetics; however, the tanks would be placed in very remote areas. They would not be visible from any residential areas or public roadways and would be painted to blend into the natural surroundings.

4.2.2 No Action Alternative

Under the No Action Alternative, baseline conditions would not change. Existing disturbances, such as UDA traffic, would continue to degrade aesthetics by creating trails, leaving behind litter, and starting wildland fires in the surrounding project area.

4.3 Soils and Prime Farmland

4.3.1 Proposed Action Alternative

No more than 9.9 acres of soil disturbance would occur under the Proposed Action Alternative: 8.9 acres of road and scope pad construction, 0.89 acre for four drainage structures (Smith Canyon, La Gloria Canyon, Maupins, and Campo Creek), 0.08 acre for well sites and holding tanks, and 0.07 acre for fencing.

- Night Vision Scope Pad and Access Road Construction

Short-term impacts, such as increased runoff, to soils can be expected from the construction of roads and scope pads; these impacts would be alleviated once construction is finished. Long-term effects to soils would be compaction from vehicles on new roads and the scope pads. Cut-and-fill activities would be required for the new roads, which would permanently impact a 50-foot road width. Soil surfaces would be stabilized either by revegetation (cut/fill slopes) or using a soil stabilizer (road surface) such as PennzSuppress® or an equivalent product. The proposed culverts for four ephemeral drainages on Airport Mesa would fall within the footprint described for road construction in this area. The repair of the Campo Creek drainage structure would remain within the existing road and drainage structure footprint.

- Drainage Structures

Short-term impacts, such as increased runoff, to soils can be expected from the installation of drainage structures. The installation or repair of the drainage structures would occur along existing roads and would alleviate some of the on-going erosion at the crossings. BMPs would be used and mitigation measures would be implemented in areas where the drainage structures would be installed and new road construction is proposed on sloping ground (see Section 5.0). Compaction techniques and erosion control measures such as waterbars, gabions, straw bales, and the use of rip-rap would be implemented to alleviate these situations.

- Portable Lights

The placement of up to 50 portable lights would have minimal impacts to soil, since no ground disturbance is required. Illumination of the lights would not have impacts on soil. Lights would be used intermittently and moved along the border road (within 60-foot Roosevelt Easement), on an as-needed basis. The use of the lighting, as needed, would reduce the amount of patrolling required by the USBP; however, monitoring would continue along dark areas to apprehend UDAs and lessen any indirect effects to soils. The portable lights would be placed along the existing roads for easier vehicle/trailer maneuvering, which would keep any disturbances to a minimum.

Portable light generators have the potential for soil contamination from accidental spills of petroleum, oils, and lubricants (POL). Use of secondary containment (e.g., catch pans) during placement and regular maintenance of the generators would aid in preventing this type of incident.

- Bollard Fence

The construction of a 300-foot section of bollard fence would occur in proximity to the border road where soils are already disturbed. Some soil excavation would be required for the removal of the vehicle barrier and placement of the concrete footer need to anchor the poles. This footer would be approximately 20 inches wide and 3 feet deep. The temporary impact area for the 300-foot section would be no more than 10 feet, making the total permanent and temporary impact area less than 0.07 acre (0.01 acre permanent and 0.06 acre temporary).

The proposed bollard fence installation would occur on three soil types, one of which is classified as prime farmland, when the soil is in a rural area and irrigated for farmland. This area is currently disturbed, not cultivated or irrigated, and is located within the 60-foot Roosevelt Easement, which is designated as Federal land. The Reiff soil type in the project corridor would not be considered a prime farmland soil type due to the present land use and proximity to an urban area. Thus, a prime farmland conversion form would not be necessary for this action.

- Blasting

Proposed blasting activities would only impact the large boulders and rocks that would be removed. No soils would be impacted from the blasting activities. All roadwork associated with the blasting activities has been addressed in past NEPA documents (INS 2001; USACE 1997, 1994).

- Water Wells and Concrete Holding Tanks

The drilling of wells would involve very little soil disturbance. The total area impacted by each well site would be approximately 4 feet by 4 feet. The installation of the concrete holding tank would require some soil excavation. An area approximately 20 feet by 20 feet would need to be graded and leveled where the tank would be placed. Trenching would be required to bury a pipe from the well to the holding tank. At most, 0.04 acre would be disturbed to install each water well and holding tank. Any areas left devoid of vegetation due to construction/installation activities would be revegetated with a native seed source.

4.3.2 No Action Alternative

Soils and associated terrain in the project area would remain in the existing condition. No impacts, either beneficial or adverse, to soils would result from the implementation of the No Action Alternative.

Soil conditions at existing drainage structures have the potential to further degrade, increasing the probability for stream bank instability, increased runoff and erosion, and a decrease in water quality.

4.4 Geology

4.4.1 Proposed Action Alternative

No significant impacts to geological resources are expected from any of the proposed actions.

- Blasting

Blasting activities would only remove large rocks or boulders, or portions of the stone in order to realign roads. None of the proposed blasting sites would affect the regional geology.

- Water Wells

The drilling of two water wells in Smith and La Gloria canyons would not cause any significant effects on geology in the project area. On the surface, the area affected by the drilling would be no more than 4 feet by 4 feet; however, the drill casing (well) would be expected to be no larger than 4 inches in diameter.

4.4.2 No Action Alternative

Implementation of the No Action Alternative would have no significant adverse impacts on the region's geology.

4.5 Water Resources

4.5.1 Proposed Action Alternative

- Night Vision Scope Pad and Access Road Construction

No direct effects to surface waterbodies would occur from the proposed road construction. Roads would be constructed with nuisance drainage culverts approximately every 300 linear feet to allow for water flow off the slopes. Surface water within other drainages (i.e., four culverts in ephemeral drainages on Airport Mesa) would not be adversely affected since these drainages are ephemeral in nature and construction would be scheduled during dry months.

The water quality in Campo Creek, an intermittent stream, could be degraded temporarily during drainage structure repairs by erosion/sedimentation and/or the

accidental spills of POLs used for the construction equipment. Attempts would be made to repair the existing drainage structure during a dry period. Improvements to the existing crossing and the use of mitigation measures, such as installing rip-rap, would greatly improve water quality of the stream bed.

The proposed road construction on Airport Mesa would cross four small, ephemeral drainages, and would require culverts. A soil stabilizer/dust suppressant, such as PennzSuppress®, would be used for the roadwork; however, this chemical is non-toxic and would not effect water quality (PennzSuppress® 2002). This scenario on Airport Mesa and the proposed drainage structure repair for Campo Creek would potentially affect drainages classified as WUS under Section 328.3(a) of the CWA. Since the permanent area of disturbance for the four culverts proposed for Airport Mesa and the drainage structure for Campo Creek are less than 0.1 acre for each scenario, this construction would be authorized under a non-notifying NWP 14 for Airport Mesa and NWP 3 for Campo Creek.

The proposed drainage structure repair for Campo Creek (Mountain Empire) falls within the 100-year floodplain; however, since this action would only repair/replace the existing drainage structure, no additional impacts are expected to the water flow in the area or the floodplain, and therefore, would comply with EO 11988. No other proposed actions are located within the floodplain (FEMA 2002).

Equipment required for the construction activities would not be staged or maintained in or near any surface water resources to prevent any contamination from POL spills that could occur.

- Drainage Structures

The three drainage structures (Smith Canyon, La Gloria Canyon, and Maupins) proposed along existing roadways have the potential to cause some short-term negative effects during the installation process, but would provide beneficial effects in the long-term. Improvements to existing crossings and the use of mitigation measures, such as installing rip-rap, would greatly improve water quality in these ephemeral stream beds. Drainage structure installation would be avoided during rain events.

All three of the proposed drainage structures would be installed in ephemeral streams and installation of drainage structures would potentially affect drainages classified as WUS under Section 328.3(a) of the CWA.

Two of the three drainage structures would require permitting under Section 404 of the CWA. All of the drainages are less than 0.5 acre, and one (La Gloria Canyon) is less than 0.1 acre (see Table 2-1). The La Gloria Canyon structure would be constructed under a non-notifying NWP 3. For the two drainages that are less than 0.5 acre (Smith Canyon and Maupins), but are greater than 0.1 acre, NWP 3/14 permit notification and 401 Water Quality Certification would have to be submitted to the USACE and Regional Water Quality Control Board, respectively, for approval before any actions could occur.

- Portable Lights

No effects are expected to water resources from the placement of up to 50 portable lights along a 20 mile section of U.S.-Mexico border. Lights would not be placed in or adjacent to drainages to reduce the potential of surface water contamination. As a precaution, catch pans would be placed under the portable light generators to contain any accidental POL spills that may occur during refueling or operation.

- Bollard Fence

No effects are expected to water resources from installing 300 feet of bollard fence. The area where fencing is proposed is an ephemeral sheet drainage area. Water only flows through the area during major storm events. The bollard style fencing is proposed for this area because it would not impede water flow across the border. No significant effects are expected to water resources from the installation of a 300-foot section of bollard fence.

- Blasting

No water resources would be affected by the proposed blasting activities. No blasting would occur in or near any surface water resources. Blasting activities would not require any excavation or removal of rock greater than five feet below the road surface; therefore, no impacts are expected to groundwater resources.

Equipment required for the blasting activities would not be staged or maintained in or near any surface water resources to prevent any contamination from POL spills that could occur.

- Water Wells and Concrete Holding Tanks

The underlying Southern California Batholith covers a tremendous area in southern California and northwestern Mexico, and produces a large amount of water for the area. No significant impacts are expected from the proposed drilling, pumping, or storing of water. A hydrogeologic analysis prepared for the two proposed wells states there is sufficient water in the aquifer to support the two wells and 10,000 gallon holding tanks (Nyman 2002). The report concludes, "the amount of water that is to be pumped by these two USBP wells is insignificant compared to the amount of water removed from the natural system by river and spring flow, and from the thousands of acres of forest surrounding Smith and La Gloria canyons." Water is currently being withdrawn from existing wells and hauled to these areas; pumping from the existing wells would be reduced or eliminated once the new wells along the border were installed. The installation of the wells would have no additional increase in withdrawal from the area. A copy of this report can be found in Appendix B.

4.5.2 No Action Alternative

Implementation of the No Action Alternative would have no significant adverse impacts on the region's water resources. Conditions of the four drainage crossings along USBP patrol roads would remain the same as they are now, with possible increases in runoff due to poor drainage and crossing conditions and lack of mitigation measures for stream bank stabilization. No additional impacts would be expected under this alternative.

4.6 Vegetation

4.6.1 Proposed Action Alternative

No more than 9.8 acres of vegetation disturbance would occur under the Proposed Action Alternative: 8.9 acres of road and scope pad construction, 0.89 acre for four drainage structures (Smith Canyon, La Gloria Canyon, Maupins, and Campo Creek), and 0.08 acre for well sites and holding tanks. Construction of the bollard fence would impact 0.07 acre, but this site does not support any vegetation communities.

Biological field surveys were conducted in April 2002. No sensitive vegetation species were observed during site specific surveys.

- Night Vision Scope Pad and Access Road Construction

Vegetation removal would be required for scope pad and access road construction. Scope pad and access road construction is expected to permanently affect 8.9 acres (8.8 acres for roads and 0.06 acre for scope pads) of vegetation. The drainage structure repair for Campo Creek would remain within the existing road and drainage structure footprint; no additional impacts to riparian vegetation would be expected. The 8.8 acres for access road construction would be permanently void of vegetation from the footprint of the road, safety berms, and cut-and-fill activities. The four culverts proposed for the ephemeral drainages that would be impacted by the proposed road construction on Airport Mesa would fall within the footprint of the proposed road. Species permanently removed from the sites include jojoba, Mormon tea, cholla, buckwheat, chamise, sage, four winged saltbush, sugar bush, and mountain mahogany.

- Drainage Structures

Some vegetation would be required for removal with the installation of three drainage structures; however, two of the proposed crossings would remain within the existing road footprint. The three drainage structures would impact approximately 0.79 acre. Species that could permanently be removed from the sites include four winged saltbush, needle grass, broom snakeweed, yerba santa, elderberry, and goldenrod. The removal of any tree species at the La Gloria Canyon crossing (red willow, coast live oak) would be avoided to the maximum extent practical. These oaks are currently subjected to heavy sedimentation buildup and are in various moribund stages. No coast live oaks would be removed at the Maupins crossing.

- Portable Lights

No vegetation would be removed for the placement of portable lights.

- Bollard Fence

No vegetation would be removed with the installation of the bollard fence.

- Blasting

No vegetation would be removed for blasting activities.

- Water Wells and Concrete Holding Tanks

Well installation would involve very little vegetation removal. The area impacted by a well site would be approximately 4 feet by 4 feet. The installation of the concrete holding tank would require vegetation removal from an area approximately 20 feet by 20 foot. In addition, some trenching would be required to bury a pipe leading from the well to the holding tank. Any areas left devoid of vegetation from the construction activities would be revegetated with a native seed source.

4.6.2 No Action Alternative

No additional direct impacts to vegetation would occur under the No Action Alternative. Typical disturbances, such as the creation of foot trails and human-induced wildland fires, would continue to occur from UDA traffic. Indirect effects have occurred to vegetation from UDAs diverting around fences and lights or away from areas that are heavily patrolled. Improvements in the infrastructure and increases in patrol activities have resulted in some illegal entrants redirecting their efforts into more remote areas. Increases in illegal foot and vehicle traffic would continue to result in damage to vegetation.

4.7 Wildlife and Aquatic Resources

4.7.1 Proposed Action Alternative

No more than 9.8 acres of wildlife habitat would be disturbed under the Proposed Action Alternative: 8.9 acres of road and scope pad construction, 0.89 acre for four drainage structures (Smith Canyon, La Gloria Canyon, Maupins, and Campo Creek), and 0.08 acre for well sites and holding tanks.

Biological field surveys were conducted in April 2002. No sensitive wildlife species were observed during site specific surveys.

- Night Vision Scope Pad and Access Road Construction

Scope pad and access road construction is expected to permanently affect 8.9 acres (8.8 acres for roads and 0.06 acre for scope pads) of wildlife habitat. No additional habitat would be lost in the long-term with the installation of the Campo Creek drainage structure since it would be placed in the same footprint as the original water crossing. This drainage structure would provide beneficial effects to downstream aquatic resources by reducing potential sedimentation and turbidity.

- Drainage Structures

Very little habitat would be lost in the long-term with the installation of the three drainage structures. Two of the three of the proposed drainage structures would be placed in the same footprint as the original water crossing, thus, requiring no additional habitat loss. The Smith Canyon drainage structure would require some habitat loss during installation. These drainage structures would provide beneficial effects to downstream aquatic resources by reducing potential sedimentation and turbidity.

- Portable Lights

Impacts to wildlife resulting from the intermittent operation of nighttime lighting (4,000 watts per lighting system) would occur. The adverse and/or beneficial effects of lighting on reptiles and amphibians are currently unknown; however, continual exposure to light has been proven to slightly alter circadian rhythms in mammals and birds. Studies have proven that under constant light, the time an animal is active, compared with the time it is at rest, increases in diurnal animals, but decreases in nocturnal animals (Carpenter and Grossberg 1984). Also, in diurnal animals, the total amount of active time increases with light intensity, while the reverse is true in nocturnal species (Carpenter and Grossberg 1984). The alteration of circadian rhythms by high intensity lighting is minimal, accounting for a maximum of two to three hours of increase or decrease in activity per day (Luce 1977). It has also been shown that within several weeks under constant lighting, mammals and birds will quickly stabilize and reset their circadian rhythms back to their original schedules. The long-term effect of an increased photoperiod on mobile wildlife species is expected to be insignificant. Given the vast open area within the project corridor, animals can easily relocate to adjacent areas of darkness.

Effects from the lighting are considered to occur along the entire corridor where they could be placed; however, in reality, only parts of the corridor would be illuminated at a given time since the portable lights would be periodically relocated to provide the most effective deterrent and enforcement strategy. Illumination from the portable lights would not typically overlap, leaving areas of darkness between them. USBP would patrol these dark areas for UDAs to lessen indirect effects to wildlife and their habitats if UDAs attempt to avoid lit areas.

The greatest impacts to wildlife from the lighting would probably be to nocturnal species. Lights could affect the migratory patterns of birds and insects, causing them to alter their course or schedule. The tendency for nocturnal birds and other wildlife species to congregate around the lights to feed on insects attracted by the lights may increase. This change in behavior may make these species more vulnerable to predation or injury. Fewer impacts would be expected closer to more populated areas due to less wildlife species.

Revised

The effects from noise emitted from the portable light generators on wildlife species would be considered insignificant. It is highly unlikely that the portable light generators would interfere with courtship and mating calls of birds since the lights would only be used during dark hours. The noise produced by the generators is near the 65 dB range; this is the equivalent to normal speech at 3 feet indoors. This level would be quickly attenuated by vegetation, typographic features, and distance. Furthermore, since these generators would be spread out along a 20-mile section and the noise would be considered “continuous” (see Section 3.10), wildlife species that may be in the area would quickly become acclimated to the noise from the generators.

No wildlife habitat would be removed for portable light placement.

- Bollard Fence

The bollard fence, by design, would allow small animals to pass through since it is not a solid fence. Since the section of fence would only be 300-foot addition to the existing fence, animal migration patterns would not be affected by the action. No aquatic resources would be affected by the proposed fence.

- Blasting

Some short-term effects would be expected to wildlife near the proposed blasting sites. Detonation would most likely frighten mammals and birds around the sites and cause them to flee the area until normal conditions in the area resumed. Vibrations from the activities could have some short-term impacts to reptiles, mammals, and birds in the area. All impacts from blasting are expected to be temporary and short-term in nature. No wildlife habitat would be removed as a result of the proposed blasting activities.

Proposed blasting activities could interfere with courtship of some bird species due to noise drowning out mating calls and disturb nest building and egg laying; however, the expected noise level is expected to be low to moderate. More importantly, blasting vibrations could also cause eggs to crack. This would have a significant effect to individuals if egg damage were to occur too late in the nesting season for the birds to renest. Therefore, blasting activities would not occur between 15 February and 30 August to avoid disturbances to bird mating activities and nesting season, to the extent practical. Migratory bird surveys would be conducted before any blasting would occur outside of this schedule.

- Water Wells and Concrete Holding Tanks

An area approximately 20 foot by 20 foot would permanently be lost from each of the proposed water wells and holding tanks. There would be some temporary impacts around the project site; however, this would be revegetated after construction if necessary. Much of the area is dissected with UDA trails, which has caused long-term disturbances to the area's habitat. Wells and holding tanks would also be beneficial in protecting wildlife habitat in the event of a wildland fire by facilitating quick containment of such fires.

4.7.2 No Action Alternative

The No Action Alternative would require additional or increased nighttime patrol efforts due to the lack of scope pads and adequate lighting. The magnitude of these effects would vary depending upon the actual increase in nighttime patrols, the area patrolled, the season, and the species of concern. Valuable wildlife habitats would continue to be damaged from constant UDA and drug smuggling traffic through the region.

4.8 Threatened and Endangered Species and Critical Habitat

4.8.1 Proposed Action Alternative

No threatened or endangered species were observed in any of the specific project area during recent (April 2002) or past biological surveys performed along the corridor (USACE 1994, 1997; INS 2001). No such species have been documented in previous EAs for various projects between Canyon City and the Imperial County line. Therefore, no impacts to threatened or endangered species would be expected upon implementation of the Proposed Action Alternative. No designated critical habitat falls within any of the specific project areas; no portable lighting systems would be placed in designated critical habitat areas.

Much of the project area would not be suited for any protected species due to the disturbed nature of the area. There is the potential for the southwestern willow flycatcher and least Bell's vireo to be found in the riparian habitats for the repair/replacement of the Campo Creek (Mountain Empire) and La Gloria drainage structures. For this action, construction would occur outside of the breeding/nesting season and the footprint for both drainage structures would remain the same as it is now; so, no additional riparian habitat or primary constituent elements would be lost with the installation or repair of the drainage structures. Portable lights would not effect protected bird species since these species tend to prefer a riparian type habitat, and as stated in Section 4.5.1, no portable lights would be placed in or near water sources.

The CNDDB shows one location for the Federally protected least Bell's vireo approximately 1.5 miles to the northeast of Mountain Empire (CNDDB 2002). The database showed no other Federally protected species in the project areas.

A 2.3-mile section of critical habitat for the Quino checkerspot butterfly has been designated along the border just west of Jacumba. No portable lights would be placed along this section of the border (see Figure 3-2). No other proposed actions are located within this designated area.

4.8.2 No Action Alternative

The No Action Alternative would have no direct impact, either beneficial or adverse, on the proposed project area's threatened and endangered species or critical habitats. UDA traffic would continue to trek through sensitive areas inside and outside of the project area, destroying habitat and possibly killing sensitive species that may be located in the region.

4.9 Air Quality

4.9.1 Proposed Action Alternative

- Night Vision Scope Pad and Access Road Construction

A minimal short-term increase in local air pollution would be expected from scope pad and access road construction. Temporary increases in air pollution would be from the use of construction equipment, dust, and particulate matter. Due to the short duration of the individual projects, any increases or impacts on ambient air quality during construction activities are expected to be short-term and can be reduced further through the use of standard dust control techniques, including roadway watering and chemical dust suppressants, such as PennzSuppress® or an equivalent product. No long-term impacts to air quality are anticipated from construction activities.

- Drainage Structures

Temporary construction related impacts to air quality like those discussed above for road construction would be expected from the installation of three drainage structures.

- Portable Lights

Generators necessary to run the portable lighting systems would cause low amounts of air emissions. These generators would be expected to be in operation approximately 12 hours per day for each lighting system (up to 18,000 total hours per month). The portable lighting units proposed for this project are Lister Pieter Model LPW3 and Magnum Night Buster 4000 Light Tower Model 3LB1. These lighting systems consist of a 6-kilowatt diesel generator that powers four 1000-watt lights on a 15-foot mast. Table 4-1 shows the maximum air emissions expected from 50 portable light generators (the maximum number of lighting systems proposed).

These amounts are below the *de minimus* thresholds and thus would not violate National or state standards.

Table 4-1: Total Emission Factors for 50 Diesel Powered Generators

Pollutant	Emission Factors (tons/year)
Exhaust hydrocarbons	0.0037
Carbon monoxide (CO)	0.0100
Nitrogen oxides (NO_x)	0.0465
Aldehydes	0.0007
Sulfur oxides (SO_x)	0.0031
Carbon dioxide (CO_2)	1.7400
Particulate matter (PM_{10})	0.0033

Source: EPA 1995

- Bollard Fence

No long-term impacts to air quality are anticipated from the installation of bollard fence. Similar short-term, construction related impacts to air quality as described above for the proposed scope pad and access road construction, would be expected for the construction of bollard fence.

- Blasting

No long-term impacts are expected from the proposed blasting activities. Emissions from equipment, as discussed above for roadwork, would be expected to cause short-term temporary impacts to the local air quality. Dust and small rock fragments would be emitted into the air during detonation; however, this would be expected to settle out and fall to the ground causing no significant or long-term negative impacts to air quality. CO would be the most important factor on air quality in the area. This gas would be produced during detonation, depending on the type and amount of explosives used for the activities (MEMCL 1999). Transporting winds would be the greatest mitigator to alleviate high concentrations of CO in the project area. No long-term impacts are expected.

- Water Wells and Concrete Holding Tanks

Any impacts to air quality would be similar to those discussed above for roadwork. Equipment necessary to drill the wells and construct the holding tanks would emit some

short-term insignificant air emissions during construction. Gasoline powered generators necessary to run the pumps would be used only on an as-needed basis and probably for no more than six to eight hours at a time. Such operation would cause low amounts of air emissions.

4.9.2 No Action Alternative

The No Action Alternative would have no impact, either beneficial or adverse, on the region's air quality.

4.10 Noise

4.10.1 Proposed Action Alternative

- Night Vision Scope Pad and Access Road Construction

Temporary construction noise impacts would occur with the Proposed Action Alternative. Short-term noise impacts would be expected from the necessary equipment needed to complete road and scope pad construction. Only insignificant noise impacts are expected during the operation phase of the project. Additionally, given the heavy traffic noise generated from nearby U.S. Highway 94 and other roads in the project area, the noise from the associated project is considered to be insignificant. Once the proposed road construction is completed, the possibility for increased traffic-related noise could occur; however, these roads would be used for night vision scope pad and daytime observation points only. Public access to these roads would be restricted and only two to four vehicle trips per day would be expected to be made by the USBP.

- Drainage Structures

Temporary construction related impacts from noise like those discussed above for road construction would be expected from the installation of three drainage structures.

- Portable Lights

Revised

Portable generators for lights would create more of a long-term exposure to increased noise. These increases would occur at night, thereby affecting the ambient DNL of the area. The noise generated from the portable generators is considered "continuous" as described in Section 3.10.1. Noise generated from the light generators would also be attenuated on weather/season, nearby vegetation density, and topography.

The self-contained generators would produce additional noise and raise the ambient noise levels slightly. Each portable light generator produces approximately 65 dB of noise, depending on the particular manufacturer; this is the level used for planning purposes and is the equivalent to normal speech at 3 feet indoors. Since the portable lights would be used intermittently and moved to various locations on an as-needed basis, the effects of noise would be minor, localized, and temporary. The lights would be used primarily in rural areas where access to electrical power sources is not readily available and, thus, away from most residential areas. No noise sensitive receptors are located in proximity to the proposed sites for portable light generators.

- Bollard Fence

Only short-term noise impacts would be expected from the necessary equipment needed to install the 300-foot section of bollard fence. The temporary effects from noise would be similar to those described above for scope pad and access road construction.

- Blasting

Noise generated from blasting activities would be short-term and at a low to moderate level. Each site proposed would require at least one detonation. The noise created by this would last less than 30 seconds. All blasting would be done during daylight hours.

Three of the 15 sites proposed for blasting are close to four existing structures: a residence at the Red Shank site (site #15), a residence at Brown's Corner (site #12), and two residences at the Jacumba site (site #17) (see Figure 2-7). An analysis was completed for the blasting impacts at those three sites for the four structures.

Vibration levels and airblast overpressure at the nearby structures were calculated, assuming the maximum amount of detonation material that a prudent blaster would use at each blast site. Airblast overpressure is low frequency air pressure, which usually falls below the sound level that a human ear can hear; however, the energy that is produced could potentially damage nearby structures (MEMCL 1999). Table 4-2 shows the expected levels of vibration and airblast overpressure at the four impacted structures. Vibration levels were measured by the peak particle velocity (PPV) and recorded in inches per second (IPS). Airblast overpressure levels were measured and recorded in

decibels. The decibel levels expected for each of the blasting sites falls within the "uncomfortably loud" category (120 dB) as shown in Table 3-4. However, the overpressures would not be high enough to damage nearby structures. Industry acceptable maximum PPV level near residential dwellings is 2.00 IPS and the noise level maximum is 140 db for construction related blasting.

Table 4-2: Expected Vibration and Airblast Overpressure Levels at Four Structures

Blast Site Number	Blast Site Location	Distance from Blast Site to Structure	Structure Location	Calculated PPV	Calculated dB
11	Red Shank	775 feet	Mexico	0.07 IPS	124.54 dB
12	Brown's Corner	900 feet	Mexico	0.06 IPS	123.14 dB
17	Jacumba	300 feet	Mexico	0.32 IPS	133.63 dB
17	Jacumba	485 feet	U.S.	0.15 IPS	129.02 dB

- Water Wells and Concrete Holding Tanks

Noise related effects for the installation of two water wells and holding tanks would be similar to those discussed above for proposed roadwork. Any construction-related noise would be short-term in nature and related to equipment needed to complete this portion of the project. Some long-term noise would be expected from the generators required to pump water from the wells into the concrete holding tanks. This noise is not expected to be continuous or cause disturbances to the natural environment.

4.10.2 No Action Alternative

No additional noise impacts would result from the No Action Alternative.

4.11 Cultural Resources

4.11.1 Proposed Action Alternative

Under the Proposed Action Alternative, no adverse impacts would be expected to any known cultural resources within the proposed project area. Indirect beneficial impacts can be anticipated to cultural resources within the project area from the reduction of illegal foot and vehicle traffic from UDAs and consequent USBP enforcement actions.

4.11.2 No Action Alternative

Under the No Action Alternative, there would be no infrastructure improvements. Illegal foot traffic from UDAs would continue at its present rate and, as the current infrastructure in place continues to decay, can be expected to increase. As a result there is a greater potential for adverse impacts to cultural resources in the area from such illegal traffic.

4.12 Socioeconomics

4.12.1 Proposed Action Alternative

No positive or negative effects to population, employment, or housing would occur with the Proposed Action Alternative. If military personnel from the National Guard or Joint Task Force-Six perform the road improvements, it is not likely that additional hiring would occur within the local area. Additionally, the Proposed Action Alternative would not induce permanent in- or out-migration to the ROI. Therefore, overall area population would not be significantly impacted. Labor and most materials would be brought into the local area; however, some expenditures are expected to occur within the ROI. Short-term increases in local revenues for commercial establishments, trade centers, and retail sales would result from the purchase of supplies and possible equipment rental. Any potential impact from the construction activities would easily be absorbed into the broader economy of the ROI.

Some beneficial, but slight, impacts to local income and sales would result from the purchase of POL to operate and maintain the generators and construction equipment. The diesel portable lighting units are scheduled for operation for 12 hours per day. Though these units would probably not be purchased locally, the fuel for their operation would probably be supplied by local distributors. Portable lighting generators would use an average of six gallons of diesel per generator during each 12-hour shift. This would require up to 300 gallons of diesel fuel used daily in the operation of up to 50 portable lighting units. Fuel purchased locally would provide long-term, insignificant economic benefits for the life of this project component.

The socioeconomic benefits from the construction activities along the project area would be a decrease drug trafficking and smuggling, and overall reduce socioeconomic

impacts and burdens that currently exist on local law enforcement and the medical community.

4.12.2 No Action Alternative

Socioeconomics in the area would remain the same as they are now for the No Action Alternative. Poor drainage crossings would continue to result in slower response times for the USBP and fewer lookout areas would continue to allow more UDAs and drug smugglers access to cross the U.S.-Mexico border. Overall, the No Action Alternative would not be expected to be beneficial for the project area.

4.12.3 Environmental Justice (EO 12898)

The racial mix of the study area is predominantly Caucasian. More individuals claim Hispanic origin nearer to the international border and the population becomes predominantly Hispanic south of the border. No impacts to housing are anticipated from the implementation of any of the alternatives. As a result, there would be no displacement of minority or low-income families. Thus, there would be no Environmental Justice impacts upon implementation of any of the alternatives.

4.12.4 Protection of Children (EO 13245)

EO 13045 requires each Federal Agency “to identify and assess environmental health risks and safety risks that may disproportionately affect children” and “ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.” This EO was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. Implementation of any of the alternatives would not result in disproportionately high or adverse environmental health or safety impacts to children on either side of the border. The construction associated with the Proposed Action Alternative would take place away from residential areas and would result in a decrease of traffic throughout the area, creating a safer environment for all children. Furthermore, these alternatives would result in a reduction of illegal immigration, drug trafficking, and other crimes within the area further making a safer living environment for children in the U.S. and in Mexico.

4.13 Cumulative Effects

This section of the EA addresses the potential cumulative impacts associated with the implementation of the alternatives outlined in Section 2.0 and other projects/programs that are planned for the region. The following paragraphs present a general discussion regarding cumulative effects that would be expected, regardless of the alternative selected.

The CEQ defines cumulative impacts as the incremental impact of multiple present and future actions with individually minor but collectively significant effects. Cumulative impacts can be concisely defined as the total effect of multiple land uses and developments, including their interrelationships, on the environment. The USBP and other entities are currently planning, conducting, or have completed several projects in the region.

- The Jacumba Brush and Small Tree Thinning project is located near Jacumba, California. The proposed action involved hand-clearing brush within an 18-acre site along Boundary Creek. Approximately 16 acres of vegetation were cleared by hand. An EA was prepared and the proposed action was implemented in October 2001.

- An EA for the Tecate Truck Trail-Road Maintenance Project near Tecate, California is currently being prepared. Approximately 1.1 miles of road with five turnouts will be constructed on the Puebla Tree Road. The Tecate Truck Trail would encompass approximately 9.6 miles of roadway and would involve 18 turnouts. The proposed construction activities would consist of grading road beds and filling with a compactable clean material, re-establishing ditch lines, cleaning culverts, and silt catch basins. Approximately 26.3 acres of previously disturbed areas occurring within existing road ROWs would be impacted.

- INS recently released a Draft EIS for the proposed construction of a border infrastructure system along the U.S.-Mexico border within San Diego County. The EIS addressed the completion of the border infrastructure system project within the remaining five miles of the 14-mile project. The border infrastructure

system consists of several components including secondary and tertiary fences, patrol and maintenance roads, lights, and integrated surveillance and intelligence system resources. Approximately nine miles of the 14-mile project have been completed or are currently under construction. These projects were addressed under separate EAs as pilot projects for the barrier system. When completed, the infrastructure system would impact approximately 290 acres, consisting of disturbed/developed lands, coastal sage scrub, maritime succulent scrub, and grasslands. Release of the final EIS is expected in early 2003.

- Plans to expand the Chula Vista Border Patrol Station near the POE at Otay Mesa in San Diego County have been proposed. The proposed action would involve acquiring a 20-acre tract of land, the construction of a 75,000-ft^2 building, vehicle maintenance and storage facilities, parking lots, and infrastructure improvements.

- The INS proposes to purchase an approximately 30-acre tract of land within the Campo AO in order to construct a new station capable of accommodating 350 agents and staff. The facility would include a single-story, 40,600 ft^2 building; above ground gasoline storage tank(s); a 90,000 ft^2 parking area; maintenance facility; helipad(s); communications tower(s); and a horse stable/paddock area. The USBP agents stationed at the current Campo Station would be relocated to the new facility when construction is complete. This station will have the capacity to accommodate 350 agents and their respective private and government vehicles. The final EA was released in February 2003.

- INS has proposed to install approximately 25 new RVS sites within the Chula Vista, California area in the next two years. In addition, to the Chula Vista project there is also potential for additional RVS sites to be installed. Currently this number is estimated to be 110 sites for the San Diego sector by the year 2011. Assuming worst-case scenario the total impacted area would be approximately 6.3 acres.

- Additional night vision scope pads and well sites have been proposed for east San Diego County. Current road plans include approximately 1.1 mile of road

construction and 2.2 miles of road reconstruction to access four night vision scope pads. Thirteen additional well sites have been selected along the U.S.-Mexico border. All actions would occur within one mile of the U.S.-Mexico border between Tecate, California and the Imperial County line. In the event these plans come to fruition, a separate NEPA document, or a supplement to this EA, would be required.

- A housing tract (100-200 houses) has been proposed for an area north of Campo, California. Details of the project are unknown at this time.

4.13.1 Proposed Action Alternative

The impacts to wildlife habitat would be minimal due to the small amount of actual habitat lost. New access roads would be narrow and have selective use, lighting would be intermittent, and fencing would be placed in an area with no valuable wildlife habitat.

Implementation of this alternative would have similar cumulative impacts as those discussed for past projects. Disturbances to soils, vegetation, and wildlife habitats by the proposed activities would be increased relative to the No Action alternative due to night vision scope pad placement and access, and drainage structure installation. Given the rural nature of the border area, the amount of acreage affected, a maximum of 9.9 acres, and the vast acres of wildlife habitat in the region, the total cumulative impact would be minimal. This amount is considered the worst-case scenario and most of the disturbance would occur within areas that are already heavily disturbed by on-going or past activities, or are within the 60-foot Roosevelt Easement.

Revised

Effects from additional lighting along the border could result in some long-term cumulative impacts, although the magnitude of these effects is not presently known and would depend upon the location and duration of the lights. Some species, such as insectivorous bats, may benefit from the concentration of insects that would be attracted to the lights. Because of the number of lights (up to 50) along such a vast amount of area (20 miles) and the shielding used for mitigation purposes, the long-term effects from the increase in lighting along the border are expected to be insignificant. Since the noise from the generators is expected to remain within the 65 dB range, which is the equivalent to normal speech at 3 feet indoors, it is not expected to be significant.

Very little vegetation and wildlife habitat would be lost with this project due to many of the improvements being completed along existing roads. Positive long-term effects from implementing this project, such as erosion control, better vantage points for USBP agents, safer patrol and access roads, and drainage improvements are expected with the Proposed Action Alternative.

4.13.2 No Action Alternative

No additional direct effects would occur to the region's natural resources as a result of the No Action Alternative. Although the projects addressed in this document for the Proposed Action Alternative would not be implemented with the No Action Alternative, effects from other projects listed above may somehow impact the project area.

Long-term indirect cumulative effects have occurred and would continue to occur from the continuing influx of UDAs and smugglers crossing the U.S.-Mexico border. USBP would continue to patrol the border at the same rate, if not more due to the lack of other tactical infrastructure available in the area. Negative effects to vegetation, cultural resources, threatened and endangered species, and critical habitats that may be in proximity to the project area would continue to be subjected to trampling and littering by UDAs and smugglers.

SECTION 5.0
ENVIRONMENTAL MITIGATION MEASURES

5.0 ENVIRONMENTAL MITIGATION MEASURES

Environmental design measures will be implemented and supervised by the USBP managers at the Campo Station for the Proposed Action Alternative.

5.1 Soils

Erosion control measures such as waterbars, gabions, haybales, or reseeding will be implemented during and after construction activities with ground disturbing activities. Revegetation efforts will be needed to ensure long-term recovery of the area and to prevent significant soil erosion problems. The use of native seeds and plants to assist in the conservation and enhancement of protected species will be considered, as required by Section 7(a)(1) of the ESA. Borrow materials, if required, will be obtained from established borrow pits or from approved on-site sources. PennzSuppress® dust suppressant, or an equivalent product, will be used for to stabilize road surfaces during and after construction efforts.

Portable light generators have the potential for soil contamination from accidental spills of POLs. Use of secondary containment (e.g., catch pans) during installation and regular maintenance of the generators will aid in preventing this type of incident.

During blasting activities, roads will be watered before detonation to minimize emissions of soil particles. Loose rock and other larger debris will be removed from the site to reduce the amount of flying material.

5.2 Water Resources

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

will have drip pans during storage to contain minor spills and drips. Although it would be unlikely for a major spill to occur, any spill will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock, etc.) will be used to absorb and contain the spill, as appropriate. Any major spill of five gallons or more of a hazardous or regulated substance will be reported immediately to on-site environmental personnel who will notify appropriate Federal and state agencies.

Since the proposed construction affects greater than one acre, a Stormwater Pollution Prevention Plan (SWPPP) will be required. A Notice of Intent will also be prepared and submitted to the EPA and Regional Water Quality Control Board.

A Spill Prevention Control and Countermeasure Plan will be in place prior to the start of construction and all construction personnel will be briefed on the implementation and responsibilities of this plan.

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

Applicable NWP 3/14 and Section 401 permit procedures will be completed prior to initiation of construction activities. The use of BMPs would be expected to reduce any potential adverse impacts to surface water resources. PennzSuppress® dust suppressant, or equivalent product, will be used for to reduce fugitive dust and silt run-off.

5.3 Biological Resources

Impacts to existing vegetation during construction activities will be minimized through avoidance; however, vegetation will be lost due to road construction, installation of drainage structures, and water well and concrete holding tank installation activities. Disturbed sites will be utilized to the maximum extent practicable for construction and operation support activities. Additionally, attempts to minimize loss of vegetation will include: (1) trimming vegetation along roadsides rather than removing the entire plant;

(2) requiring heavy equipment to utilize road pullouts or other such disturbed areas; and (3) revegetation efforts in areas that were temporarily disturbed. Native seeds or plants, which are compatible with the enhancement of protected species, will be used to the extent feasible, as required under Section 7(a)(1) of the ESA. Vehicular traffic associated with engineering and operational support activities will remain on established roads to the maximum extent practicable.

Revised

All drainage structures will be repaired or installed outside of the least Bell's vireo and southwestern willow flycatcher nesting season; blasting activities in or near riparian areas will also occur outside of the nesting season. Migratory bird surveys will be conducted before any blasting occurs and before any ground disturbing activities that occur during the nesting/breeding season.

5.4 Air Quality

Mitigation measures will include dust suppression methods, such as watering roads and staging areas, to minimize airborne particulate matter that will be created during construction activities. Additionally, all construction equipment and vehicles will be required to be kept in good operating condition to minimize exhaust emissions. Standard construction practices will be used to control fugitive dust during the construction phases of the proposed project.

During blasting activities, roads will be watered before detonation to minimize emissions of soil particles. Wind conditions will be monitored before any blasting activities; blasting would not be conducted during high winds. Transport winds are required for blasting, however, to move high CO concentrations produced from the detonations from the project area. Good blasting techniques will be followed in order to keep airborne particles to a minimum.

5.5 Noise

During the construction phase and blasting activities, short-term noise impacts are anticipated. All Occupational Safety and Health Administration (OSHA) requirements will be followed. On-site activities will be restricted to daylight hours with exceptions for

emergency situations. All construction equipment will possess properly working mufflers and be kept in a proper state of tune to reduce backfires. Implementation of these measures will reduce the expected short-term noise impacts to an insignificant level in and around the project area.

Revised

If necessary, especially in areas where blasting is planned in proximity to buildings, blasting mats or soil overburdens will be used to reduce the amount of noise generated near the structures. Good public relations in the surrounding areas near the planned blasting sites will be conducted throughout the project.

5.6 Cultural Resources

During the cultural resource surveys performed for the project, the original designs for one of the access roads would impact several archeological sites. The access road was redesigned to completely avoid the sites. No other sites were recorded in the immediate area of any other proposed actions. If any cultural materials are discovered during the implementation of this project, construction would stop until a qualified archaeologist can assess the significance of the findings.

SECTION 6.0
PUBLIC INVOLVEMENT

6.0 PUBLIC INVOLVEMENT

6.1 Agency Coordination

This chapter discusses consultation and coordination that will occur during preparation of the draft and final versions of this document. This includes contacts that were made during the development of the proposed action and writing of the EA. Formal and/or informal coordination were conducted with the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- U.S. Forest Service (USFS)
- Bureau of Land Management (BLM)
- U.S. Environmental Protection Agency (EPA)
- Natural Resource Conservation Service (NRCS)
- California State Historic Preservation Office (SHPO)
- California Department of Fish and Game (CDFG)
- Native American Nations
- California Resource Agency
- San Diego Regional Water Quality Control Board
- California State Clearinghouse

6.2 Public Review

The Draft EA was made available for public review for a period of 32 days. Three comment letters were submitted within this review period; copies of these letters are included in Appendix D. Summaries of the comments received and the responses to these comments are presented in the following section.

The Final EA will be released to the public and a Notice of Availability (NOA) will be published in the local newspaper. Proof of publication of the NOA for the Draft EA is included in Appendix D of this document.

6.3 Comments on Draft EA and Responses

Revisions made to this document as a result of the public review period for the Draft EA are denoted with the word "Revised" in the margin throughout the Final EA.

6.3.1 California Regional Water Quality Control Board – Colorado River Basin Region

Comment 1: The proposed project may involve streambed alteration.
Response 1: This comment has been noted. Since this project is being undertaken by and/or for the Federal Government, a Streambed Alteration Notification is not required.

Comment 2: The proposed project appears to have a potential impact on water quality and will require a National Pollutant Discharge Elimination System construction stormwater permit. Section 401 water quality certification may also be required.
Response 2: Section 5.2 of the Draft EA stated that a Stormwater Pollution Prevention Plan would be required for the project. Sections 4.5.1 and 5.2 of the Draft EA also state that any applicable NWPs and Section 401 permit procedures would be completed prior to initiation of construction activities.

6.3.2 Bureau of Land Management – Palm Springs-South Coast Field Office

Comment 1: The comment requested a section describing the BLM, public land, the South Coast Resource Area, and the California Desert Conservation Area.
Response 1: A section has been added in Section 1.2.5.

Comment 2: The commenter requested a section on the Federal Land Policy and Management Act.
Response 2: A statement has been added in Section 1.2.5.

Comment 3: The commenter stated the information in Section 1.3 on the "Roosevelt ROW" was not entirely correct.
Response 3: All references to the 60-foot area have been revised to say *60-foot Roosevelt Easement* and the statement made in Section 1.3 has been revised.

Comment 4: The commenter stated information in Land Use about the National Park Service land ownership is not correct.
Response 4: The National Park Service reference has been removed from the text in Section 3.1 and the information has been corrected.

Comment 5: The commenter requested that public land ownership be added to all maps and figures.

Response 5: Figure 2-9, the map with all proposed activities shown, has been updated to show BLM land ownership in the project area.

6.3.3 U.S. Fish and Wildlife Service – Carlsbad Office

Comment 1: The USFWS recommends protocol surveys be conducted for the arroyo toad, least Bell's vireo, and southwestern willow flycatcher. The EA should list all species that could occur within the project area, potential effects, and mitigation.
Response 1: Project specific surveys were performed for this project and no Federally listed species were observed. Past documents and surveys conducted in the same vicinity were analyzed for this project and no Federally protected species were observed during surveys conducted for these previous projects. As stated in Section 4.8.1 of the EA, the CNDDB shows one location for the least Bell's vireo approximately 1.5 miles northeast of the Mountain Empire project. All Federally protected species found in San Diego County and their habitats are included in Table 3-1. Section 3.8.1 of the Draft EA stated that the least Bell's vireo and southwestern willow flycatcher have the potential to occur in the La Gloria and Campo Creek riparian areas; however, the proposed drainage structure repair would simply replace the existing drainage structure and no additional habitat would be lost. Much of the habitat in the areas where the proposed projects (portable lights, four low water crossings, blasting activities) would occur is in a disturbed state within the Roosevelt Easement and/or within the existing road ROW. Other areas where actions are proposed are not necessarily disturbed by vehicle activities, but during the project specific surveys, every area showed signs of heavy UDA foot traffic. Environmental design measures to reduce potential impacts on biological resources are included in Section 5.3.

Comment 2: It is recommended that any ground disturbing activities not be performed between February 15 and August 30, rather than March 15 though June 30 as stated in the EA.
Response 2: The USBP will commit to prohibiting ground disturbing activities within riparian areas from occurring between 15 February and 30 August, except in emergency situations. Section 5.3 of the Final EA has been revised accordingly. Section 5.3 has also been revised to state that migratory bird surveys would be done in areas that would require ground-disturbing activities prior to any action, if conducted during the breeding/nesting season.

Comment 3: The EA needs specific portable light locations, their proximity to riparian/wetland areas, and Quino checkerspot butterfly critical habitat.
Response 3: As stated in the Draft EA, lighting systems would remain with in the 60-foot Roosevelt Easement and within the road ROW (Section 2.1.3) along the 20-mile stretch as shown in Figure 2-5. Since there are only up to 50 portable lights proposed along the 20 mile section, no specific areas are designated; however, areas where lighting systems are prohibited are noted in the EA, including Quino checkerspot butterfly critical habitat (Section 2.1.3, 3.8.2) or in or adjacent to drainages (Section 4.5.1). These systems would be transported by USBP vehicles and no ground disturbance, vegetation removal, or road construction would be required for their placement (Section 2.1.3, 4.6.1).

Comment 4: The commenter is concerned about the lack of mitigation measures associated with the portable lights, the number of lights used, upward illumination, and cumulative effects.
Response 4: Effects of the portable light placement on wildlife species has been discussed in Section 4.7.1. Section 2.1.3 states that the lights would face south and shields would be placed over the bulbs to reduce or eliminate backlighting. The EA calls for the use of *up to* 50 portable lighting systems over a 20-mile stretch of border in areas where increased UDA and smuggling activities occur. These high-use areas receive a tremendous amount of foot and vehicle traffic from UDAs and USBP agents patrolling the areas. Typically, high traffic areas such as these have degraded wildlife habitat due to the constant disturbances from UDAs. The lights would be placed along existing roads within 60 feet of the international border. No vegetation or ground disturbing activities would be required for light placement; therefore, no wildlife habitat would be lost. Lights would be prohibited in wetland/riparian areas, ephemeral drainages, and Quino checkerspot critical habitat. The cumulative effects section of the Final EA has been revised to include lighting effects.

Comment 5: The commenter suggests a noise analysis be performed on the operation of the proposed portable light generators.
Response 5: This section in the Final EA has been expanded to include generator data.

Comment 6: The commenter states that the EA does not describe the type of vegetation to be impacted and would like the vegetation communities and amounts to be disturbed included in the Final EA.
Response 6: Section 3.6 of the Draft EA stated the different vegetation communities found in the project area and then listed the different vegetation species observed at each proposed impact area, by action, during the April 2002 site visit. The amount of area to be disturbed is disclosed in Section 2.0 and the acreage to be affected is broken down by action type and vegetation communities in Section 4.6.1 of the Draft EA.

Comment 7: The commenter recommends a mitigation plan for the project. The commenter is concerned about the loss of riparian habitat and oak woodland habitat.
Response 7: The USBP is not statutorily required to mitigate for impacts to habitat, unless the habitat is occupied by or designated as critical habitat for a Federally protected species, or is a jurisdictional WUS, as defined under the CWA. Therefore, a mitigation plan is not required for this project. Less than 10 acres of disturbance is expected from the Proposed Action Alternative, and some of these actions would occur within the 60-foot Roosevelt Easement, which is already heavily disturbed. The drainage structures proposed for three of the four areas would be replacements; therefore, the area has already been disturbed and no additional impacts would occur. The proposed Campo Creek drainage structure repair is within riparian habitat. Since this crossing is an existing crossing and proposed for a replacement culvert, no additional habitat would be lost and the construction would be scheduled to avoid the nesting/breeding season of the least Bell's vireo and southwestern willow flycatcher. The proposed La Gloria Canyon drainage structure replacement is the only proposed action within an area with an oak woodland habitat as stated in Section 3.6. These oaks are currently subjected to heavy sedimentation buildup and are in various moribund stages. The proposed crossing repair would avoid the removal of the oak, if possible.

Comment 8: The commenter recommends a restoration plan be included in the Final EA if on is proposed.
Response 8: Please see the response for Comment 7.

Comment 9: The commenter felt that the EA did not address a full range of alternatives. The commenter suggested three additional alternatives to the portable lighting systems: RVS, lights other than the metal halide style, and solar powered lighting/ lower wattage light bulbs for the portable lights.
Response 9: The EA addressed a full range of alternatives, which could be undertaken to satisfy the stated purpose and need. The three suggested alternatives to the portable lights have been analyzed since the Draft EA was released, but also have been eliminated from further analysis and are discussed in Section 2.3 of the Final EA.

Comment 10: The Draft EA does not adequately address cumulative effects. The commenter suggests including the effects from increased private traffic, researchers, USBP agents due to the Proposed Action Alternative.
Response 10: Cumulative effects from the project have been discussed in the EA. Increases in private traffic and researchers would be restricted on the road leading to the Mountain Empire scope site. The use of other roads in the project area is unquantifiable and therefore cannot be analyzed in the cumulative effects. Effects from the USBP agents would continue since they would still be required to patrol the border area. The improved roads would not result in more traffic; rather, the improvements would allow the USBP agents to operate more efficiently, effectively, and safely.

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SECTION 7.0
REFERENCES

7.0 REFERENCES

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SECTION 8.0
LIST OF ACRONYMS AND ABREVIATIONS

8.0 LIST OF ACRONYMS AND ABBREVIATIONS

AO	Area of Operations
BLM	Bureau of Land Management
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CDCA	California Desert Conservation Area
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
dB	decibel
DNL	day-night average sound level
EO	Executive Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act
ft^2	square feet
FY	fiscal year
INA	Immigration and Nationality Act
INS	Immigration and Naturalization Service
IPS	inches per second
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NRHP	National Register of Historic Places
NWP	Nationwide Permit
PCPI	Per capita personal income
PCT	Pacific Crest Trail
PL	Public Law
POE	Port-of-Entry
POL	petroleum, oils, and lubricants
PPV	peak particle velocity
ROI	Region of Influence
ROW	right-of-way
RVS	Remote Video Surveillance
SANDAG	San Diego Regional Planning Agency
SCIC	Southern Coastal Information Center
SDAPCD	San Diego County Air Pollution Control District
SDMM	San Diego Museum of Man
SDWA	Safe Drinking Water Act
SWANCC	Solid Waste Agency of Northern Cook County
TPI	Total Personal Income
UDA	undocumented alien
U.S.	United States

USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WPLT	Western Pluvial Lakes Tradition
WUS	Waters of the United States

SECTION 9.0
LIST OF PREPARERS

9.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this EA.

NAME	ORGANIZATION	DISCIPLINE/ EXPERTISE	EXPERIENCE	ROLE IN PREPARING EA
Joseph Lamphear	INS Western Region, Environmental Officer	NEPA	13 years Environmental Management & Review	EA review and coordination
Charles McGregor	USACE, Fort Worth District	Chemistry	7 years NEPA	EA review and Technical Manger
Alan Marr	USACE, Fort Worth District	Environmental Resource Planner	33 years of experience with the USACE	EA review and Technical Manager
Patience Patterson, RPA	USACE, Fort Worth District	Archaeology	30 years Professional Archaeologist/Cultural Resource Manager	EA review and coordination
Kevin Feeney	INS Headquarters, Environmental Officer	NEPA	30+ years in NEPA	EA review
David Sitchler	US Border Patrol	Border Patrol Operations	16 years Law Enforcement	EA review
Richard Gordon	US Border Patrol	Border Patrol Operations	16 years Law Enforcement	EA review
Wade D. Rowley	Rowley Enterprises	Military Construction	Enlisted Const Equip Operator 9 years Engineer Officer, 14 years Team Engineer Commander, 10 years	EA coordination, field investigations, and GIS
Chris Ingram	Gulf South Research Corporation	Biology/Ecology	23 years EA/EIS studies	EA review and field investigations
John Lindemuth	Gulf South Research Corporation	Archaeology	11 years experience	Cultural Resources
David Alford	Gulf South Research Corporation	GIS	2 years GIS experience	GIS/Graphics
Kate Koske Roussel	Gulf South Research Corporation	Forestry/Wildlife	3 years in NEPA and related studies	Project Manager and field investigations
Donna Bankston	Gulf South Research Corporation	Forestry	2 years in NEPA and related studies	Field investigations

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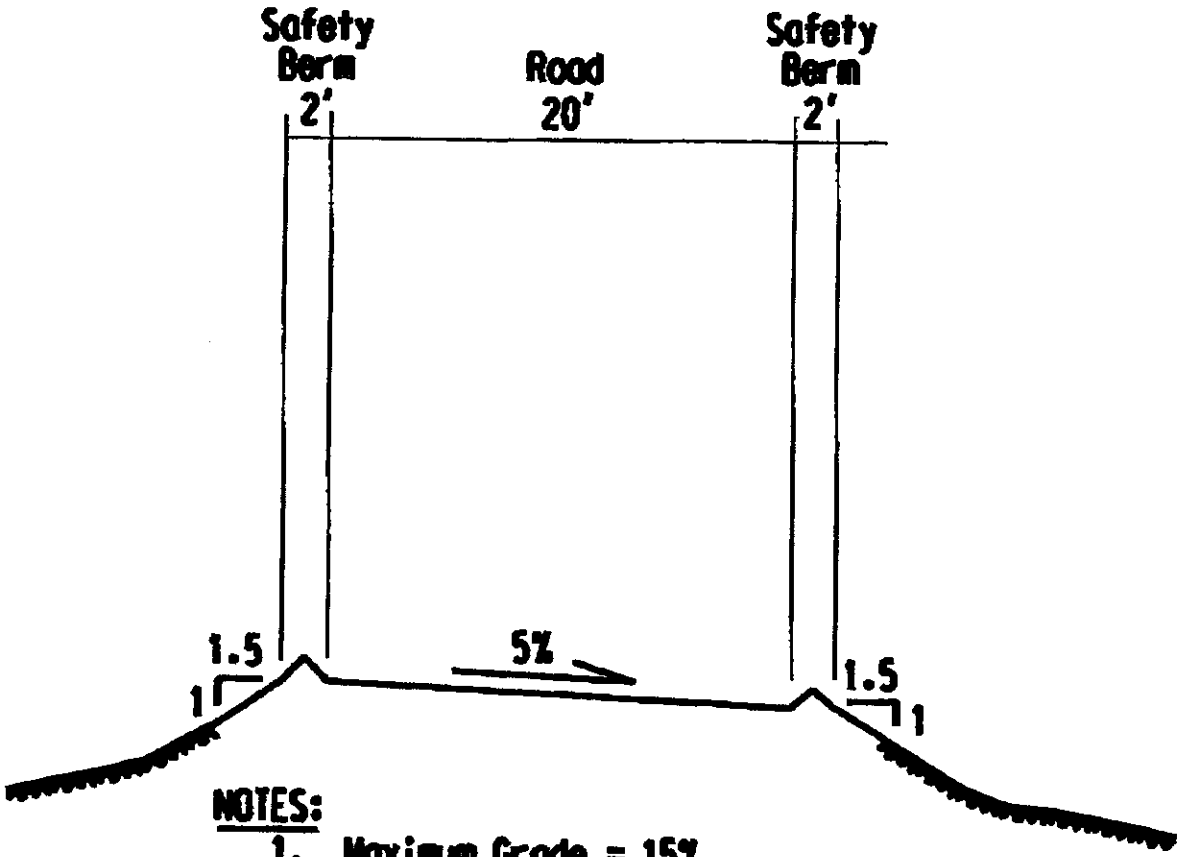
APPENDIX A
PROJECT DESIGNS

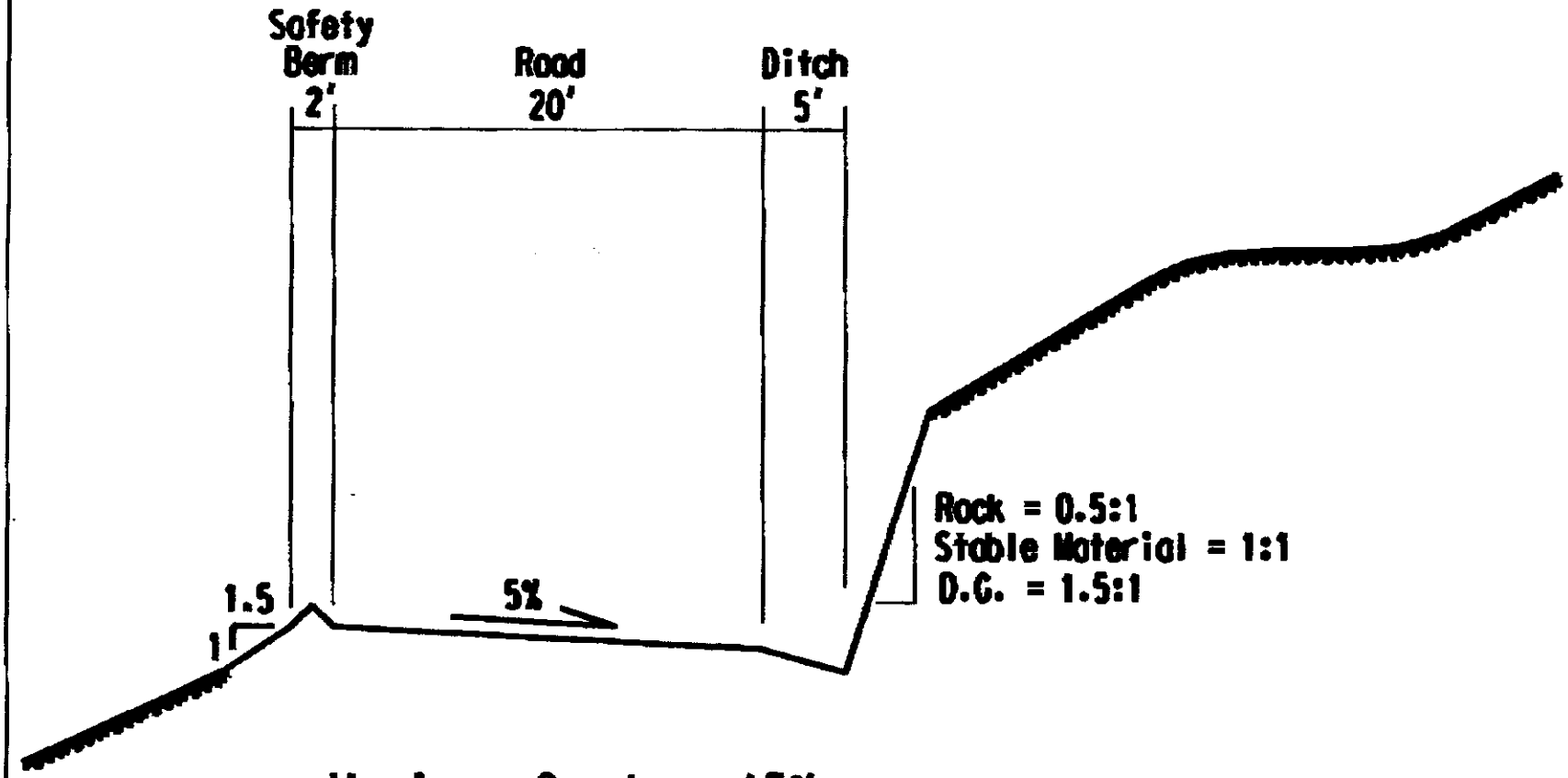


NOTES:

1. Maximum Grade = 15%
2. Carry water to low point & culvert

East County San Diego
Typical Road Sections
Fill Section

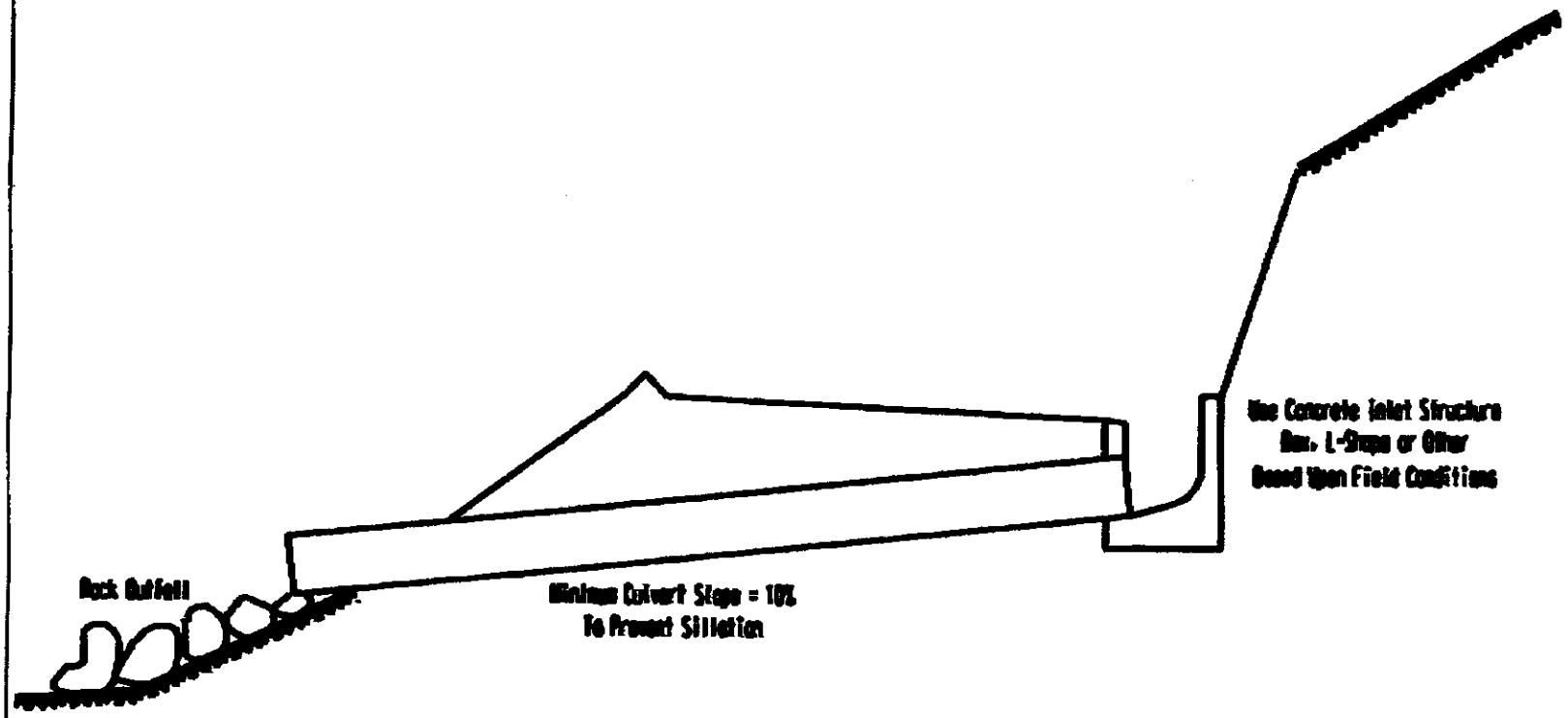
DPA Anderson 7 Oct 02



Maximum Grade = 15%

East County San Diego
Typical Road Sections
Side-Hill Cut

DM Anderson 7 Oct 02

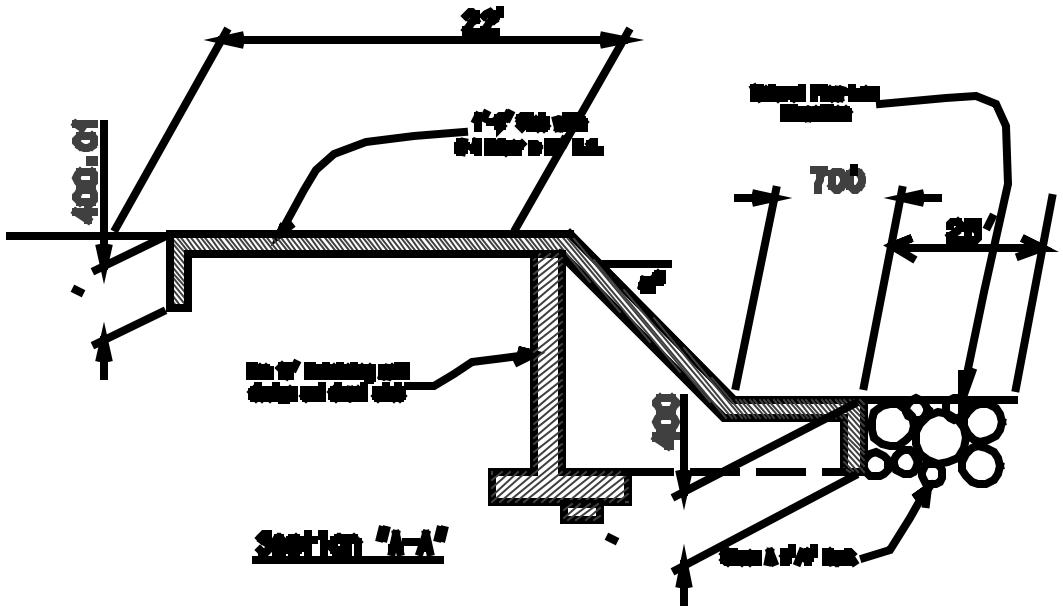


NOTE:

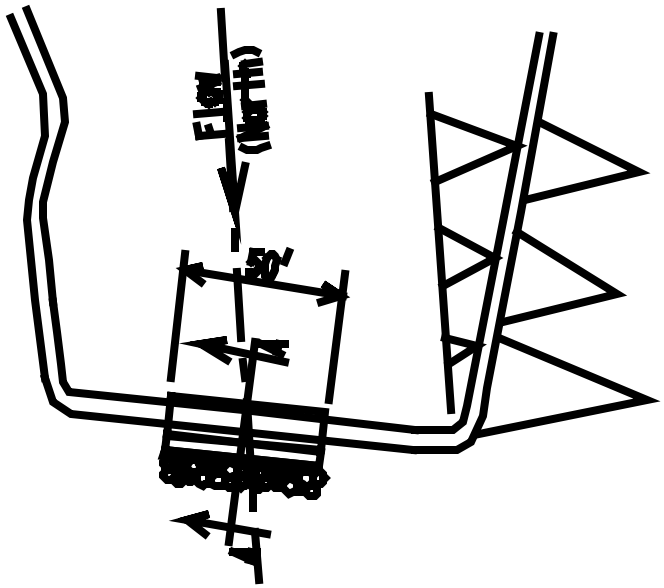
1. Size culvert to location per CM Anderson

East County San Diego
Typical Road Sections
Culvert Typical

CM Anderson 7 Oct 02



Typical Section



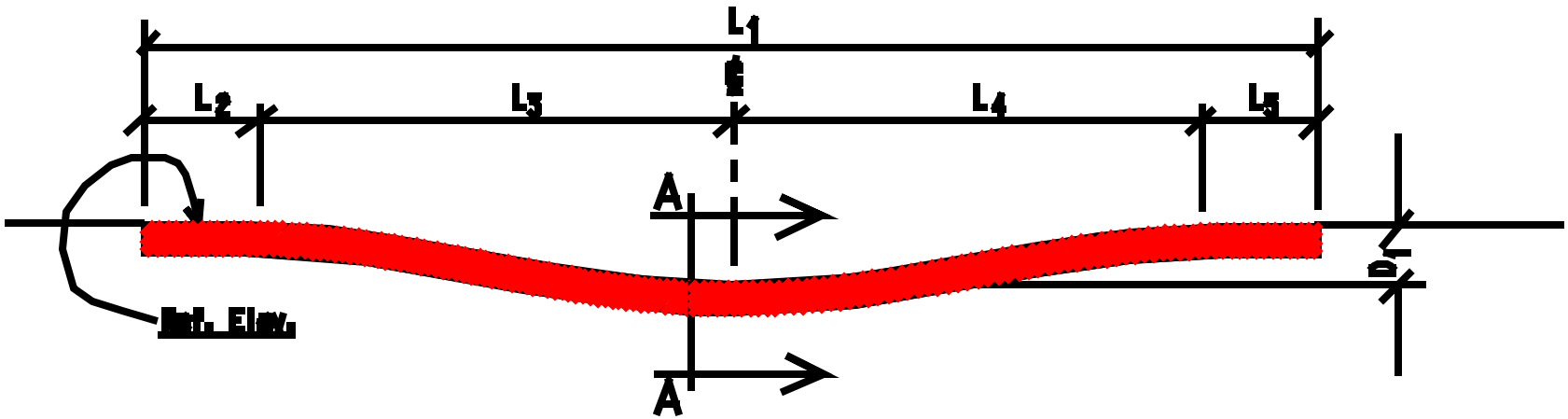
Plan View

Typical Section and Plan View of the Smith Canyon Drainage Structure

GERC / GULF SOUTH RESEARCH CORPORATION

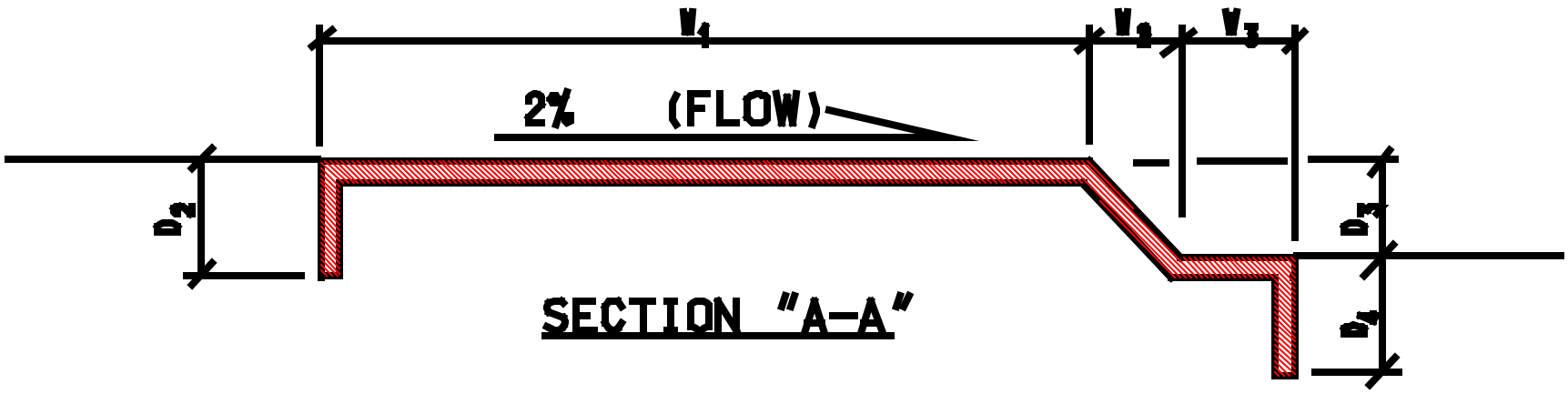
SCALE: not to scale

DATE: November 2002



PROFILE

(As seen looking downstream)



SECTION "A-A"

Typical Profile and Section of the Maupins and La Gloria Canyon Drainage Structures

gsrc GULF SOUTH RESEARCH CORPORATION

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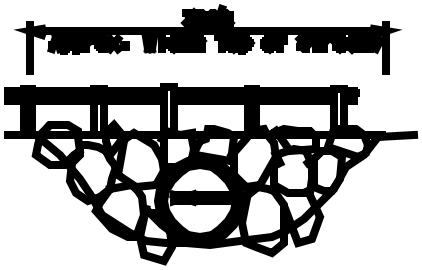
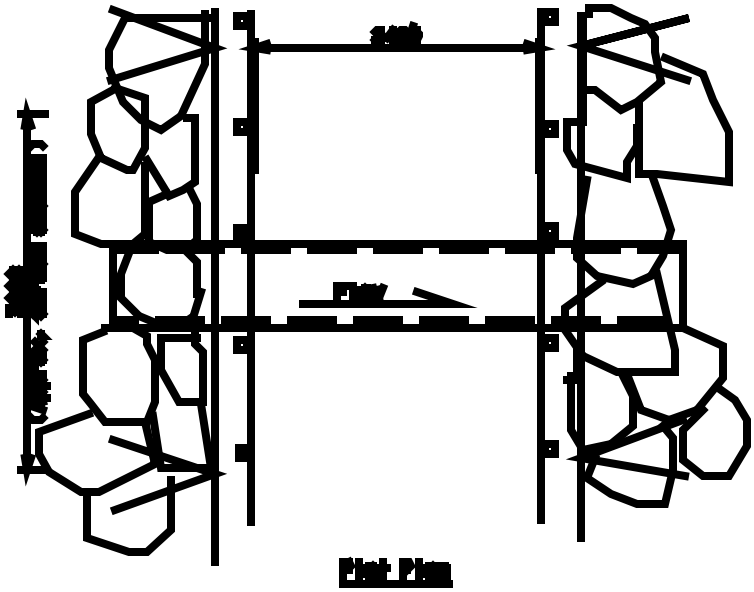
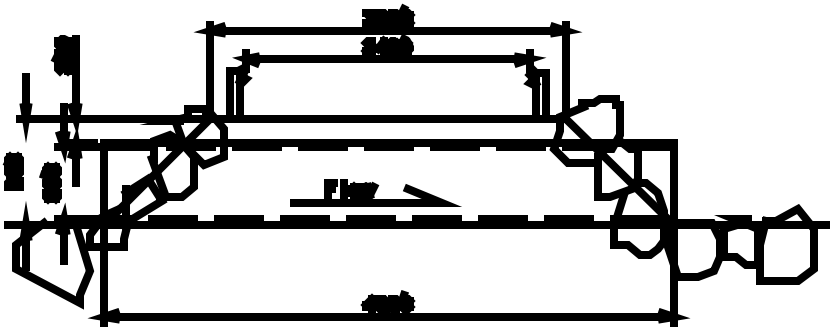
DATE: November 2002



End View



Plot Plan



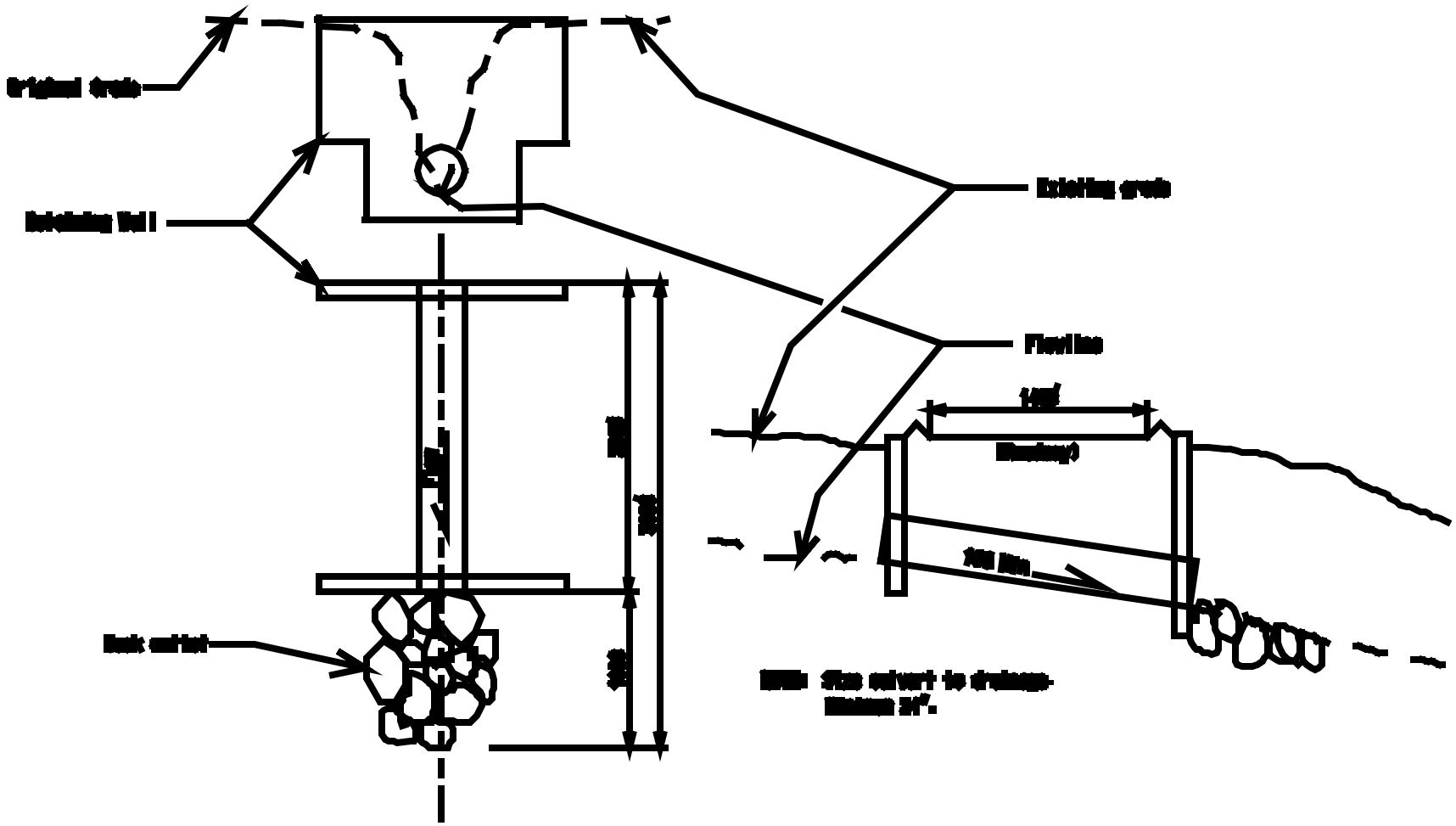
Section

End, Plot Plan and Section Views of Campo Creek Drainage Structure

GSRC / GULF SOUTH RESEARCH CORPORATION

SCALE: Not to Scale

DATE: November 2002



Airport Mesa Deep Water Crossing

GERC / GULF SOUTH RESEARCH CORPORATION

SCALE: not to scale

DATE: November 2002

APPENDIX B
HYDROGEOLOGIC ANALYSIS

NYMAN & ASSOCIATES

3168 Sherry Drive
Baton Rouge, LA 70816-5009

March 3, 2003

Kate Koske Roussel
Natural Resources
Gulf South Research Corporation
7602 GSRI Avenue
Baton Rouge, Louisiana 70820

Subject: Environmental assessment of proposed INS wells in the Smith/La Gloria canyon areas along the U.S./Mexico border, San Diego County, California.

Dear Ms. Roussel:

As you requested, I have made a thorough study of the hydrologic literature that included southeastern San Diego County, California, for the purpose of writing an environmental assessment for the areas of interest to the Immigration and Naturalization Service (INS). The literature search was done to estimate the environmental impact that two water wells, each producing about 50,000 gallons/year, would have on the general hydrology of the area. Geologic maps from the California Department of Conservation (Geological Survey), the San Diego County Water Authority, and several theses on hydrogeology written by students at San Diego State University have provided a good insight toward answering this question. Total recharge for the 2001 recharge season (late winter and spring) was estimated for the Campo Creek basin using stream-hydrograph separation and pro-rated for the Smith/La Gloria canyon watersheds on a unit-recharge basis (recharge/mile^2) and compared to 30 years of past streamflow.

Purpose and Location of Investigation

The INS plans to have two wells installed along the U.S./Mexico border in Smith and La Gloria canyons, San Diego County, California. Smith and La Gloria canyons are located about 1.0 to 2.5 miles east of the town of Campo (Figure 1). The INS plans to have a well drilled near the national border in each canyon. Each well would be drilled in granite (crystalline rock), each well is expected to be pumped at the rate of 1.0 to 1.5 gal/min, and would be used to maintain a 10,000-gal holding tank needed to support the INS activities in each canyon (Figure 2).

Regional Hydrogeology

San Diego County lies within the Peninsular Range geomorphic province, the mountains of which are largely composed of granitic (crystalline) rocks of the Southern California Batholith, which was emplaced during the Cretaceous period of geologic time. Regional uplift resulted in the erosion of most of the overlying rocks and currently this batholith is exposed over most of southern San Diego County (Figure 1) from elevations of 500 ft to more than 6,000 ft (NGVD)(Pollock, 1991, p.53).

Groundwater movement is primarily through pore spaces developed by weathering and decomposition of the crystalline rocks and through granular alluvium, as well as through fractures in the bedrock. Regional groundwater movement in crystalline rock is preferentially along lineaments and associated fracture zones (Lower, 1977, p. 173).

Lineaments

Lineaments are linear topographic features that are geologically controlled and are most obvious from studies of high-altitude imagery that shows unusually straight valleys, river courses, and other topographic features. In San Diego County, according to Lower (1977, p. 11), lineaments formed because of zones of weakness in crystalline rocks as the rocks cooled and were uplifted as the Peninsular Ranges. Lineaments are topographic features created because of the weathering and erosion of this zone of weakness (frequent jointing and shear zones). The most common trends for lineaments are N 20°W and N 20°E, although north-south and east-west trends are also present. Minor faults in the Southern California Batholith may also have the same trends (Figures 1, 3).

Lineaments are hydrologically important because they provide major avenues for groundwater movement and storage in crystalline rock. Lineaments are often the upstream limit of etchbasins (shallow intermountain basins that contain valley fill) (Lower, 1977, p.39) and large etchbasins are often formed where lineaments cross from two different directions. Etchbasins are important because they store water from surface runoff and groundwater flow from connecting lineaments (Lower, 1977, p.44).

Smith and La Gloria canyons both fit the description of lineaments because they are reasonably straight and are oriented N 20°W in this area. Many of the faults in this area also have an approximately N 20°W trend (Figures 2,3), suggesting that Smith and La Gloria canyons may be fault controlled but may not be indicated as such because they have not been studied in detail. Campo Valley is probably a large etchbasin that is the beneficiary of surface and groundwater flow from Smith and La Gloria canyons, and other adjacent canyons.

Water Availability in Crystalline Rocks

There is considerable literature regarding water wells in crystalline rock. Domestic water supplies in many parts of the U.S., and in other countries, are dependent on such wells because there is no other groundwater source available. Crystalline rocks include all classes of igneous and metamorphic rocks, which include granitic rocks, schist, and gneiss. All of these types of rock, for all practical purposes, have essentially no primary permeability, i.e. the minerals that constitute crystalline rocks are essentially impermeable (pass an insignificant amount of water). However, there is secondary permeability (permeability created after the original rock was emplaced) created by fractures, joints, and shearing that can provide useful amounts of groundwater to wells.

Shallow fractures in crystalline rock are often created by stress relief due to unloading of overlying rocks because of erosion. Techtonically produced fractures adjacent to fault zones and areas of intense folding can occur at any depth (Nommensen, 1989, p.15). According to Nommensen (1989, p.14), the weathering of crystalline rock is primarily a near-surface phenomenon that is generally restricted to a zone within about 300 feet of the earth's surface.

Availability of Water from Crystalline Rocks in San Diego County

According to Nommensen, (1989, p.21), wells in the Southern California Batholith range from 95 to 1,950 feet in depth and have a median depth of about 410 feet and most have casing cemented to a depth of 50 feet or more. Well yields averaged as much as 39.5 gal/min (p.32).

Pollock (1991, p.54), investigated the relationship between well depth and well yield in the fractured crystalline rocks of San Diego County. His investigation was based on 2,618 wells completed in the Southern California Batholith in San Diego County. The well records are on file at the Department of Health Services. Of these records a subset of 146 wells was selected because the records included well location, total depth, total yield, static water level, and included the continuous monitoring of yield with depth.

Records for 91 "valley" wells were studied statistically and it was found that wells less than 100 ft deep had average yields ranging from 0 to about 1.5 gal/min/20-ft of saturated depth, wells 200 ft deep had average yields ranging from about 0.5 to nearly 2.0 gal/min/20-ft of saturated depth, wells to 300 ft deep had average yields ranging from 0.5 to nearly 2.5 gal/min/20-ft of saturated depth (Pollock, 1991, Fig.10, p.67). The average yield of all valley wells is about 1.0 gal/min/20-ft of saturated depth to a depth of about 600 ft. In other words, a 600-ft well with a static water level 100 ft below land surface therefore may yield about 25 gal/min. The average yield per 20-foot depth interval for wells on hillsides and hilltops ranges from 0 to 1.0 and 0 to 0.5 gal/min/20-ft of saturated depth, respectively. According to Pollack (1991, p.95), the relatively high yields in the valleys may be the result of (1) valleys tend to form along structurally weak zones that may contain fractured rocks, and (2) groundwater recharge from streams and the presence of residuum and alluvium probably increase yields in valleys. (3) Erosion in upland areas exposes relatively unweathered rock thus reducing the yield to wells on hillsides and hilltops, and (4) fractures on the hills and hillsides collect water that drains toward the valleys.

Static water levels in valley topography in San Diego County generally range from 0 to 50 ft below land surface (Pollock, 1991, p.66). According to Mower and Nace (1957), the presence of cottonwood trees indicates a water table about 4 to 5 feet below land surface, the presence of willow indicates a water table within about 2 feet of land surface.

Phreatic Water Consumption

According to Lower (1977, p.13), vegetation in San Diego County at the higher elevations generally consists of coniferous and mixed forest trees. Mature pine and oak trees in this class annually transpire up to 1.8 acre-feet of water per acre of trees (Todd, 1970). At lower elevations the vegetation consists of scrub oak and shrubs constituting chaparral and mixed

chaparral. According to Todd (1970) chaparral growths are reported to transpire up to 1.7 acre-feet of water per acre annually (p. 14). Flora around springs and along streams in canyon floors often consist of live oak, cottonwood, willow, alder, and maple, and these trees can transpire from 2.7 to 4.5 acre-ft of water per acre annually (p.16).

Groundwater Recharge

Groundwater recharge is the replenishment of the zone of saturation with water derived from sources above the earth's surface (Meinzer, 1942). It is the most important parameter of the groundwater system (Lower, 1977, p 53) because it is required to maintain the groundwater system. Recharge involves three steps (1) infiltration into the soil or other openings, (2) percolation downward through the unsaturated zone, and (3) recharge—the movement of some of the soil water to the saturated zone (water table) to become part of the groundwater system (Lower, 1977, p. 53). Recharge calculations by Lower (1977, p. 61) indicate that recharge near the village of Mount Laguna, 20 miles north of Campo, occurred primarily from February through April, during his studies from October 1973 to May 1976. Based on stream flow data during this period, bedrock recharge contributed 0.23 acre-ft/acre annually of groundwater to stream channels along lineaments in the Mount Laguna area. Based on spring discharge data during this period, annual recharge of 0.19 acre-foot/acre was related to crystalline rock and etchbasins (Lower, 1977, p.172). Decomposed roots and animal borings augment infiltration in etchbasins. When the rate of rainfall exceeds the infiltration rate surface runoff is created and this water is lost to the groundwater system. Snowfall accounted for 43% of the total annual precipitation at Mount Laguna and snow is very desirable from a recharge point of view because snow generally melts slowly continually wetting the soil thus providing continual infiltration. In the fractured crystalline rocks, groundwater percolates through open fractures to the zone of saturation. Chemical weathering of the bedrock also occurs, slowly enlarging the fractures. Percolation to the zone of saturation continues unless the water is intercepted by plants and is removed by evapotranspiration. Because plants are most active during the spring and summer most of the recharge occurs during the winter and early spring months.

Blain (1981, p.70) established eight rain gages at different elevations at Honey Springs Ranch (Figure 1), about 18 miles WNW of Campo, estimated the relationship between elevation and the amount of precipitation for an area ranging in elevation from 1,145 to 1,900 feet. A plot of average rainfall at the eight stations indicated a linear trend and suggested a 25% increase in rainfall for each 500-foot rise in elevation (Fig. 16, p.71). Blain (p.87, 90, 359) also concluded that the water table rose following wet periods not because of infiltration through the soil but by infiltration and drainage through highly permeable near-surface factures in the exposed crystalline rock areas nearby. Smith and La Gloria canyons are incised about 1,000 ft into the Southern California Batholith.

Recharge in the Campo Creek Basin

The soils in the Campo Creek Basin are mostly decomposed crystalline rock and are therefore very granular and highly permeable--6.3 to 20 inches/hr on the hilltops and hillsides (Tollhouse soils) and greater than 20 inches/hr in the valley bottoms (Mottsville soil) (USDA, 1973, p.56, 58)—however, because of steep slopes runoff may also be very rapid. The

distribution of these soils are mapped as MvC (Mottsville) and ToG and ToE2 (Tollhouse) as shown in Figure 5. When such soils become saturated these highly permeable soils facilitate the movement of recharging rainwater to the water table and subsurface fractures.

It would be very useful to be able to calculate the volume of water in storage in the soils and fractures in the crystalline rock. A commonly used method of determining total recharge is by observing the water-table rise following a rain event (Lerner, 1997, p.142). Because of the lack of monitor wells and the irregularity of the volume in fractures and pore spaces calculating the volume of water represented by the water-table rise is uncertain in this area.

Another method of estimating the total recharge over a whole catchment area (river basin) is based on the analysis of river hydrographs (Lerner, 1997, p.143). The basic equation is:

Recharge = baseflow + withdrawals (stresses) + rate of storage depletion

Baseflow is streamflow maintained by natural groundwater discharge (springs and seepage from the surrounding aquifer). Baseflow is the flow after a storm surge has passed when streamflow is maintained by groundwater discharge from the soil and surrounding bedrock. Withdrawals and depletion of aquifer storage can be avoided here because the Bureau of Land Management restricts anthropogenic development in Smith and La Gloria canyons and recharge occurs primarily in the later winter and early spring when vegetative stress is minimal on the groundwater system (Lower, 1977). The method for estimating groundwater recharge from streamflow records has been thoroughly tested and described by Rutledge and Daniel (1994). The volume of recharge is calculated for each individual rainfall event. The basic equation is:

$$R = \frac{2(Q2 - Q1)(K)}{2.3026}$$

where:

R = total volume of recharge (in cfs, ft^3/sec);

Q1 = groundwater discharge (cfs) at the critical time (days) as extrapolated from the streamflow recession preceding the peak;

Q2 = groundwater discharge (cfs) at critical time (days) as extrapolated from the streamflow recession following the peak; and

K = the time (days) required for groundwater discharge to decline through one log cycle and is determined by extending the trend line of the rate of recession across a log cycle.

The method also requires the calculation of the critical time period (Tc, days), which is:

Tc = 0.2144K

This graphical analysis is shown in Figure 6 for the gauging station Campo Creek near Campo for the period January through April 2001. The station is operated by the U.S. Geological Survey and these average daily discharge readings are available from their internet website (USGS, 2001). The results for two calculations are shown on Figure 6. There was one large event (3.4 cfs, 3/7/2001), and six small events (0.46, 0.32, 0.44, 0.65, 0.57, 0.58, on 1/11, 1/28, 2/13, 3/1, 4/12, and 4/21, respectively). The calculations indicate that during the large event about 11.67 cfs (7.54 Mgal) of recharge had entered the groundwater system. On each of the small events about 6.25 cfs (4.04 Mgal) of recharge had entered the groundwater system. A total of about 24 Mgal had entered the groundwater system during the six small events and the total recharge was therefore about 32 Mgal for the Campo Creek Basin during the late winter and spring of 2001.

According to the USGS, the gauging station near Campo monitors a drainage area of 85 square miles (mi^2) (Appendix A). A unit recharge area can therefore be calculated indicating 0.38 Mgal/mi2. Smith and La Gloria canyons constitute about 4 mi^2 (Figure 7) of the 85 mi^2 in the Campo Creek basin. The available recharge to the well sites was therefore estimated to be about 1.5 Mgal during the late winter and spring of 2001. Although the amount of recharge varies from year to year it should be noted that rain events have been reasonably persistent since the late 1970s (Figure 8). Figure 8 shows that there was very little flow in Campo Creek from 1970 to 1977, but since then there have been rather regular rain events during the recharge season that have replenished the groundwater system from year to year. Figure 8 is based on average monthly discharge recorded at the Campo Creek near Campo gage (Appendix A) and monthly rainfall at Campo (from the Western Regional Climate Center, Appendix B).

Environmental Assessment

The studies in San Diego County mentioned above quantify at their location that there is significant recharge and groundwater contribution to springs, rivers, and crystalline rocks. When Campo Creek is at baseflow the flow represents the excess of groundwater after the deep groundwater system has been essentially filled. The two wells proposed for Smith and La Gloria Canyons would each supply the INS about 50,000 gal/yr, or 100,000gal/yr total. The recharge to the groundwater system in the canyons was about 1.5 Mgal during the recharge season of 2001 and there have been repeated significant rain events each year during the recharge season for the past 20 years (Figure 8). The amount of water that is to be pumped by these two INS wells is insignificant compared to the amount of water removed from the natural system by river and spring flow, and the thousands of acres of forest surrounding Smith and La Gloria canyons.

Dale J. Nyman, CGWP, CPG
Hydrogeologist

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STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION

GEOLOGIC MAP OF CALIFORNIA
SAN DIEGO-EL CENTRO SHEET

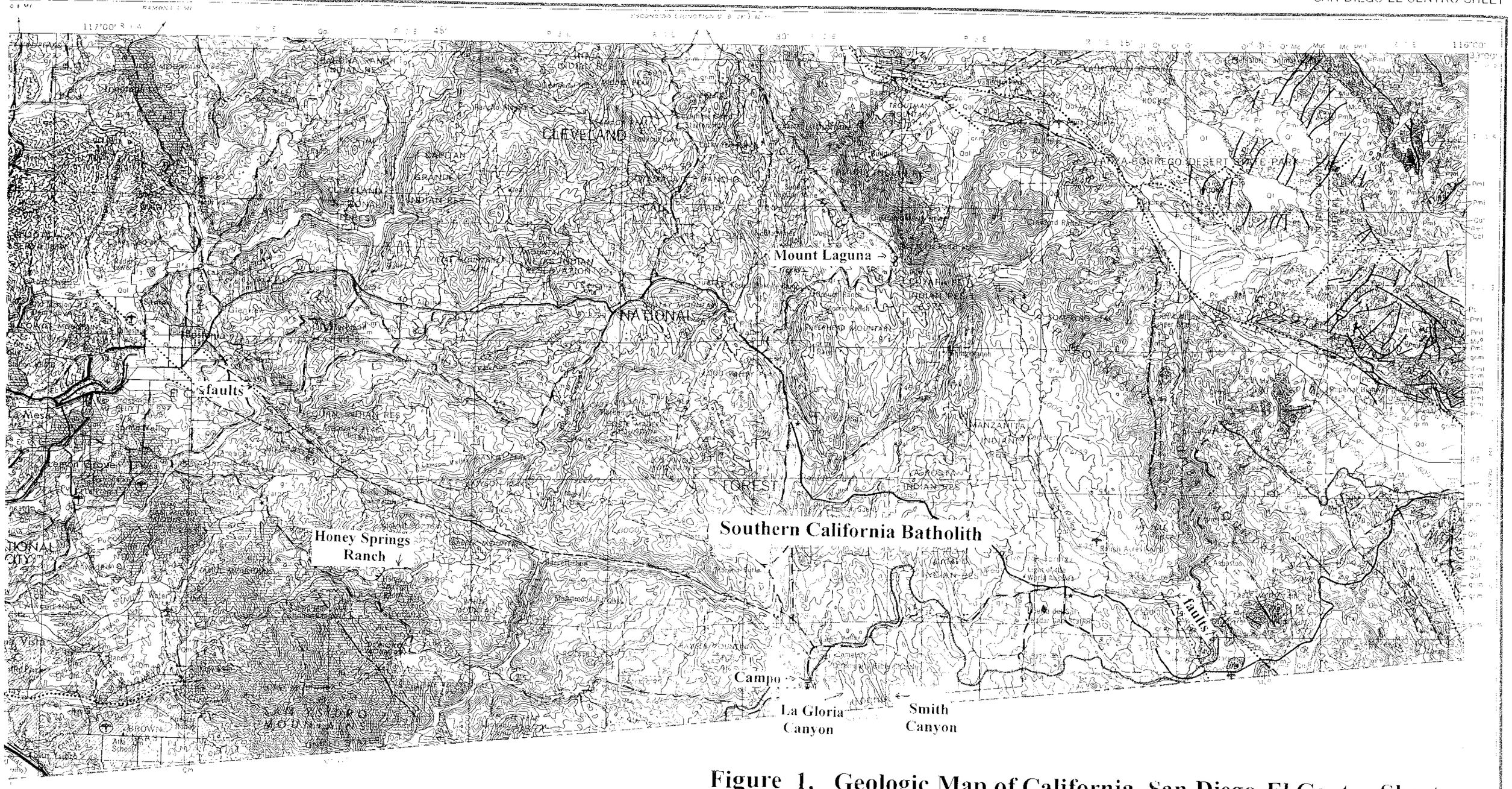


Figure 1. Geologic Map of California, San Diego-El Centro Sheet [compiled by R.G. Strand, 1962]

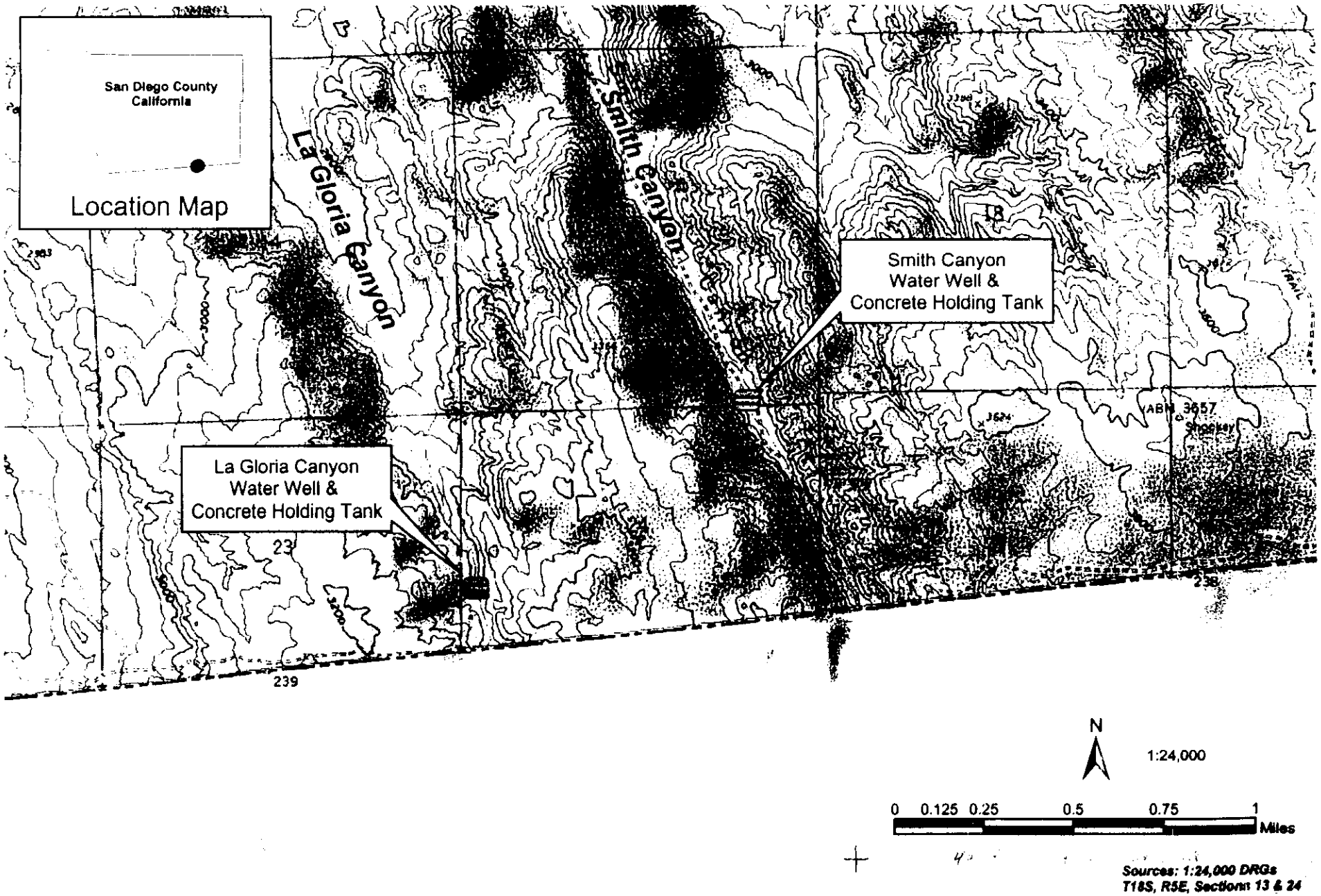


Figure 2 : Proposed Water Wells and Concrete Holding Tanks

gsrc / GULF SOUTH RESEARCH CORPORATION

August 2002

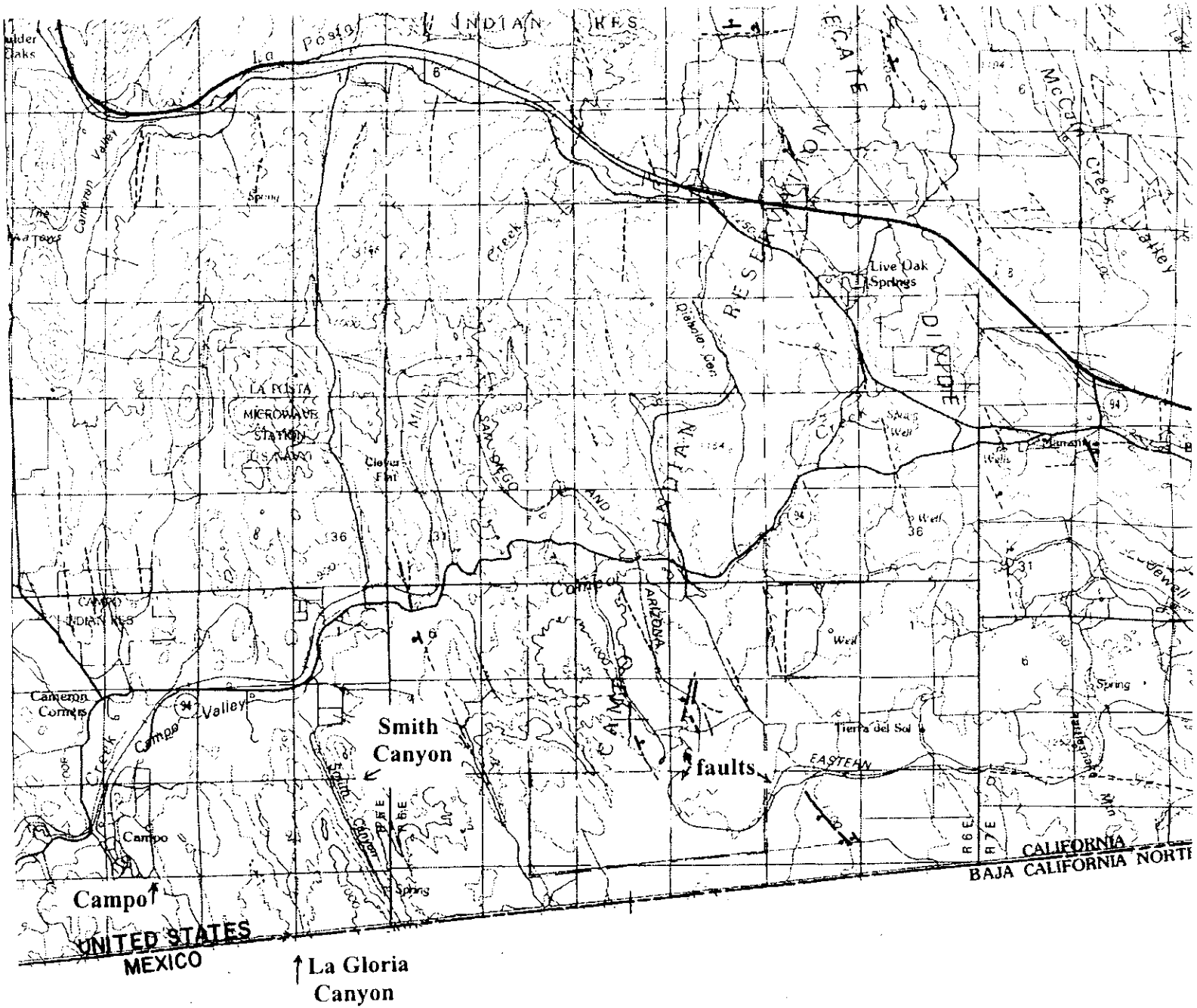
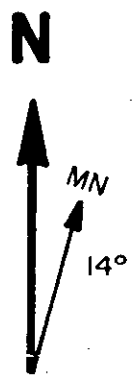


Figure 3. Map of Quaternary Faults and Lineaments in San Diego County [from DMG Open-File Report 88-6, by J.E. Kahle, 1985]

-EXPLANATION-

H 1968	Holocene fault	Fault with most recent displacement in Holocene time (past 10,000 years). Trace marked by scarps or other physiographic features identified on aerial photographs and inspected in the field or complied from published sources. Historic movement indicated by date adjacent to trace; may be due to movement on other near by faults. Bar and ball on downdropped side.
	Pleistocene fault	Fault with most recent displacement in Pleistocene time (past 2,000,000 years). Trace marked by eroded scarps, displaced older alluvium, or other physiographic features identified on aerial photographs. Most were inspected in the field or compiled from published sources. Most are late Pleistocene in age of most recent displacement, but some may be Holocene. Dashed line indicates inferred fault. Bar and ball on downdropped side.
	Lineament	Trace characterized by aligned vegetation and scarps which appear to displace sediments or surfaces of Quaternary age. Not field checked. May represent movement along joints or bedding planes. Only those which appear to have significant movement are shown.



SCALE 1:100,000

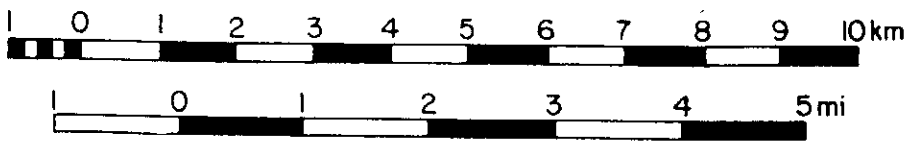


Figure 4. Explanation to Figure 3.

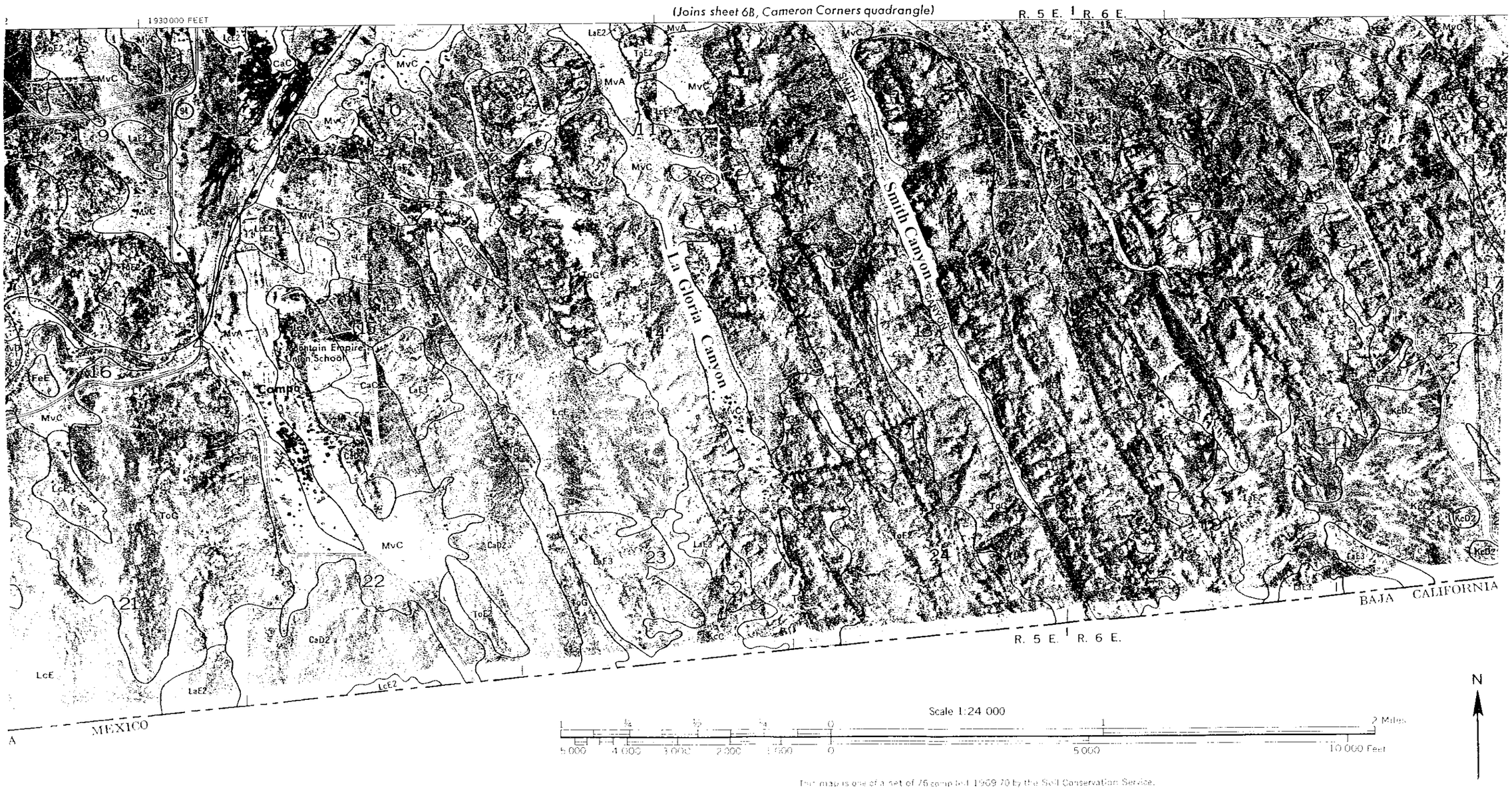


FIGURE 5. Soil associations in the Campo area, California (USDA, 1973)

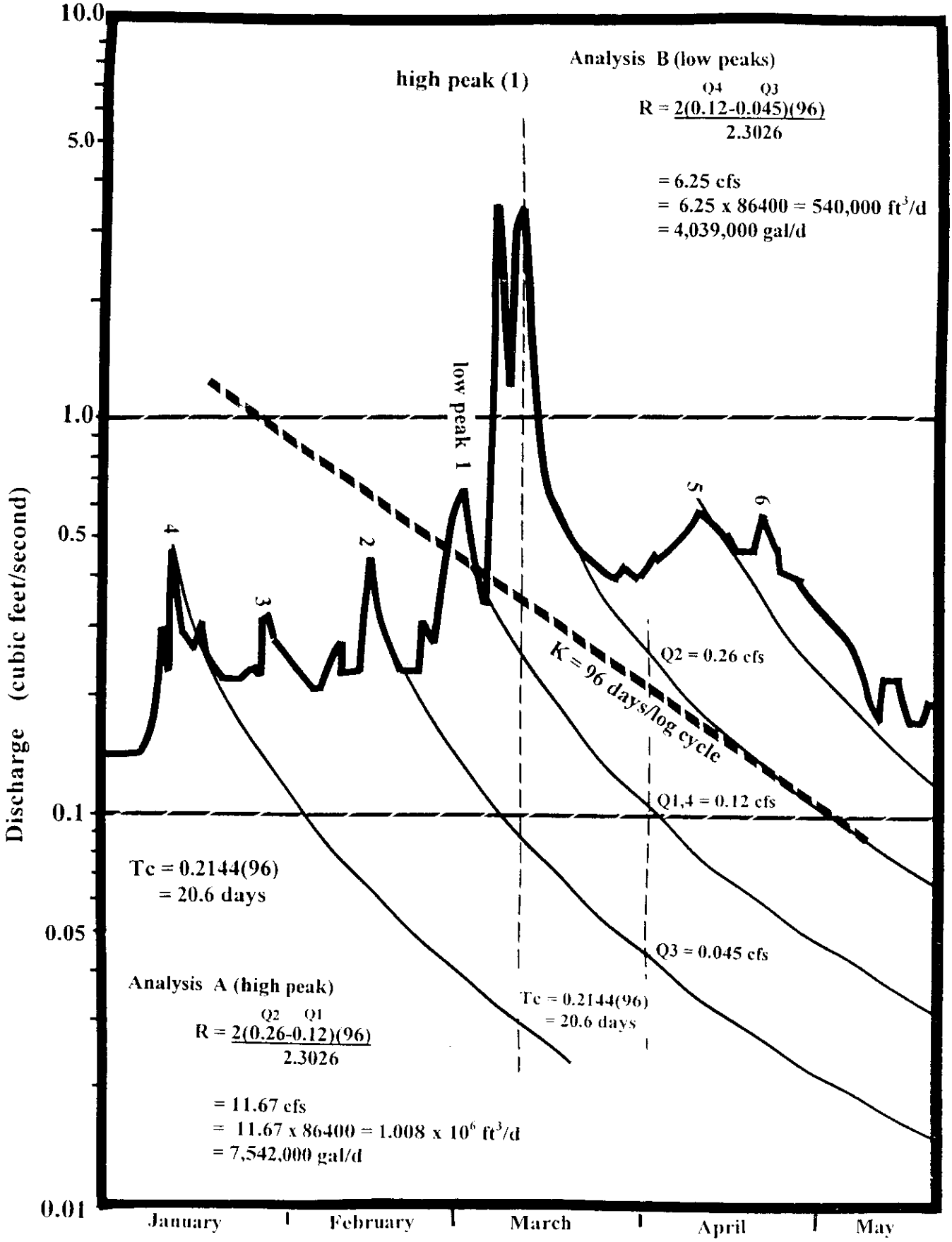


Figure 6. Graphical analyses of recharge in the Campo Creek basin during the late winter and spring of 2001, based on U.S.G.S. streamflow data.

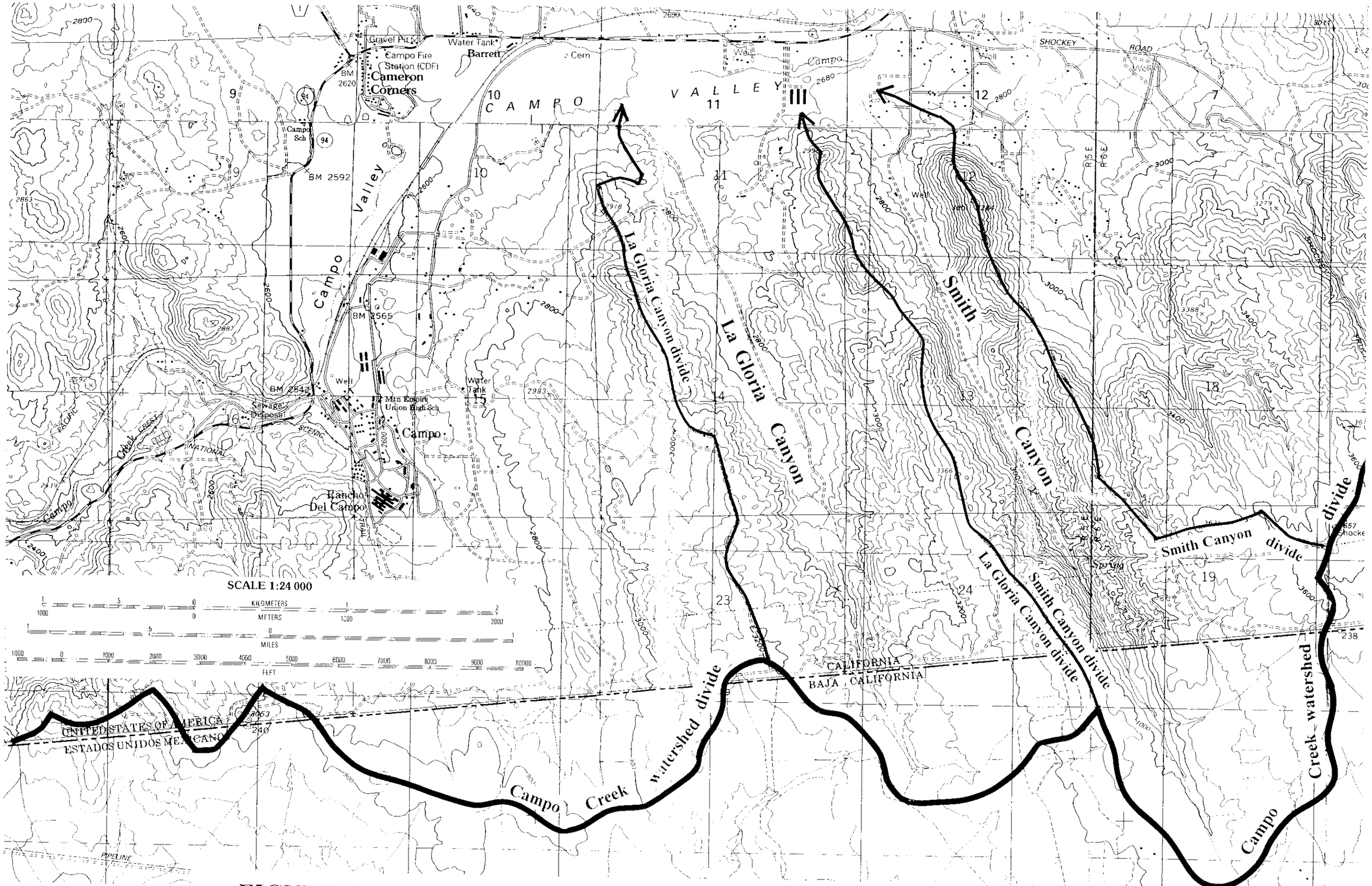


FIGURE 7. Drainage areas for Smith and La Gloria canyons.

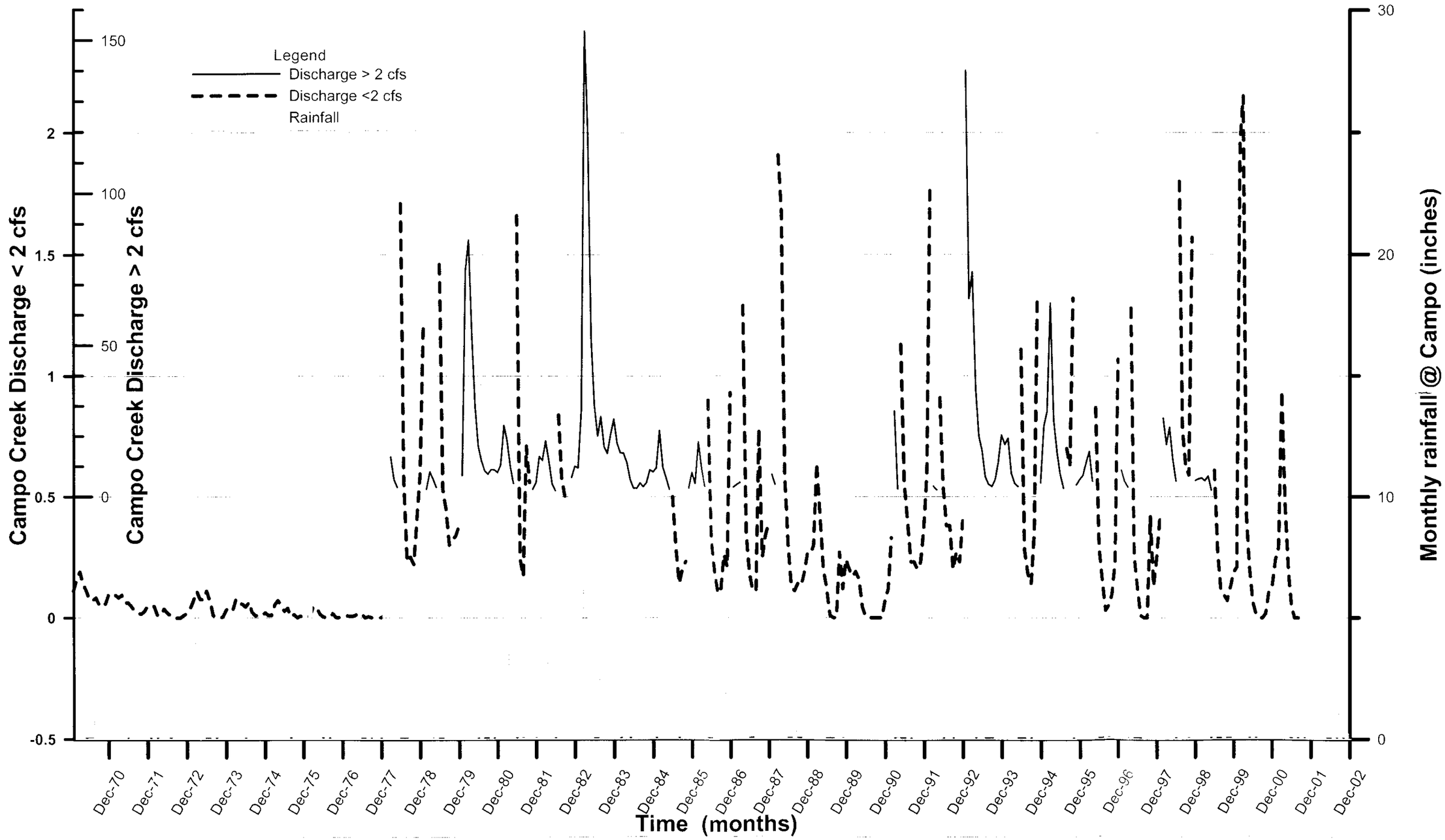


FIGURE 8. Rainfall and average monthly discharge hydrographs, Campo Creek nr. Campo, California

Appendix A. Monthly streamflow for the USGS gaging station Campo Creek near Campo, 1970 to 2001 used in Figure 8

Monthly Streamflow Statistics for the Nation

USGS 11012500 CAMPO C NR CAMPO CA

Available data for this site Surface-water: Monthly streamflow statistics GO

San Diego County, California
Hydrologic Unit Code 18070305
Latitude 32°35'28", Longitude 116°31'29" NAD27
Drainage area 85.0 square miles
Gage datum 2,179.08 feet above sea level NGVD29

Output formats

HTML table of all data
Tab-separated data
Reselect output format

YEAR	Monthly mean streamflow, in ft^3/s											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1936										.000	.10	.47
1937	1.24	31.2	19.5	14.3	6.35	2.26	.56	.21	.10	.16	.91	5.21
1938	4.37	11.3	38.4	10.6	7.22	2.56	.56	.19	.10	.12	.73	7.97
1939	10.8	19.1	12.5	7.85	3.30	.46	.20	.13	1.29	.87	1.61	2.62
1940	4.75	9.69	4.43	5.44	.90	.27	.068	.058	.090	.19	.24	8.95
1941	3.78	9.74	32.8	54.6	25.1	12.1	5.86	5.23	4.43	8.83	9.12	13.1
1942	14.7	12.4	12.4	9.15	5.42	1.91	.34	.074	.093	.24	1.22	3.01
1943	14.4	10.8	15.1	10.3	2.95	1.09	.31	.18	.16	.42	.70	3.24
1944	5.26	26.7	17.3	8.73	4.29	2.43	.58	.10	.097	.40	6.23	5.17
1945	6.77	7.36	17.1	7.24	2.36	.79	.22	.65	.27	.38	.68	9.50
1946	7.07	5.59	5.64	4.22	1.06	.070	.013	.000	.18	.084	.86	1.30
1947	1.29	1.54	.80	.24	.094	.030	.000	.000	.000	.000	.043	.17
1948	.14	.17	.17	.12	.058	.020	.000	.000	.000	.068	.000	.000
1949	.15	.73	.89	.42	.17	.027	.000	.000	.000	.000	.000	.003
1950	.14	.17	.12	.083	.035	.000	.000	.000	.000	.000	.000	.000
1951	.010	.018	.12	.12	.045	.000	.000	.000	.000	.000	.000	.000
1952	.48	.15	12.5	3.60	1.52	.63	.49	.052	.000	.042	.19	.25
1953	.23	.22	.67	.35	.14	.063	.000	.000	.000	.000	.000	.087
1954	.25	.17	.91	.24	.10	.003	.000	.000	.000	.000	.000	.094
1955	.20	.14	.11	.10	.097	.000	.35	.071	.000	.000	.000	.003
1956	.13	.097	.000	.077	.052	.000	.000	.000	.000	.000	.000	.000

1957	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1958	.000	.000	.000	1.04	.039	.000	.000	.000	.000	.000	.000	.000
1959	.000	.046	.10	.053	.016	.000	.000	.000	.000	.000	.000	.000
1960	.000	.000	.000	.013	.029	.000	.000	.000	.000	.000	.000	.000
1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1964	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003
1965	.000	.004	.003	.010	.000	.000	.000	.000	.000	.000	.013	.006
1966	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003
1967	.000	.000	.068	.087	.077	.000	.000	.000	.000	.000	.000	.000
1968	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1969	.006	.32	.92	.89	.72	.42	.20	.20	.20	.071	.084	.090
1970	.11	.16	.19	.14	.11	.077	.072	.083	.054	.046	.059	.098
1971	.088	.094	.083	.094	.062	.063	.047	.029	.020	.016	.027	.051
1972	.051	.047	.011	.012	.037	.020	.010	.001	.000	.000	.010	.018
1973	.039	.071	.11	.077	.075	.11	.071	.010	.000	.000	.004	.032
1974	.042	.031	.077	.058	.057	.045	.065	.023	.009	.010	.007	.021
1975	.010	.010	.054	.071	.046	.027	.039	.003	.013	.000	.007	.000
1976	.000	.010	.044	.045	.015	.004	.000	.000	.017	.001	.001	.001
1977	.010	.006	.005	.010	.020	.014	.000	.004	.000	.000	.000	.001
1978	.011	.040	13.1	5.52	3.10	1.71	.56	.23	.25	.22	.40	.59
1979	1.21	2.49	8.25	5.87	3.19	1.46	.53	.45	.30	.32	.34	.38
1980	7.01	74.5	84.6	53.6	30.5	16.8	11.8	8.60	7.40	8.97	8.87	7.97
1981	10.4	23.6	18.6	10.1	4.38	1.66	.24	.17	.71	.56	2.43	4.68
1982	13.2	12.0	18.4	11.9	4.11	2.04	.84	.57	.50	.51	6.32	10.0
1983	9.49	28.5	153	121	52.2	30.4	20.1	26.5	16.5	14.3	20.7	25.7
1984	17.7	14.5	14.4	11.2	5.69	2.82	2.79	4.50	3.30	4.63	8.81	8.16
1985	9.45	21.8	9.70	6.32	2.49	.50	.29	.14	.20	.23	2.79	7.97
1986	4.25	18.1	9.45	3.38	.90	.32	.19	.10	.12	.26	.21	.93
1987	3.06	3.89	4.56	1.29	.35	.18	.11	.11	.078	.25	.34	.39
1988	7.27	4.08	1.91	1.68	.60	.31	.13	.11	.14	.13	.18	.26
1989	.26	.30	.64	.43	.20	.12	.009	.000	.000	.027	.12	.24
1990	.20	.17	.19	.16	.046	.007	.000	.000	.000	.000	.000	.069
1991	.12	.33	28.3	2.53	1.13	.56	.40	.23	.23	.20	.23	.37
1992	.59	1.77	3.37	2.21	.91	.55	.38	.38	.20	.27	.23	.40
1993	140	65.3	74.1	35.7	19.9	15.2	6.54	4.00	3.30	5.54	11.4	20.3
1994	17.2	19.3	7.73	4.33	3.37	1.11	.28	.18	.14	.35	1.31	4.48

1995	23.3	28.2	63.8	25.5	15.0	7.45	2.73	.70	.63	1.32	3.85	5.63
1996	6.98	11.3	14.9	5.11	.87	.29	.15	.030	.050	.095	.22	1.07
1997	8.79	5.10	3.12	1.28	.25	.12	.009	.000	.000	.042	.13	.25
1998	.42	25.9	17.2	22.9	12.3	5.14	1.80	.78	.63	.59	1.57	5.33
1999	5.83	6.13	5.22	6.78	2.20	.61	.27	.11	.094	.072	.13	.19
2000	.21	1.96	2.15	.43	.20	.066	.017	.000	.000	.018	.11	.13
2001	.24	.29	.94	.48	.20	.047	.000	.000	.000			
Mean of monthly streamflows	5.60	7.96	11.6	7.39	3.49	1.77	.93	.85	.64	.78	1.44	2.57

Questions about data h2oteam@usgs.gov
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Appendix B. Monthly rainfall data for Campo, California, for 1970 to 2001 used in Figure 8

(provided by the Western Regional Climate Center)

1971 - 2000

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1971-2000 Normals (~3 KB)

1961 - 1990

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1961-1990 Normals (~3 KB)

Period of Record

- Station Metadata
- Station Metadata Graphics

General Climate Summary Tables

- Temperature
- Precipitation
- Heating Degree Days
- Cooling Degree Days
- Growing Degree Days

Temperature

- Daily Extremes and Averages
- Spring 'Freeze' Probabilities
- Fall 'Freeze' Probabilities
- 'Freeze Free' Probabilities
- Monthly Temperature Listings
  - Average
  - Average Maximum
  - Average Minimum

Precipitation

- Monthly Average
- Daily Extreme and Average
- Daily Average
- Precipitation Probability by Duration.
- Precipitation Probability by Quantity.
- Monthly Precipitation Listings
  - Monthly Totals

Snowfall

- Daily Extreme and Average
- Daily Average
- Monthly Snowfall Listings
  Monthly Totals

Snowdepth

- Daily Extreme and Average
- Daily Average

Heating Degree Days

- Daily Average

Cooling Degree Days

- Daily Average

Period of Record Data Tables

- Daily Summary Stats (~55 KB)
- Monthly Tabular data (~2 KB)

Western Regional Climate Center,
wrcc@dri.edu

CAMPO, CALIFORNIA

Monthly Total Precipitation (inches)

(041424)

File last updated on Nov 21, 2002
*** Note *** Provisional Data *** After Year/Month 200208
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.
MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5
Individual Months not used for annual or monthly statistics if more than 5 days are missing.
Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

YEAR (S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1948	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00	0.00	0.22	1.10	0.00	2.56	3.88
1949	4.33	2.24	1.39	0.11	0.41	0.00	0.00	0.00	0.00	0.77	1.09	2.42	12.76
1950	2.74	1.19	1.68	0.48	0.01	0.00	0.10	0.00	0.22	0.00a	0.41	0.34	7.17
1951	4.00	1.39	1.12	3.57	0.27	0.00	0.44	1.34	0.01	1.09	0.82	7.19	21.24
1952	5.05	0.95	8.40	1.62	0.00	0.00	1.24	0.00	0.00	0.00	2.85	3.13	23.24
1953	1.04	1.05	2.28	1.24	0.49	0.01	0.04	0.01	0.00	0.00	1.14	0.18	7.48
1954	4.89	2.49	6.45	0.16	0.18	0.05	1.42	0.03	0.13	0.00	0.68	0.75	17.23
1955	3.85	1.23	0.68	0.52	1.95	0.00	0.82	1.90	0.00	0.00	1.14	1.77	13.86
1956	1.70	1.75	0.00	2.36	0.45	0.00	0.65	0.00	0.00	0.07	0.00	0.40	7.38
1957	7.05	0.78	1.57	1.09	2.60	0.28	0.01	0.65	0.44	2.17	0.84	1.34	18.82
1958	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00z	0.00
1959	1.12	5.61	0.00	0.17	0.14	0.00	0.03	0.16	0.34	0.50	0.13	2.93	11.13
1960	2.97	4.10	0.45	1.95	0.49	0.00	0.17	0.03	1.59	0.16	1.67	0.07	13.65
1961	1.09	0.16	2.28	0.00	0.02	0.00	0.00	0.62	0.00	0.37	0.77	2.08	7.39
1962	3.61	4.53	2.12	0.00	0.90	0.11	0.00	0.00	0.00	0.07	0.00	0.65	11.99
1963	0.18g	3.03	1.72	1.86	0.00	0.13	0.00	0.63	2.45	1.35	1.77	0.31	13.25
1964	2.12	1.34	3.22	0.95	0.67	0.00	0.00	0.03	0.07	0.39	1.88	1.83	12.50
1965	0.80	0.00z	1.20	6.03	0.05	0.00	0.36	0.13	0.00z	0.00	9.03	4.31	21.91
1966	1.35	1.40	1.16	0.05	0.07	0.22	0.39	0.19	0.20	0.46	0.83	0.00z	6.32
1967	1.42	0.00	1.03	3.54	0.48	0.06	0.34	0.49	0.82	0.00	3.65	4.23	16.06
1968	0.58	0.73	2.19	0.85	0.28	0.03	1.88	0.06	0.00	0.05	0.72	1.66	9.03
1969	8.30	5.67	1.96	0.10	0.43	0.12	0.01	0.00	0.20	0.02	1.85	0.26	18.92
1970	0.85	0.96	3.95	1.18	0.00	0.03	0.03	2.66	0.08	0.12	1.28	2.66	13.80
1971	1.12	1.22	0.40	1.46	0.67	0.00	0.07	1.00	0.25	1.18	0.05	3.60	11.02
1972	0.00	0.18	0.00	0.24	0.14	0.31	0.00	0.04	0.14	1.87	2.60	2.55	8.07
1973	1.70	3.13	5.24	0.29	0.09	0.00	0.00	0.09	0.00	0.05	1.69	0.11	12.39
1974	4.29	0.07	1.24	0.24	0.16	0.00	1.28	0.13	0.31	2.32	0.39	1.24	11.67
1975	0.40	1.02	3.40	1.58	0.11	0.12	0.09	0.00	0.18	0.07	2.15	0.63	9.75
1976	0.07	5.47	1.81	1.85	0.06	0.00	0.61	0.00	2.85	0.24	1.02	0.76	14.74

1977	3.10	0.35	0.85	0.19	1.15	0.00	0.00	1.18	0.00	0.88	0.25	0.00z	7.95
1978	7.79	5.38	5.45	1.48	0.53	0.00	0.00	0.01	0.16	0.06	3.05	4.45	28.36
1979	3.99	1.95	4.88	0.03	0.19	0.00	0.00	0.16	0.04	0.82	0.26	0.69	13.01
1980	11.82	8.82	3.72	1.87	0.80	0.00	0.55	0.00	0.00	0.28	0.00	0.54	28.40
1981	0.91	2.64	4.22	0.80	0.10	0.00	0.05	0.03	0.31	0.19	1.35	0.03	10.63
1982	5.14	2.15	4.30	0.82	0.12	0.00	0.33	0.56	0.37	0.13	4.42	3.44	21.78
1983	2.23	4.82	9.92	2.23	0.19	0.00	0.01	4.05	0.68	1.16	2.45	3.20c	30.94
1984	0.12	0.00	0.04	0.24	0.00	0.55	1.51	2.29	0.67	0.18	1.43	4.25	11.28
1985	0.00z	1.59	1.46	0.27	0.04	0.09	1.74	0.00	0.33	0.69	4.53	1.76	12.50
1986	0.75	3.53	3.47	0.28	0.01	0.00	0.35	0.06	1.32	2.12	0.57	0.72	13.18
1987	1.66	2.55	2.58	0.31	0.08	0.01	0.00	0.65	0.48	3.13	2.48	1.82	15.75
1988	3.49	1.94	0.72	2.48	0.36	0.00	0.02	1.65	0.00	0.00	1.08	2.12	13.86
1989	1.05	1.18	1.65	0.21	0.13	0.00	0.00	0.00	0.17	0.36	0.03	0.29	5.07
1990	3.06	1.78	0.70	0.99	0.23	0.22	0.11	0.18	0.62	0.04	0.56	1.30	9.79
1991	1.35	2.23	0.00z	0.05	0.00	0.00z	0.62	0.00	0.35	0.58	0.30	2.83	8.31
1992	3.24a	5.05	4.94	0.68	0.23	0.00	0.75	2.05	0.00	0.24	0.06	4.04	21.28
1993	18.61	6.51	1.53	0.00	0.12	0.16a	0.00	0.00	0.00	0.30	1.49	1.16	29.88
1994	1.70	4.14	3.14	1.35	0.00	0.00	0.00	1.22	0.00	0.19	0.68	0.97	13.39
1995	10.12	3.28	6.63	1.26	1.10	0.48	0.06	0.64	0.28	0.00	0.08	0.57	24.50
1996	1.54	3.20	2.76	0.53	0.07	0.00	0.00	0.07	0.03	1.56	0.92	1.98	12.66
1997	4.33	1.53	0.02	0.22	0.00	0.00z	0.00z	0.07	1.93	0.16	1.75	4.21	14.22
1998	1.60	10.37	4.40	2.35d	1.17	0.02	0.10	0.20	0.20	0.03	1.17	1.42	23.03
1999	1.66	0.83	0.62	3.31	0.00	0.46	0.00z	0.00	0.14	0.00	0.00	0.21	7.23
2000	0.75	4.20	1.47	0.46	0.00	0.21	0.00	0.13	0.30	0.65	0.39	0.04	8.60
2001	2.92	4.12	1.76	1.45	0.03	0.00	0.12	0.00	0.24	0.00	1.11	1.02	12.77
2002	0.40	0.12	1.12	0.39	0.00	0.00	0.19	0.00	1.06a	0.00c	0.26j	0.00z	3.28
Period of Record Statistics													
MEAN	3.13	2.61	2.49	1.09	0.34	0.07	0.32	0.47	0.38	0.52	1.34	1.82	14.99
S.D.	3.37	2.24	2.18	1.17	0.50	0.13	0.49	0.82	0.61	0.72	1.54	1.55	6.57
SKEW	2.49	1.32	1.36	1.86	2.63	2.16	1.78	2.38	2.54	1.77	2.75	1.06	0.89
MAX	18.61	10.37	9.92	6.03	2.60	0.55	1.88	4.05	2.85	3.13	9.03	7.19	30.94
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	5.07
NO YRS	51	52	52	53	53	51	52	54	53	54	53	51	44

APPENDIX C
PROTECTED SPECIES LIST

Appendix C
Protected Species of Potential Occurrence in San Diego County, California

Common Name	Scientific Name	Federal Status	State Status	CDFG Status
MAMMALS				
American badger	*Taxidea taxus*	--	--	SC
California leaf-nosed bat	*Macrotus californicus*	--	--	SC
California mastiff bat	*Eumops perotis californicus*	--	--	SC
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	--	--	SC
Jacumba pocket mouse	*Perognathus longimembris internationalis*			SC
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	--	--	SC
Mexican long-tongued bat	*Choeronycteris mexicana*	--	--	SC
Northern San Diego pocket mouse	*Chaetodipus (=Perognathus) fallax fallax*	--	--	SC
Pacific pocket mouse	*Perognathus longimembris pacificus*	E	--	SC
Pale big-eared bat	*Corynorphinus townsendii pallescens*	--	--	SC
Pallid bat	*Antrozous pallidus*	--	--	SC
Pallid San Diego pocket mouse	*Chaetodipus (=Perognathus falax pallidus*	--	--	SC
Pocketed free-tailed bat	*Nyctinomops femorasaccus*	--	--	SC
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	--	--	SC
San Diego desert woodrat	*Neotoma lepida intermedia*	--	--	SC
Stephens' kangaroo rat	*Dipodomys stephensi*	E	T	--
BIRDS				
Bank swallow	*Riparia riparia*	--	T	--
Belding's savanna sparrow	*Passerculus sandwichensis beldingi*	--	E	--
Burrowing owl	*Athene cunicularia*	--	--	SC
California black rail	*Laterallus jamaicensis coturniculus*	--	T	--
California brown pelican	*Pelecanus occidentalis californicus*	E	E	--
California horned lark	*Eremophila alpestris actia*	--	--	SC
California least tern	*Sterna antillarum browni*	E	E	--
Coastal cactus wren	*Campylorhynchus brunneicapillus*	--	--	SC
California coastal gnatcatcher	*Polioptila californica californica*	T	--	SC
Cooper's hawk	*Accipiter cooperii*	--	--	SC
Double-crested cormorant	*Phalacrocorax auritus*	--	--	SC
Golden eagle	*Aquila chrysaetos*			SC
Least Bell's vireo	*Vireo bellii pusillus*	E	E	--
Light-footed clapper rail	*Rallus longirostris levipes*	E	E	--
Northern harrier	*Circus cyaneus*	--	--	SC

Appendix C. Continued.

Common Name	Scientific Name	Federal Status	State Status	CDFG Status
Prairie falcon	*Falco mexicanus*	--	--	SC
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	--	--	SC
Southwestern willow flycatcher	*Empidonax traillii extimus*	E	--	--
Tricolored blackbird	*Agelaius tricolor*	--	--	SC
Western snowy plover	*Charadrius alexandrinus nivosus*	T	--	SC
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	--	E	--
Willow flycatcher	*Empidonax traillii*	--	E	--
Yellow warbler	*Dendroica petechia brewsteri*	--	--	SC
Yellow-breasted chat	*Icteria virens*	--	--	SC
REPTILES				
Barefoot banded gecko	*Coleonyx switaki*	--	T	--
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	--	--	SC
Coronado skink	*Eumeces skiltonianus interparietalis*	--	--	SC
Flat-tailed horned lizard	*Phrynosoma mcalli*	--	--	SC
Northern red-diamond rattlesnake	*Crotalus rubber rubber*	--	--	SC
Orange-throated whiptail	*Cnemidophorus hyperythrus*	--	--	SC
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	--	--	SC
San Diego mountain kingsnake	*Lampropeltis zonata pulchra*	--	--	SC
Silvery legless lizard	*Anniella pulchra pulchra*	--	--	SC
Southwestern pond turtle	*Clemmys marmorata pallida*	--	--	SC
Two-striped garter snake	*Thamnophis hammondii*	--	--	SC
AMPHIBIANS				
Arroyo toad	*Bufo microscaphus californicus*	E	--	SC
Coast range newt	*Taricha torosa torosa*	--	--	SC
Large-blotched salamander	*Ensatina eschscholtzii klauberi*			SC
Mountain yellow-legged frog	*Rana muscosa*	PE	--	SC
Western spadefoot	*Scaphiopus hammondii*	--	--	SC
FISHES				
Arroyo chub	*Gila orcutti*	--	--	SC
Desert pupfish	*Cyprinodon macularius*	E	E	--
Mohave tui chub	*Gila bicolor mohavensis*	E	E	--
Tidewater goby	*Eucyclogobius newberryi*	E	--	SC
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	E	E	--
INVERTEBRATES				
Quino checkerspot butterfly	*Euphydryas editha quino*	E	--	--
Riverside fairy shrimp	*Streptocephalus woottoni*	E	--	--
San Diego fairy shrimp	*Branchinecta sandiegonensis*	E	--	--

Appendix C. Continued.

Common Name	Scientific Name	Federal Status	State Status	CDFG Status
PLANTS				
Baja California birdbush	*Ornithostaphylos oppositifolia*	--	C	--
Borrego bedstraw	*Galium angustifolium ssp. borregoense*	--	R	--
California orcutt grass	*Orcuttia californica*	E	E	--
Coastal dunes milk-vetch	*Astragalus tener var. titi*	E	E	--
Cuyamaca Lake downingia	*Downingia concolor var. brevior*	--	E	--
Cuyamaca larkspur	*Delphinium hesperium spp. cuyamacae*	--	R	--
Dehesa nolina	*Nolina interrata*	--	E	--
Del Mar manzanita	*Arctostaphylos glandulosa ssp. crassifolia*	E	--	--
Dunn's mariposa lily	*Calochortus dunnii*		R	
Encinitas baccharis	*Baccharis vanessae*	T	E	
Gambel's water cress	*Rorippa gambelii*	E	T	--
Mexican flannelbush	*Fremontodendron mexicanum*	E	R	--
Mohave tarplant	*Deinandra mohavensis*	--	E	--
Mount Laguna aster	*Machaeranthera asteroids var. lagunensis*	--	R	--
Nevin's barberry	*Berberis nevinii*	E	E	--
Orcutt's spineflower	*Chorizanthe orcuttiana*	E	E	--
Otay Mesa mint	*Pogogyne nudiuscula*	E	E	--
Otay tarplant	*Deinandra conjugens*	T	E	--
Salt marsh bird's beak	*Cordylanthus maritimus maritimus*	E	E	--
San Bernardino blue grass	*Poa atropurpurea*	E	--	--
San Diego ambrosia	*Ambrosia pumila*	PE	--	--
San Diego button-celery	*Eryngium aristulatum parishii*	E	E	--
San Diego mesa mint	*Pogogyne abramsii*	E	E	--
San Diego thorn-mint	*Acanthomintha ilicifolia*	T	E	--
Short-leaved dudleya	*Dudleya brevifolia*	--	E	--
Slender-pod jewel-flower	*Caulanthus stenocarpus*	--	R	--
Small-leaved rose	*Rosa minutifolia*	--	E	--
Spreading navarretia	*Navarretia fossalis*	T	--	--
Thread-leaved brodiaea	*Brodiaea filifolia*	T	E	--
Willowy monardella	*Monardella linoides* spp. *viminea*	E	E	--

E – Endangered
T – Threatened
C – Candidate
R – Rare

Source: California Natural Diversity Database, 2002.
Last Updated October 16, 2000.

APPENDIX D
CORRESPONDENCE

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

REPLY TO
ATTENTION OF:

December 26, 2001

Planning, Environmental, and Regulatory Division

SUBJECT: Environmental Assessment for Border Road and Fence: Construction and Repair Campo to Jacumba, California

US Fish and Wildlife Service
Carlsbad Field Office
Attn: Nancy Gilbert
2730 Loker Avenue West
Carlsbad, CA 92008

Dear Ms. Gilbert,

The U.S. Army Corps of Engineers (USACE), Fort Worth District, in cooperation with the Immigration and Naturalization Service (INS), intends to prepare a Supplemental Environmental Assessment (SEA) for the construction and repair of road and fencing along approximately 28 miles of international border between Campo and Jacumba in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along approximately 28 miles along the U.S.-Mexico International Border.

Attached is a map illustrating the approximate project location. We are currently in the process of gathering the most current information available regarding Federally listed species potentially occurring within this area of San Diego County. The INS Architectural and Engineering Resource Center (INS-AERC) respectfully requests that your agency provide a list of the protected species of San Diego County along with a description of the sensitive resources (e.g., rare or unique plant communities, threatened and endangered and candidate species, etc.) that you believe may be affected by the proposed INS activities. Any information you may have regarding critical habitat areas for these species would also be greatly appreciated.

We intend to provide your agency with a copy of the Draft SEA once it is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft SEA.

Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1708.

Sincerely,

William Fickel, Jr.
Planning, Environmental and
Regulatory Division

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

REPLY TO
ATTENTION OF:

December 26, 2001

Planning, Environmental, and Regulatory Division

SUBJECT: Environmental Assessment for Border Road and Fence: Construction and Repair Campo to Jacumba, California

California Department of Fish and Game
Attn: William E. Tippets
4949 Viewridge Avenue
San Diego, California 92123

Dear Mr. Tippets,

The U.S. Army Corps of Engineers (USACE), Fort Worth District, in cooperation with the Immigration and Naturalization Service (INS), intends to prepare a Supplemental Environmental Assessment (SEA) for the construction and repair of road and fencing along approximately 28 miles of international border between Campo and Jacumba in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads, construction of new road segments, and the installation of fencing and culverts along approximately 28 miles along the U.S.-Mexico International Border.

Attached is a map illustrating the approximate project location. We are currently in the process of gathering the most current information available regarding state-listed species potentially occurring within this area of San Diego County. The INS Architectural and Engineering Resource Center (INS-AERC) respectfully requests that your agency provide a list of the protected species of San Diego County along with a description of the sensitive resources (e.g., rare or unique plant communities, threatened and endangered and candidate species, etc.) that you believe may be affected by the proposed INS activities. Any information you may have regarding critical habitat areas for these species would also be greatly appreciated.

We intend to provide your agency with a copy of the Draft SEA once it is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft SEA.

Your prompt attention to this request would be greatly appreciated. If you have any questions, please call Mr. Charles McGregor at (817) 886-1708.

Sincerely,

William Fickel, Jr.
Planning, Environmental and
Regulatory Division

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

In Reply Refer to: FWS-SDG-2427.3

Eric Verwers Director, INS A-E Resource Center
19 Taylor St. Room 3A28
PO Box 17300
Fort Worth, Texas 76102-0300

MAR 2 6 2002

Dear Mr. Verwers:

The U.S. Fish and Wildlife Service (Service) appreciates the Immigration and Naturalization Service's (INS) efforts to work with us to avoid, and/or minimize, impacts to federally listed species. The majority of our efforts in the past few years have been focused on the 14-mile Border Infrastructure System in western San Diego County. While we are currently working with the INS on the Border Infrastructure System, we would like to take this opportunity to express several concerns regarding INS activities in eastern San Diego and Imperial counties. In short, we are interested in obtaining a status report for construction and operations projects being implemented or planned within eastern San Diego and Imperial County, and clarification on what level of environmental review has been conducted. Of particular concern is compliance with section 7 of the Endangered Species Act of 1973, as amended (Act). A more detailed description of our concerns and recommendations follow.

Border Road and Fence: Construction and Repair, Campo to Jacumba and Tecate to Campo:

Although we have commented on these projects during public review, pursuant to the National Environmental Policy Act (NEPA), we have not consulted pursuant to section 7 of the Act. We are also uncertain of these projects' implementation status. To summarize our involvement, on May 23, 1994, we commented on the May 1994 draft Environmental Assessment, Border Road and Fence: Construction and Repair, Campo to Jacumba, and indicated our concern for potential impacts to federally listed species, migratory birds, oak woodlands, sensitive habitats, and movement corridors. Since 1994, we submitted species lists for this same project on January 8, 1997, and February 12, 2002; requested surveys for listed species in a memorandum to Julia Dougan, Bureau of Land Management, dated May 9, 1997; contributed to field surveys, and clarified our concerns for potential impacts to listed species in a memorandum to Julia Dougan dated June 5, 1998 (enclosed). In our 1998 memorandum to BLM, we recommended consultation for potential impacts to Quino checkerspot butterfly (*Euphydras editha quino*, Quino).

It is not clear to us how construction of these projects are being phased and whether the appropriate level of environmental review has occurred. Please provide the following information to assist us in evaluating the possible effects to listed species for Border Road and Fence Construction and Repair, as well as Border Patrol Activities, between Tecate and Jacumba:

1. Please clarify which sections of fence and/or roads, have been, or are planned to be, constructed. Provide a scaled map showing which sections are complete and which sections remain open.

2. Provide detailed information regarding all biological surveys that have been conducted for this project. Provide a scaled map showing which areas were surveyed for federally listed species, including survey forms, reports, and field notes.

3. Clarify how impacts to migratory birds, sensitive habitats, and oak trees have been (or will be) avoided.

4. The projects are within proposed critical habitat for Quino and designated critical habitat for Peninsular bighorn sheep (*Ovis canadensis*). Provide an analysis of potential impacts to these two species' critical habitat.

Remote Video Surveillance Systems

We recently received a request for a species lists for a Programmatic Environmental Assessment (PEA) for the Installation and Operation of Remote Video Surveillance Systems (RVS) in San Diego and Imperial counties. We support the production of a PEA for INS activities along the California/Mexico Border (border), but recommend that the scope be larger than the RVS. In particular, we recommend that all activities along the border, such as: a) Border Road and Fence Construction and Repair (Tecate to Campo and Campo to Jacumba); b) Brush and Tree Clearing near Jacumba; c) Tecate Truck Trail-Road Maintenance Project; d) Campo Border Patrol Station; e) Installation of Stadium Lighting Along the Border East of Calexico; f) Installation of Vehicle Barriers and RVS (with potential road construction) in the Yuha Desert; and g) Installation and Operation of RVS in San Diego and Imperial counties, be included in a PEA to properly analyze INS's direct, indirect, and cumulative impacts to the environment.

We are under the assumption that INS is using the June 2001, Final Report Supplemental Programmatic Environmental Impact Statement (SPEIS) for INS and JTF-6 Activities, prepared by the ACOE, Ft Worth District, as a guiding document, and that the above projects are tiered from the SPEIS. This relationship between planning documents and completed, on-going, and planned projects has not been explicit. To further assist INS with this programmatic approach, we request a tour of the border with U.S. Border Patrol Agents, from the eastern end of the 14-Mile Border Infrastructure System to the Colorado River. This will help us have a better understanding of the area and how segments/operations/projects fit together. If it is determined that these projects "may affect" listed species, then we recommend (as we did in a letter dated

November 20, 2001) that we complete a programmatic consultation, pursuant to section 7 of the Act, to address impacts resulting from INS activities to listed species and/or critical habitat.

Thank you for your attention to these matters. We are available to work with the INS to fulfill its mission while fulfilling its obligations to comply with the Endangered Species Act and the National Environmental Policy Act. Please call Patrice Ashfield or Sandy Vissman of my staff at (760) 431-9440 to arrange a tour of the border.

Sincerely,

For Nancy Gilbert
Assistant Field Supervisor

cc:

INS; Russell R. D'Hondt, Charles Parsons
GSRC; Chris Ingrahm
ACOE; Charles McGreggor
USBP, Calvin Davis
BLM; Greg Hill

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

REPLY TO
ATTENTION OF:

April 3, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Dr. Knox Mellon
California State Historic Preservation Officer
Office of Historic Preservation
ATTN: Anmarie Medin
1416 9TH Street, Room 1442-7
Sacramento, CA 95814

Dear Dr. Mellon,

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project. INS intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

The proposed project consists of the placement of 30-50 portable lights; the installation of one scope site; road rehabilitation and construction and the installation of four culverts along the International Border between the Pacific Crest Trail near Campo, California and the Imperial County line east of Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along the U.S.-Mexico International Border. This SEA will address the beneficial and adverse effects of the rehabilitation of existing roads, construction of new road segments, the installation of culverts, fence replacement, and the placement of portable lights along the International Border.

Archaeological and biological surveys will be completed for the proposed areas; these will begin in late April 2002. My staff will keep you informed of the progress and data on the proposed project. Once we have the data concerning the cultural resources we will be in contact regarding an appropriate determination of effect for this project.

Thank you for your assistance in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosures
1. Figure 1: Vicinity Map for San Diego County and 30-50 portable lights installation
2. Figure 2: Location of the Scope Site
3. Figure 3: Road Rehabilitation/Road Construction
4. Figure 4. Bollard Fence
5. Figure 5. Road Construction

Copy Furnished w/o enclosure:

INS Architect/Engineer Resource Center
ATTN: Mr. Eric Verwers, Director
819 Taylor Street, Room 3A28
Fort Worth, Texas 76102-0300

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Clifford LaChappa, Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Dear Chairperson LaChappa:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

The proposed project consists of the placement of 30-50 portable lights; the installation of one scope site; road rehabilitation and construction and the installation of four culverts along the International Border between the Pacific Crest Trail near Campo, California and the Imperial County line east of Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along the U.S.-Mexico International Border. This SEA will address the beneficial and adverse effects of the rehabilitation of existing roads, construction of new road segments, the installation of culverts, fence replacement, and the placement of portable lights along the International Border.

Archaeological and biological surveys will be completed for the proposed areas; these will begin in late April 2002. My staff will keep you informed of the progress and data on the proposed project.

Thank you for your assistance in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson of the Fort Worth District Corps of Engineers at (817) 886-1723.

Sincerely,

Eric W. Verwers

Eric W. Verwers, Director,
INS-AERC

Enclosures
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2. Figure 2: Location of the Scope Site
3. Figure 3: Road Rehabilitation/Road Construction
4. Figure 4. Bollard Fence
5. Figure 5. Road Construction

Copy Furnished w/o enclosure:

P.E. Patterson, CESWF-PER-EC
819 Taylor Street, Room 3A14
Fort Worth, Texas 76102-0300

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Mike Jackson, Sr., President
Quechan Tribal Council
P.O. Box 1899
Yuma, AZ 85366

Dear President Jackson:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

The proposed project consists of the placement of 30-50 portable lights; the installation of one scope site; road rehabilitation and construction and the installation of four culverts along the International Border between the Pacific Crest Trail near Campo, California and the Imperial County line east of Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along the U.S.-Mexico International Border. This SEA will address the beneficial and adverse effects of the rehabilitation of existing roads, construction of new road segments, the installation of culverts, fence replacement, and the placement of portable lights along the International Border.

Archaeological and biological surveys will be completed for the proposed areas; these will begin in late April 2002. My staff will keep you informed of the progress and data on the proposed project.

Thank you for your assistance in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson of the Fort Worth District Corps of Engineers at (817) 886-1723.

Sincerely,

Eric W. Verwers

Eric W. Verwers, Director,
INS-AERC

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Copy Furnished w/o enclosure:

P.E. Patterson, CESWF-PER-EC
819 Taylor Street, Room 3A14
Fort Worth, Texas 76102-0300

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Tony Pinto, Chairman
Ewiiaapaayp Band of Mission Indians
P.O. Box 2250
Alpine, CA 91903

Dear Chairman Pinto:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

The proposed project consists of the placement of 30-50 portable lights; the installation of one scope site; road rehabilitation and construction and the installation of four culverts along the International Border between the Pacific Crest Trail near Campo, California and the Imperial County line east of Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along the U.S.-Mexico International Border. This SEA will address the beneficial and adverse effects of the rehabilitation of existing roads, construction of new road segments, the installation of culverts, fence replacement, and the placement of portable lights along the International Border.

Archaeological and biological surveys will be completed for the proposed areas; these will begin in late April 2002. My staff will keep you informed of the progress and data on the proposed project.

Thank you for your assistance in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson of the Fort Worth District Corps of Engineers at (817) 886-1723.

Sincerely,

Eric W. Verwers

Eric W. Verwers, Director,
INS-AERC

Enclosures
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Copy Furnished w/o enclosure:

P.E. Patterson, CESWF-PER-EC
819 Taylor Street, Room 3A14
Fort Worth, Texas 76102-0300

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Ralph Goff, Chairman
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

The proposed project consists of the placement of 30-50 portable lights; the installation of one scope site; road rehabilitation and construction and the installation of four culverts along the International Border between the Pacific Crest Trail near Campo, California and the Imperial County line east of Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; and the installation of fencing and culverts along the U.S.-Mexico International Border. This SEA will address the beneficial and adverse effects of the rehabilitation of existing roads, construction of new road segments, the installation of culverts, fence replacement, and the placement of portable lights along the International Border.

Archaeological and biological surveys will be completed for the proposed areas; these will begin in late April 2002. My staff will keep you informed of the progress and data on the proposed project.

Thank you for your assistance in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson of the Fort Worth District Corps of Engineers at (817) 886-1723.

Sincerely,

Eric W. Verwers

Eric W. Verwers, Director,
INS-AERC

Enclosures
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2. Figure 2: Location of the Scope Site
3. Figure 3: Road Rehabilitation/Road Construction
4. Figure 4. Bollard Fence
5. Figure 5. Road Construction

Copy Furnished w/o enclosure:

P.E. Patterson, CESWF-PER-EC
819 Taylor Street, Room 3A14
Fort Worth, Texas 76102-0300

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Rebecca Maxcy, Chairwoman
Inaja Band of Mission Indians
P.O. Box 186
Santa Ysabel, CA 92070

Dear Chairwoman Maxcy:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Kenny Meza, Chairman
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Dear Chairman Meza:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Gwendolyn Parada, Chairwoman
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905

Dear Chairwoman Parada:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
P.O. Box 1302
Boulevard, CA 91905

Dear Chairman Elliott:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Howard Maxcy, Chairman
Mesa Grande Band of Missions Indians
P.O. Box 270
Santa Ysabel, CA 92070

Dear Chairman Maxcy:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Allen E. Lawson, Spokesman
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Dear Spokesman Lawson:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Ben Scerato, Chairman
Santa Ysabel Band of Diegueño Indians
P.O. Box 130
Santa Ysabel, CA 92070

Dear Chairman Scerato:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Georgia Tucker-Kimble, Chairwoman
Sycuan Band of Mission Indians
5459 Dehesa Road
El Cajon, CA 92019

Dear Chairwoman Tucker-Kimble:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Anthony Pico, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903

Dear Chairman Pico:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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April 3, 2002

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Sherry Cordova, Chairperson
Cocopah Indian Tribe
County 15th & Avenue G
Somerton, AZ 85350

Dear Chairperson Cordova:

I am writing to initiate consultation with you regarding the proposed project mentioned above. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the Immigration and Naturalization Service (INS) and the U.S. Border Patrol (USBP), is initiating the Section 106 consultation process under the National Historic Preservation Act and the National Environmental Policy Act (NEPA) for the above-mentioned proposed project.

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STATE OF CALIFORNIA – THE RESOURCES AGENCY
OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-9824 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

GRAY DAVIS, Governor

April 17, 2002

In reply refer to:
INS020408A

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

RE: Supplemental Environmental Assessment for the proposed Border Road and Fence: Construction and Repair Campo to Jacomba, CA.

Dear Mr. Fickel:

Thank you for notifying me that the Immigration and Naturalization Service (INS) is preparing a Supplemental Environmental Assessment that will present alternative plans to improve and construct roads, replace fencing, and place portable lights along the U.S.-Mexico International Border from the area of Tecate to Jacumba, California. I understand that you are acting on behalf of the INS and the U.S. Border Patrol in providing this information. Your request for my comments is made pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act. In making this request, I understand that you have determined that this proposed Federal action is an undertaking as defined in Section 800.16(y) of the regulation and that it has the potential to cause effects on historic properties.

In accordance with Section 800.3(c)(3) of the implementing regulations, your letter of April 3, 2002, initiated consultation with me for this undertaking.

Thank you for providing the vicinity and location maps for the five locations proposed for activities under this undertaking. The maps help me envision the environments in which you will be defining the Area of Potential Effect (APE) for this undertaking pursuant to 36 CFR § 800.4(a)(1). In performing this task, please describe to me how the APE could be defined for activities proposed for this undertaking and consider the definition of an APE in the regulation at Section 800.16(d), "...the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." The APE should not only include the areas in which improvements will occur, but also such areas as temporary work zones, equipment and material staging areas, and access roads. Preparation of maps delineating the APE locations at a larger scale than that of the location maps would greatly facilitate our consultation.

I acknowledge that you intend to conduct archaeological surveys of the five proposed areas beginning in late April 2002. In making such plans, I trust that you have already begun to gather existing information about historic properties; and, this includes conducting a records and literature search at the South Coastal Information Center (SCIC) located on the San Diego State University campus. The SCIC is the best source of current information about historic properties within your APE. Please also consider contacting the Native American Heritage Commission for information about interested Native American groups and individuals who might have information about historic properties. I look forward to the opportunity to review the documentation for this inventory effort.

I hope that your plans to elicit comments from the interested public will build upon the information received from the NAHC. Please contact other interested parties, as they become known through this process.

I look forward to continuing consultation as the plans for this undertaking proceed. If you have any questions or comments, please contact Brian Wickstrom, Staff Archaeologist, at (916) 654-4614 or at bwick@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

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

REPLY TO
ATTENTION OF:

May 20, 2002

Planning, Environmental, and Regulatory Division

SUBJECT: Supplemental Environmental Assessment for Border Infrastructure from Tecate to Jacumba, San Diego County, California

Bureau of Land Management
ATTN: Mr. Greg Hill
690 West Garnet Avenue
P.O. Box 581260
North Palm Springs, CA 92258

Dear Mr. Hill:

The U.S. Army Corps of Engineers (USACE), Fort Worth District, is acting on behalf of the U.S. Immigration and Naturalization Service (INS), in preparing a Supplemental Environmental Assessment (SEA) addressing the following: the placement of 30-50 portable lights within 60 feet of the United States-Mexico International border from Tecate to Jacumba, California; the installation of one scope site; road rehabilitation and construction; the installation of four low water crossings (LWC); and the installation of approximately 200 feet of bollard fencing along the international border near Jacumba, California. All activities would take place between Tecate, California and just east of Jacumba, California in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original Environmental Assessment (EA) completed by the USACE in 1994. It will address the potential impacts of repairing existing roads, construction of new road segments, the placement of portable lights, and the installation of fencing and culverts along the United States-Mexico International Border.

There are approximately five miles of new road construction and improvements proposed for the project in various locations along the border. Three of the LWCs are components of on-going road improvements described in the 1994 EA. The fourth new LWC would be required across Campo Creek at the Mountain Empire Campground to access the proposed scope site. The attached maps depict locations of the proposed roadwork and LWCs, as well as the proposed bollard fence section and scope site. The 30-50 portable lights would be placed, as needed, along the border within the 60-foot Roosevelt Easement.

We intend to provide your agency with a copy of the Draft EA once it is completed. Please inform us if additional copies are needed and/or if someone else within your agency

other than you should receive the Draft EA. Your prompt attention to this request would be greatly appreciated. If you have any questions, please feel free to contact Mr. Charles McGregor at (817) 886-1708.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental and
Regulatory Division

Attachments

U.S. Department of Justice
Immigration and Naturalization Service
Architect-Engineer Resource Center

Attention: CESWF-PM-INS
819 Taylor Street, Room 3A28
P.O. Box 17300
Fort Worth, TX 76102-0300

June 7, 2002

Ms. Nancy Gilbert
Assistant Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services, Carlsbad Field Office
2730 Loker Avenue West
Carlsbad, California 92008

RE: FWS-SDG-2427.3
Letter dated 26 March 2002

Dear Ms. Gilbert:

The Immigration and Naturalization Service (INS) appreciates the cooperation and assistance of the U.S. Fish and Wildlife Service (USFWS). The on-going infrastructure construction activities from Tecate to east of Jacumba were addressed in previous environmental assessments (EAs) prepared by the U.S. Army Corps of Engineers (USACE), Los Angles District for the Joint Task Force Six (JTF-6). A list of these EAs is included as Attachment A. These EAs include information regarding the field surveys conducted for the projects, as well as the impact analysis on protected species and sensitive habitats. If your office does not have copies of these documents we will forward you copies, if requested.

Attachment B is a map of the border region depicting components of the projects which have been completed and which are still on going. Briefly, all of the landing mat fence and most of the road repair and improvements have been recently completed. However, work is still on going within Horseshoe Canyon on road improvements and some minor drains across the border road.

The task orders used to procure the EAs referenced in Attachment A did not include the contractors' field notes as a deliverable, therefore we do not have a copy of their notes. However, the EAs provide a description of the methods used during the surveys, the results of the surveys, and maps of the areas surveyed.

In response items 3 and 4 on page 2 of your letter, impacts to migratory birds and sensitive habitats have been avoided or minimized by restricting construction activities to existing road rights-of-way (ROW) to the extent practicable. The ground-disturbing activities (e.g., grading, trenching, etc.) were all initiated and/or completed prior to the proposed designation of critical habitat for Quino Checkerspot Butterfly (QCB). Potential impacts to the QCB were addressed in the EAs.

The projects between Jacumba and the Jacumba Mountains were completed before the designation of critical habitat for the Peninsula Bighorn Sheep.

You are correct in your presumption that the Supplemental Programmatic Environmental Impact Statement (SPEIS), which was finalized in June 2001, has been used to tier subsequent site-specific EAs once projects were identified. In addition to an estimate of the types of projects and quantification of expected impacts from various infrastructure projects, the SPEIS provides a programmatic analysis of border infrastructure projects through 2004. While the SPEIS does discuss remote video surveillance (RVS) systems, as part of the INS's Integrated Surveillance Intelligence System (ISIS), JTF-6 does not provide support in installing these systems. Thus, the INS believed it would be prudent to prepare a separate programmatic document for the installation and operation of the RVS systems.

The San Diego Sector, U.S. Border Patrol provided a border tour, including a helicopter reconnaissance trip, with Ms. Michelle Clendenin of your staff. Also, we have agreed to meet with Ms. Clendenin mid-July to discuss San Diego Sector projects. The San Diego Sector's eastern boundary is the San Diego/Imperial County line, thus they not have jurisdiction to the Colorado River. The area east of this boundary is under the jurisdiction of the El Centro and Yuma Sectors. Please let me know if you want to arrange a separate site visit to these sectors.

The INS is aware of your desire for the preparation of a Programmatic Biological Assessment for the San Diego Sector. It is my understanding that this matter is still under consideration at INS Headquarters. I will ensure that you are informed once a decision has been made.

If you have any questions, please feel free to call Mr. Calvin Davis at (619) 662-7057, Mr. Charles McGregor at (817) 886-1708 or Mr. Todd Smith at (817) 886-1511.

Sincerely,

Eric W. Verwers

Eric W. Verwers
Director, Immigration and Naturalization Service
A-E Resource Center

Attachments

Attachment A

Draft Supplemental Environmental Assessment: JTF-6 Border Road Maintenance and Construction, Tecate to Campo, San Diego County, California, dated February 1997

Final Environmental Assessment: Border Road and Fence: Construction and Repair Campo to Jacumba, San Diego County, California, dated June 1994.

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA. **INS020408A**

Dr. Knox Mellon
California State Historic Preservation Officer
Office of Historic Preservation
ATTN: Brain Wickstrom
1416 9TH Street, Room 1442-7
Sacramento, CA 95814

Dear Dr. Mellon,

I wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. Your response, dated April 17, noted that you looked forward to continued consultation on the project. The proposed project has changed in the interim and enclosed is a revised project description and maps. INS intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

A Supplemental Environmental Assessment (SEA) is being prepared for the placement of 30-50 portable lights (to remain within the 60-foot Roosevelt right-of-way [ROW]); the installation of seven night vision scope pads; road reconstruction and construction; the installation of four drainage structures; and the installation of a 200-foot section of bollard fence (to remain within the 60-foot Roosevelt ROW; see Figure 2-7), 15 blasting sites (to remain within the 60-foot Roosevelt or existing road ROW; see Figure 2-8), and two well sites with concrete holding tanks along the international border from Tecate to Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; blasting activities; and the installation of fencing, night vision scope pads, water wells, and drainage structures along the U.S.-Mexico International Border (see enclosed Project Description and maps).

Archaeological and biological surveys will be completed for the total of the proposed areas; these were begun in late April 2002 and will continue with the additional areas. Please note that the individual APEs for each project site are noted in the description. My staff will keep you informed of the progress and data on the proposed project. Once we have all of the data

concerning the cultural resources we will be in contact regarding an appropriate determination of effect for this project.

Thank you for your assistance and patience in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosures
Figures for project (4 pages)

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Clifford LaChappa, Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Dear Chairperson LaChappa:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

A Supplemental Environmental Assessment (SEA) is being prepared for the placement of 30-50 portable lights (to remain within the 60-foot Roosevelt right-of-way [ROW]); the installation of seven night vision scope pads; road reconstruction and construction; the installation of four drainage structures; and the installation of a 200-foot section of bollard fence (to remain within the 60-foot Roosevelt ROW; see Figure 2-7), 15 blasting sites (to remain within the 60-foot Roosevelt or existing road ROW; see Figure 2-8), and two well sites with concrete holding tanks along the international border from Tecate to Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; blasting activities; and the installation of fencing, night vision scope pads, water wells, and drainage structures along the U.S.-Mexico International Border (see enclosed Project Description and maps).

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INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
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October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Howard Maxcy, Chairman
Mesa Grande Band of Missions Indians
P.O. Box 270
Santa Ysabel, CA 92070

Dear Chairman Maxcy:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

A Supplemental Environmental Assessment (SEA) is being prepared for the placement of 30-50 portable lights (to remain within the 60-foot Roosevelt right-of-way [ROW]); the installation of seven night vision scope pads; road reconstruction and construction; the installation of four drainage structures; and the installation of a 200-foot section of bollard fence (to remain within the 60-foot Roosevelt ROW; see Figure 2-7), 15 blasting sites (to remain within the 60-foot Roosevelt or existing road ROW; see Figure 2-8), and two well sites with concrete holding tanks along the international border from Tecate to Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; blasting activities; and the installation of fencing, night vision scope pads, water wells, and drainage structures along the U.S.-Mexico International Border (see enclosed Project Description and maps).

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
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Laguna Niguel, California 92677

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October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
P.O. Box 1302
Boulevard, CA 91905

Dear Chairman Elliott:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

A Supplemental Environmental Assessment (SEA) is being prepared for the placement of 30-50 portable lights (to remain within the 60-foot Roosevelt right-of-way [ROW]); the installation of seven night vision scope pads; road reconstruction and construction; the installation of four drainage structures; and the installation of a 200-foot section of bollard fence (to remain within the 60-foot Roosevelt ROW; see Figure 2-7), 15 blasting sites (to remain within the 60-foot Roosevelt or existing road ROW; see Figure 2-8), and two well sites with concrete holding tanks along the international border from Tecate to Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; blasting activities; and the installation of fencing, night vision scope pads, water wells, and drainage structures along the U.S.-Mexico International Border (see enclosed Project Description and maps).

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INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Gwendolyn Parada, Chairwoman
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905

Dear Chairwoman Parada:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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INS Western Region
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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Kenny Meza, Chairman
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Dear Chairman Meza:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Rebecca Maxcy, Chairwoman
Inaja Band of Mission Indians
P.O. Box 186
Santa Ysabel, CA 92070

Dear Chairwoman Maxcy:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Tony Pinto, Chairman
Ewiiaapaayp Band of Mission Indians
P.O. Box 2250
Alpine, CA 91903

Dear Chairman Pinto:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Sherry Cordova, Chairperson
Cocopah Indian Tribe
County 15th & Avenue G
Somerton, AZ 85350

Dear Chairperson Cordova:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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Chief, Planning, Environmental
and Regulatory Division

Enclosures
Figures for project (4 pages)
Project Description

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

October 8, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Ralph Goff, Chairman
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

A Supplemental Environmental Assessment (SEA) is being prepared for the placement of 30-50 portable lights (to remain within the 60-foot Roosevelt right-of-way [ROW]); the installation of seven night vision scope pads; road reconstruction and construction; the installation of four drainage structures; and the installation of a 200-foot section of bollard fence (to remain within the 60-foot Roosevelt ROW; see Figure 2-7), 15 blasting sites (to remain within the 60-foot Roosevelt or existing road ROW; see Figure 2-8), and two well sites with concrete holding tanks along the international border from Tecate to Jacumba, California. All activities would take place in San Diego County, California. This SEA will update previous alternatives and evaluate additional alternatives from the original EA completed in 1994. It will address the potential impacts of repairing existing roads; construction of new road segments; blasting activities; and the installation of fencing, night vision scope pads, water wells, and drainage structures along the U.S.-Mexico International Border (see enclosed Project Description and maps).

Archaeological and biological surveys will be completed for the total of the proposed areas; these were begun in late April 2002 and will continue with the additional areas. Please note that the individual APEs for each project site are noted in the description. My staff will keep you informed of the progress and data on the proposed project. Once we have all of the data concerning the cultural resources we will be in contact regarding an appropriate determination of effect for this project.

Thank you for your assistance and patience in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

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Honorable Steven F. TeSam, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903

Dear Chairman TeSam:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Georgia Tucker-Kimble, Chairwoman
Sycuan Band of Mission Indians
5459 Dehesa Road
El Cajon, CA 92019

Dear Chairwoman Tucker-Kimble:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Ben Scerato, Chairman
Santa Ysabel Band of Diegueño Indians
P.O. Box 130
Santa Ysabel, CA 92070

Dear Chairman Scerato:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service and preparation of a Supplemental Environmental Assessment (SEA) for the proposed Border Road and Fence: Additional sites for Construction and Repair Campo to Jacumba, CA.

Honorable Allen E. Lawson, Spokesman
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Dear Spokesman Lawson:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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Honorable Mike Jackson, Sr., President
Quechan Tribal Council
P.O. Box 1899
Yuma, AZ 85366

Dear President Jackson:

The Immigration and Naturalization Service, AERC, wrote to initiate consultation with you regarding the proposed project mentioned above on April 3, 2002. The proposed project has changed in the interim and enclosed is a revised project description and maps. The U.S. Army Corps of Engineers, Fort Worth District, acting on behalf of the INS, intends to prepare a Supplemental Environmental Assessment (SEA) for the following actions.

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INS Western Region
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Laguna Niguel, California 92677

SDSU
San Diego State University

Department of Astronomy
College of Sciences
5500 Campanile Drive
San Diego CA 92182 • 1221
619 • 594 • 6182
FAX: 619 • 594 • 1413

December 2, 2002

E-mail: etzel@sciences.sdsu.edu
Web site: http://mintaka.sdsu.edu

Rich Gordon
Supervisory Border Patrol Agent
United States Border Patrol, Campo Station
P.O. Box 68
Campo, CA 91906

Dear Mr. Gordon,

I would like to follow up on my conversation with you by phone on November 29, and my conversation in person with Supervisory Patrol Agent Vince Clark on the night of November 26, about the outdoor lighting at the Interstate-8 Laguna Summit Checkpoint. The increased lighting in the past six months has elevated the checkpoint to the third largest contributor of light pollution at SDSU's Mount Laguna Observatory (MLO) behind the San Diego metropolitan area and the North County coastal communities. Previously, the third greatest contributor was Mexicali. When considering sources of light pollution, it is not just the number of lights that contribute, but their proximity to the observatory and also the type and use of lighting fixtures. The Laguna Summit Checkpoint is only five miles to the southwest of MLO, so its contribution is great for its size.

The problem does not arise from light that goes directly into the telescope or its instruments from an external light source. Rather, it is stray light that goes upward (even if only by reflection off of the ground or vehicles), which then reflects off of dust or molecules in the atmosphere high above the observatory that finally goes down into the telescope. This process is similar to the one that makes the daytime sky blue, except that rather than the sun illuminating the sky from above, it is artificial light illuminating the nighttime sky from below that is the problem. My goal is to find some mutually agreeable solution for your agency's needs for such lighting and at the same time to protect the nighttime skies for the long-term future of astronomical research in San Diego County.

Let me first state that San Diego County is unique in the continental United States in optical astronomy. Mount Palomar (MPO) and Mount Laguna Observatories (MLO) offer the best overall mix of: 1) dark skies, 2) high percentage of clear nights, and 3) clean laminar airflow off the Pacific Ocean that brings a high degree of atmospheric transparency and steady images. Mount Wilson Observatory, outside of Pasadena, California, was the premier location for the placement of large telescopes in the early 1900s for these reasons, but it has been reduced to working mostly on bright stellar sources because of the rampant light pollution of the LA basin. Desert locations are generally darker, but they fall flat in the latter two areas. Kitt Peak National Observatory in mountain desert Arizona closes down for two months in the summer because of monsoons! There are no large telescopes east of the Continental Divide because there are no good sites.

San Diego County has very important national resources in the forms of MPO and MLO, and they should be protected. They can easily be productive for another hundred years. Included with this letter is a "Light Pollution Map" based upon radiance-calibrated high-resolution DMSP satellite data in the peak color region of human vision. The *black* contour zones are essentially unpolluted and they are either unpopulated desert or ocean locations. Mount Laguna lies in the very good *blue* zone that denotes 10% or less pollution above natural sky level. That location is blessed by having

the Cleveland National Forest to the west and the Anza-Borrego Desert State Park to the east. Mount Palomar is in the still quite good *green* zone with 10 to 50% pollution above natural sky level. Both observatories have worked with the County and various municipalities to help protect dark skies; both would like to prevent the fate of Mount Wilson (Pasadena, where light pollution greatly exceeds the natural level by several times) from falling upon them.

Mount Laguna Observatory is a site worthy of further astronomical development. It started in 1968 with a telescope of only 16-inches in aperture. It has grown to include 24- and 40-inch telescopes. We currently have a project to build a new generation robotic 100-inch telescope for a cost of $8.6M. The SDSU Astronomy Department was recently named as a benefactor of an estate worth several million dollars, and a good portion of it will likely be applied to support the telescope project. This telescope will be very much involved in global astronomical projects that require "24 hours a night" observations by joining with similar telescopes being installed now on La Palma in the Canary Islands and on Maui. Others are in the planning stage to provide true global coverage.

This new SDSU telescope will also serve astronomers and their students at the other 22 campuses of the California State University (CSU) system. SDSU has the only research-grade astronomical observatory in the system. The CSU system cannot afford to build such observatories for the other campuses even if it wanted to; superior remote sites like Mount Laguna simply *don't exist* near the other campuses. Additionally, SDSU and NASA's Goddard Space Flight Center entered into a Memorandum of Agreement (MOA, copy enclosed) in 1998 to share in the operation of the telescope for the mutual benefit of both institutions and other telescope users. The MOA will go into effect once the telescope is operational. NASA scientists will be granted 10% of the telescope time in exchange for use of their state-of-the-art instruments. Thus, another Federal agency will benefit from any mitigation of light pollution problems that affect MLO.

There are also two other smaller observatories adjacent to MLO on private properties located on Morris Ranch. These individuals valued the dark skies of Mount Laguna enough to purchase land to develop their own observatories. As good neighbors, MLO and these private residents are willing to work with the U.S. Border Patrol on mitigating the lighting problem that has developed. We also realize that you have a critical mission to perform, and do not want to diminish your efforts.

The large increase in light pollution in the past six months has resulted from the newly installed lighting in the eastbound lanes of I-8. These new lights have brought to an end the unlawful wrong-way drivers headed west bound in the center median, without headlights, to avoid the Laguna Summit Checkpoint. It is tragic that innocent people died because of these wrong-way drivers. Your current efforts have demonstrated that lighting is an effective solution to the problem. However, I would like to insure that a more practical, safe, environmentally friendly, and efficient form of lighting be employed in any future permanent lighting solution; I would also like to participate in any formal discussions with CalTrans or other agencies in reaching such a solution.

The current sideways pointing floodlights are a traffic hazard in addition to destroying the nighttime sky for astronomy. This lighting is probably detrimental to wildlife, particularly migratory birds and the nighttime hunting habits of raptors. Continued excessive use of Metal Halide sources would be very undesirable. Astronomers would prefer Low Pressure Sodium (LPS) streetlights in Full-Cut-Off (FCO) fixtures in a normal residential or highway interchange situation. Energy efficient LPS light sources (bulbs) produce the greatest amounts of light per square foot of ground coverage per watt of electricity, and FCO fixtures reflect virtually all the light from the bulb to the ground. Upwards and sideways pointing light (the latter produces dangerous "glare" to motorists) is

eliminated, which greatly reduces light pollution. The flat plane of glass enclosing the light source and upper interior reflector is mounted perfectly horizontally to eliminate sideways glare.

I understand that color rendition is important for your lighting applications, and that low light level TV cameras are used increasingly to get good descriptions of vehicles. In that regard, LPS is probably not a good solution. I therefore urge strongly that you employ High Pressure Sodium (HPS) light sources in FCO fixtures mounted on standard poles, similar or identical to those employed by CalTrans at exit and on ramps, to fulfill your requirements for the eastbound lanes and its median. If need be, these fixtures could be installed on both sides of the road to provide uniform median to shoulder coverage for the length of road you require. I would definitely put up warning signs to the eastbound motorists that they are entering a "lighting control zone" so as not to catch them off guard and possibly cause accidents from disorientation. I would think this solution would be much better for many reasons compared to the current unshielded, glaring, Metal Halide floodlights.

Prior to the increased light pollution of the past six months, the existing Metal Halide lighting for the westbound lanes of the checkpoint proper was noticeable at MLO. It was most noticed when turned on or off, but now you are in 7/24/365 operation. Even now, when a large truck pulls into the checkpoint, the changes in lighting level and pattern are noticeable. I realize that you require some sideways pointing lighting to illuminate the relatively narrow sidewalls of the pass at the Laguna Summit to monitor for foot traffic attempting to bypass the checkpoint. The use of FCO fixtures at the checkpoint alone would therefore be detrimental; you cannot simply tilt your existing lights too far downward because of your needs to illuminate the pass. However, I would like for you to consider mitigation of the overall adverse affects of your nighttime lighting by adding shielding to your westbound checkpoint lights. Such shields could be installed above and outward from the existing lights to prevent stray light from passing directly into the sky. At present, because the lights are not operated in FCO mode, I can see them from the air when flying to the north of the checkpoint at night. That direct illumination of the sky is not doing astronomy or the Border Patrol any good. Shielding above the lights would reflect this wasted light back down onto the ground where it would do you some good, save the nighttime sky for astronomers, and help to reduce the negative impact on migratory birds and raptors. Another possibility would be to put in a narrow north-south run of FCO LPS fixtures on the valley walls for foot traffic control, and then use your existing Metal Halide at the checkpoint proper in FCO mode of operation.

Again, I offer my services to reach a mutually agreeable solution to this problem in the spirit of being a good neighbor. The International Dark-Sky Association, which contains many lighting engineers, would also offer their services and resources in this effort. I am also a member.

Sincerely,

Paul B. Etzel

Paul B. Etzel
Chair, Department of Astronomy
Director, Mount Laguna Observatory

Cc: Joe Dolan, NASA Goddard Space Flight Center, Greenbelt, MD
Anne S. Fege, Forest Supervisor, Cleveland National Forest
Lisa Bruhn, International Dark-Sky Association, San Diego County Chapter

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REPLY TO
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December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Clifford LaChappa, Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Dear Chairperson LaChappa:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

Enclosed is a copy of the draft cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Three sites in the Airport Mesa section were found to be in close proximity to the proposed project. The road was redesigned to completely avoid the sites. Site CA-SDI-6035 at the Mountain Empire project section, sites CA-SDI-177, CA-SDI-4458 and CA-SDI-4460 at the Airport Mesa section, and sites CA-SDI-5164 and CA-SDI-7004 at the SDG&E section will be avoided by the proposed construction. Site CA-SDI-4470 at the SDG&E section will not be affected. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance and patience in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
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Enclosure

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Honorable Ralph Goff, Chairman
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

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Honorable Sherry Cordova, Chairperson
Cocopah Indian Tribe
County 15th & Avenue G
Somerton, AZ 85350

Dear Chairperson Cordova:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

Enclosed is a copy of the draft cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Three sites in the Airport Mesa section were found to be in close proximity to the proposed project. The road was redesigned to completely avoid the sites. Site CA-SDI-6035 at the Mountain Empire project section, sites CA-SDI-177, CA-SDI-4458 and CA-SDI-4460 at the Airport Mesa section, and sites CA-SDI-5164 and CA-SDI-7004 at the SDG&E section will be avoided by the proposed construction. Site CA-SDI-4470 at the SDG&E section will not be affected. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance and patience in this matter. I look forward to hearing from you concerning this proposed project. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Harlan Pinto, Chairman
Ewiiaapaayp Band of Mission Indians
P.O. Box 2250
Alpine, CA 91903

Dear Chairman Pinto:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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INS Western Region
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P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Rebecca Maxcy, Chairwoman
Inaja Band of Mission Indians
P.O. Box 186
Santa Ysabel, CA 92070

Dear Chairwoman Maxcy:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Regional Environmental Officer
INS Western Region
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Laguna Niguel, California 92677

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REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Kenneth Meza, Sr., Chairman
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Dear Chairman Meza:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
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INS Western Region
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Laguna Niguel, California 92677

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P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Gwendolyn Parada, Chairwoman
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905

Dear Chairwoman Parada:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
P.O. Box 1302
Boulevard, CA 91905

Dear Chairman Elliott:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
and Regulatory Division

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Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Howard Maxcy, Chairman
Mesa Grande Band of Missions Indians
P.O. Box 270
Santa Ysabel, CA 92070

Dear Chairman Maxcy:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
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ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Mike Jackson, Sr., President
Quechan Tribal Council
P.O. Box 1899
Yuma, AZ 85366

Dear President Jackson:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Allen E. Lawson, Spokesman
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Dear Spokesman Lawson:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
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Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Ben Scerato, Chairman
Santa Ysabel Band of Diegueño Indians
P.O. Box 130
Santa Ysabel, CA 92070

Dear Chairman Scerato:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
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December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Georgia Tucker-Kimble, Chairwoman
Sycuan Band of Mission Indians
5459 Dehesa Road
El Cajon, CA 92019

Dear Chairwoman Tucker-Kimble:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 10, 2002

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance for the Immigration and Naturalization Service (INS) for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Steven F. TeSam, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903

Dear Chairman TeSam:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on April 3, 2002. In a letter to you dated October 8th, we noted the proposed project has changed in the interim. At that time we provided a revised project description and maps. We also stated that an archaeological survey would be performed and the results provided as soon as possible, and the concurrence for the appropriate determination of effect would be requested from the State Historic Preservation Officer (SHPO).

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA. **INS020408A**

Dr. Knox Mellon
California State Historic Preservation Officer
Office of Historic Preservation
ATTN: Jennifer Darcangelo
1416 9TH Street, Room 1442-7
Sacramento, CA 95814

Dear Dr. Mellon,

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested your concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

Enclosed is a copy of the draft Environmental Assessment (EA) for this project. Please note that the title of the enclosed document is, *Environmental Assessment for Various Road Improvements from Canyon City to the Imperial County Line, San Diego County, California.* This name more closely describes the geographical extent of the project. There have been no other changes to the project that has been under review. This document will be under public review until 16 February 2003.

Also, enclosed is copy of the Native American distribution list for this project and its ongoing review. The tribes have been sent all reports and now, for their comment, the draft EA.

I would very much appreciate your response to the concurrence request. Thank you for your assistance in this matter. I look forward to hearing from you concerning my request. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

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Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Clifford LaChappa, Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Dear Chairperson LaChappa:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

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DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Ralph Goff, Chairman
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

Enclosed is a copy of the draft Environmental Assessment (EA) for this project. Please note that the title of the enclosed document is, *Environmental Assessment for Various Road Improvements from Canyon City to the Imperial County Line, San Diego County, California.* This name more closely describes the geographical extent of the project. There have been no other changes to the project that has been under review. This document will be under public review until 16 February 2003.

Thank you for your assistance in this matter. I look forward to hearing from you concerning the public review. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
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REPLY TO
ATTENTION OF

January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Sherry Cordova, Chairperson
Cocopah Indian Tribe
County 15th & Avenue G
Somerton, AZ 85350

Dear Chairperson Cordova:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Harlan Pinto, Chairman
Ewiiaapaayp Band of Mission Indians
P.O. Box 2250
Alpine, CA 91903

Dear Chairman Pinto:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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INS Western Region
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FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Rebecca Maxcy, Chairwoman
Inaja Band of Mission Indians
P.O. Box 186
Santa Ysabel, CA 92070

Dear Chairwoman Maxcy:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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and Regulatory Division

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Regional Environmental Officer
INS Western Region
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Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Kenneth Meza, Sr., Chairman
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Dear Chairman Meza:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Gwendolyn Parada, Chairwoman
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905

Dear Chairwoman Parada:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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Chief, Planning, Environmental
and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
P.O. Box 1302
Boulevard, CA 91905

Dear Chairman Elliott:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Howard Maxcy, Chairman
Mesa Grande Band of Missions Indians
P.O. Box 270
Santa Ysabel, CA 92070

Dear Chairman Maxcy:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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Enclosure

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Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Mike Jackson, Sr., President
Quechan Tribal Council
P.O. Box 1899
Yuma, AZ 85366

Dear President Jackson:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Allen E. Lawson, Spokesman
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Dear Spokesman Lawson:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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and Regulatory Division

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Ben Scerato, Chairman
Santa Ysabel Band of Diegueño Indians
P.O. Box 130
Santa Ysabel, CA 92070

Dear Chairman Scerato:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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January 21, 2003

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SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Georgia Tucker-Kimble, Chairwoman
Sycuan Band of Mission Indians
5459 Dehesa Road
El Cajon, CA 92019

Dear Chairwoman Tucker-Kimble:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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January 21, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Section 106 Compliance and NEPA Review for the Immigration and Naturalization Service for the proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA.

Honorable Steven F. TeSam, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903

Dear Chairman TeSam:

I wrote to you on December 10, 2002 to provide you with a copy of the cultural resources survey for this project as promised in a previous letter. I also requested from the State Historic Preservation Officer (SHPO) concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

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Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
Governor

Tal Finney
Interim Director

ACKNOWLEDGEMENT OF RECEIPT

DATE: January 29, 2003

TO: Joe Lamphear
U.S. Immigration & Naturalization Service
24000 Avila Road
Laguna Niguel, CA 92677

RE: Environmental Assessment for Various Road Improvements from Canyon City, CA to the Imperial County Line
SCH#: 2003014002

This is to acknowledge that the State Clearinghouse has received your environmental document for state review. The review period assigned by the State Clearinghouse is:

Review Start Date: January 24, 2003
Review End Date: February 16, 2003

We have distributed your document to the following agencies and departments:

California Highway Patrol
Caltrans, District 11
Department of Fish and Game, Region 5
Department of Parks and Recreation
Department of Water Resources
Native American Heritage Commission
Office of Emergency Services
Office of Historic Preservation
Regional Water Quality Control Board, Region 7
Resources Agency
State Lands Commission
State Water Resources Control Board, Division of Water Quality

The State Clearinghouse will provide a closing letter with any state agency comments to your attention on the date following the close of the review period.

Thank you for your participation in the State Clearinghouse review process.

2003 FEB -4 AM 7:01
LAGUNA NIGUEL, CA

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
(916)445-0613 FAX(916)323-3018 www.opr.ca.gov

California Regional Water Quality Control Board
Colorado River Basin Region

Winston H. Hickox
Secretary for Environmental Protection

73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260
Phone (760) 346-7491 • FAX (760) 341-6820

Gray Davis
Governor

February 5, 2003

Joe Lamphear, Regional Environmental Specialist
Immigration and Naturalization Service
24000 Avila Road
Laguna Niguel, CA 92677

SUBJECT: NOTICE OF COMPLETION OF ENVIRONMENTAL ASSESSMENT FOR VARIOUS ROAD IMPROVEMENTS FROM CANYON CITY, CALIFORNIA TO THE IMPERIAL COUNTY LINE

Your request for comments on the subject project was received at the Regional Water Quality Control Board, Colorado River Basin Region (Regional Board) on January 28, 2003. Regional Board staff reviewed the submitted environmental document and found the following:

1. The proposed project may involve streambed alteration.

2. The proposed project appears to have a potential impact on water quality and will require a National Pollutant Discharge Elimination System (NPDES) construction stormwater permit. Section 401 water quality certification may also be required.

Please contact Ms Rosalyn Fleming at (760) 776-8935 for information on how to obtain the required NPDES stormwater permit and Mr. John Carmona, Senior Water Resource Control Engineer at (760) 340-4521 for further guidance on Section 401 water quality certification.

Thanks for the opportunity to review the proposed project. If you have any questions on this matter, please contact me at (760) 776-8968.

Osabuogbe C. Igbinedion
Senior Water Resource Control Engineer

OCI/oci

File: ER SD ED

RECEIVED
2003 FEB -7 AM 6:21
LAGUNA NIGUEL, CA

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Palm Springs-South Coast Field Office
690 West Garnet Avenue
P.O. Box 581260
North Palm Springs, CA 92258-1260

Visit us on the Internet at www.ca.blm.gov
www.ca.blm.gov/palmsprings

FEB 1 8 2003

IN REPLY REFER TO:
2800
CA-38154
(CA-669)

Mr. Alan Marr
U.S. Army Corps of Engineers
Environmental Resources Branch, Room 3A14
P.O. Box 17300
Fort Worth, Texas 76102

Dear Mr. Marr:

Thank you for the opportunity to comment on the draft environmental assessment (EA) prepared by the INS to address potential impacts of the various road improvements between Canyon City and Imperial County line in San Diego County, California. The Bureau of Land Management has administrative authority for several thousand acres of public land in San Diego County, including numerous parcels along the U.S. – Mexico Border. The public lands in western San Diego County are managed according to the South Coast Resource Management Plan (1994), and lands in the eastern portion of the county are managed under the California Desert Conservation Area Plan (1980, as amended), and the Eastern San Diego County Management Framework Plan (1981).

The BLM has the following comments on several sections of the Draft EA:

Section 1.0 Introduction and Purpose and Need

1.2 Background

Add section describing BLM, public land, South Coast Resource Area, and California Desert Conservation Area.

1.2 Regulatory Authority

Add section on Federal Land Policy and Management Act (FLPMA) as authority for BLM to issue right-of-way (ROW) grants and permission for INS to maintain roads on public land.

1.3 Location of the Proposed Action

Include description of public lands. Revise the statement about the "60-foot Roosevelt ROW". The statement that a ROW was set aside for the federal government is incorrect. The 1907 Presidential Proclamation applied to public domain lands, which are "reserved, from entry, settlement or other form of appropriation under the public land laws and set apart as a public reservation." In 1997, under the authority of FLPMA, the BLM issued a right-of-way grant (CA38154) authorizing re-alignment, improvement, and maintenance of the Tecate to Campo international border road across public land. In 1998, the ROW grant was amended to include additional public lands between Campo and Jacumba based on an environmental assessment prepared by the Army Corps of Engineers and adopted by BLM (Ca-066-98-48).

Section 3.0 Affected Environment

3.1 Land Use

Correct statement in the first paragraph, "This category consists of national parks, etc.", and "The State of California and the National Park Service are the primary landholders/managers in the county." There are no National Parks in San Diego County (the NPS does manage the Cabrillo National Monument on Point Loma in San Diego). The majority of federal public land in San Diego County is managed by the U.S. Forest Service (Cleveland National Forest), followed by the Bureau of Land Management, and the U.S. Fish and Wildlife Service. The public lands affected by the proposed action are all managed by the BLM.

List of Figures

Please add public land ownership to all maps and figures. Current GIS land status coverage can be obtained from the BLM California State Office Mapping Science Section, (916) 978-4350.

The BLM and the Border Patrol cooperate on many projects in the San Diego Sector, however the BLM is ultimately responsible for approving all actions taking place on public lands managed by the BLM. The BLM may use another agency's environmental document for NEPA compliance (40 CFR 1506.3) in order to reduce paperwork, eliminate duplication, and make the process more efficient.

When another agency's environmental assessment (EA) is used for NEPA compliance, the following criteria must be met:

a) The environmental document meets Council for Environmental Quality (CEQ), Department of the Interior (DOI), and BLM standards.

b) The BLM has performed an independent review of the environmental document and has concluded that it has addressed BLM concerns and suggestions. This review must be documented in the official files or in the decision document.

c) The BLM takes full responsibility for the scope and content of the environmental analysis.

d) The BLM must prepare its own Finding of No Significant Impact (FONSI) and Decision Record (DR). Another agency's FONSI and DR cannot be used or adopted by the BLM.

e) If a project on public land requires an Environmental Impact Statement (EIS), the BLM may request formal designation as a cooperating agency, and a memorandum of understanding (MOU) between the BLM and INS would be prepared. The MOU would specify special resource needs, data requirements, and issues to be addressed in the document, and identify the responsibilities of the lead and cooperating agency (40 CFR 1501.6).

For the above reasons, and to ensure consistency with BLM management goals and regulations, the BLM needs to be involved by the INS, Border Patrol, other relevant agencies, and their contractors in all phases of the proposed projects. The geographic area covered by the Border Patrol San Diego Sector includes several BLM offices. The western half of San Diego County, roughly west and south of the Cleveland National Forest, is managed by the Palm Springs-South Coast Field Office. The El Centro Field Office manages the remainder of the county. The contacts for each office are listed below:

James G. Kenna, Field Manager
Bureau of Land Management
Palm Springs-South Coast Field Office
Post Office Box 581260
North Palm Springs, CA 92258-1260
(760) 251-4800

Greg Thomsen, Field Manager
Bureau of Land Management
El Centro Field Office
1661 S. 4th Street
El Centro, CA 92243
(760) 337-4400

We appreciate the on-going cooperation of the INS and the U.S. Border Patrol in managing the public lands in San Diego County. If you have any questions, please call Greg Hill, Planning and Environmental Coordinator at (760) 251-4800.

Sincerely,

GHill For

James G. Kenna
Palm Springs-South Coast Field Manager

Gray Davis
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Tal Finney
Interim Director

February 18, 2003

Joe Lamphear
U.S. Immigration & Naturalization Service
24000 Avila Road
Laguna Niguel, CA 92677

Subject: Environmental Assessment for Various Road Improvements from Canyon City, CA to the Imperial County Line
SCH#: 2003014002

Dear Joe Lamphear:

The State Clearinghouse submitted the above named Environmental Assessment to selected state agencies for review. The review period closed on February 16, 2003, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
(916)445-0613 FAX(916)323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2003014002
Project Title Environmental Assessment for Various Road Improvements from Canyon City, CA to the Imperial County Line
Lead Agency U.S. Immigration & Naturalization Service

Type EA Environmental Assessment

Description Placement of portable lights, scope pad and access road construction, installation / repair of drainage structures, installation of water wells and holding tanks, blasting activities, and installation of fencing.

Lead Agency Contact

Name Joe Lamphear
Agency U.S. Immigration & Naturalization Service
Phone 949.425.7077 **Fax**
email
Address 24000 Avila Road
City Laguna Niguel **State** CA **Zip** 92677

Project Location

County San Diego
City
Region
Cross Streets
Parcel No. Various
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways SD & AZ Eastern
Waterways Campo Creek
Schools
Land Use Land managed by the Bureau of Land Management, privately owned land, and Federal land within 60-feet of the international border.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Soil Erosion/Compaction/Grading; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects

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Reviewing Agencies Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; California Highway Patrol; Caltrans, District 11; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Board, Region 7; Native American Heritage Commission; State Lands Commission

---

Date Received 01/24/2003 **Start of Review** 01/24/2003 **End of Review** 02/16/2003

Note: Blanks in data fields result from insufficient information provided by lead agency.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92009

2003 FEB 21 16
LAGUNA NIGUEL, CA

In Response Reply To:
FWS-SDG-3325.1

Mr. Joe Lamphear
Regional Environmental Specialist
INS Western Region
24000 Avila Road
Laguna Niguel, California 92677

FEB 18 2003

Re: Draft Environmental Assessment (EA) for Various Road Improvements from Canyon City, California to the Imperial County Line, San Diego County, California

Dear Mr. Lamphear:

The U.S. Fish and Wildlife Service (Service) appreciates this opportunity to provide our comments and offer recommendations regarding proposed road improvements from Canyon City, California to the Imperial County line. The draft EA analyzes two alternatives: a Preferred Alternative, and No Action Alternative. The proposed action consists of the following: (1) the placement of 50 portable lights from the Pacific Crest Trail to the Imperial County line; (2) three night vision scope pads with access road construction; (3) installation/repair of four culverts; (4) installation of a 300-foot bollard fence near Jacumba; (5) blasting activities; and (6) installation of two water wells and holding tanks. Construction of 1.45 miles of new road access and night vision scope pads will result in the permanent loss of 8.9 acres of vegetation. In addition, road and culvert construction will cross four ephemeral drainages resulting in 1.16 acres of permanent and 0.42 acre of temporary impacts to wildlife habitat.

We have a legal responsibility for the welfare of migratory birds, anadromous fish, and threatened and endangered species which occur in the United States. Our mandates further require that we provide comments on any public notices issued for a Federal permit or license affecting the nation's waters (e.g., Clean Water Act, Section 404 and River and Harbor Act of 1899, Section 10, pursuant to the Fish and Wildlife Coordination Act). We are also responsible for administering the Endangered Species Act of 1973, as amended (Act). Section 7 of the Act requires Federal agencies to consult with us should it be determined that their discretionary acts may affect a listed, threatened, or endangered species or critical habitat upon which those species depend.

To date, our coordination with the Immigration and Naturalization Service (INS) for the proposed road improvement projects has been to provide technical assistance. We provided you with a list of species that may occur in the project area in letters dated November 21, 2001, and February 12, 2002. On June 6, 2002, representatives from this office conducted a site visit to

view the existing roads and to discuss proposed improvements. Furthermore, a CD-ROM depicting locations of federally-listed species and their critical habitat within San Diego County was mailed from our office to you on October 10, 2002.

Several federally listed species have the potential to be found in the vicinity, or have been documented near the proposed project sites. These species include the arroyo toad (*Bufo californicus*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and Quino checkerspot butterfly (*Euphydryas editha quino*), and its critical habitat. We offer our recommendations and comments in Attachment 1 to assist the INS in avoiding and minimizing impacts to fish and wildlife resources.

In summary, the draft EA does not adequately address potential impact to listed species. Our main concerns are: (1) inadequate federally-listed species surveys; (2) timing of construction activities; (3) the potential adverse impacts to listed species from portable light use; (4) inadequate description of potential impacts to sensitive habitat, and lack of mitigation for the loss of 10.48 acres of wildlife habitat; (5) limited alternatives for the proposed action; and (6) potential long term effects of the proposed action on listed species and critical habitat.

Based on the information provided, we recommend the INS include other alternatives to the project design in the final EA. We appreciate the opportunity to comment on the draft EA. If you have any questions pertaining to this letter, or wish to set up a meeting to discuss any of these issues, please contact Michelle Clendenin at (760) 431-9440, extension 209.

Sincerely,

for Peter Sorensen
Acting Assistant Field Supervisor

Attachment

cc: Terry Dean, U.S. Army Corps of Engineers, San Diego Regulatory Branch
Stacy Baczkowski, Regional Water Quality Control Board
William Tippets, California Department of Fish and Game
Chris Ingram, Gulf South Research Corporation

SPECIFIC COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR VARIOUS ROAD IMPROVEMENTS FROM CANON CITY TO THE IMPERIAL COUNTY LINE

1. The draft EA states that "no threatened or endangered species were observed in any of the specific project area during recent (April 2002) or past surveys..."(section 4.8). However, it appears from the documentation provided in the EA that only one biological survey was conducted. We believe that this level of survey effort was inadequate to detect listed species likely to occur in the project area. Due to the proximity of Campo Creek to the project area, we recommend protocol level surveys be conducted for the arroyo toad, least Bell's vireo, and southwestern willow flycatcher. All of these species have been documented, or have potential to occur within the project area. The final EA should address all of the listed species which have potential to occur within the project area and provide a determination of project effects, and measures to reduce or avoid impacts to these species and their habitats.

2. The draft EA states that blasting activities will avoid nesting birds by limiting activities from July 1 to March 14. We recommend all proposed blasting activities, and any ground disturbance or vegetation removal should not occur between February 15 and August 30, the breeding season for most migratory birds.

3. The project proposes the operation of 50 portable high intensity lights using metal halide bulbs, with each unit capable of illuminating 4,000 watts. The lights will be powered by a 6-kilowatt self contained diesel generator. The portable lights are proposed for continuous night time operation along a 20-mile stretch of the existing border road between the Pacific Crest Trail to the Imperial County line. However, the draft EA does not identify specific locations where lights would be used, or describe the proximity of the lights to sensitive habitat such as riparian/wetland areas, and Quino critical habitat.

   Although many of the effects of artificial lights on wildlife within rural areas are unknown, literature suggests that light pollution may have a deleterious effect. The consequences of artificial light on mammals includes disruptions in daily activity cycles, reduction in foraging, dispersal, and reproductive opportunities (Grigione, 2003). The introduction of artificial lights in an otherwise dark sky environment may disrupt the navigational abilities in migratory birds (Harder 2002, Ainley 2001). Wetland obligate species, including aquatic invertebrates, amphibians, and fish, may become susceptible to predation from continuous illumination of light on their habitat (Harder 2002). Studies have shown that artificial light exposure disrupts reproductive cycles and behavior patterns in many species of toads, frogs, and salamanders, which are partly or completely nocturnal (Baker, 1990, Buchanan 2003, Wise and Buchanan 2003, Buchanan 1993).

We are concerned with the lack of measures incorporated into the project design that minimizes and/or avoids potential adverse impacts to fish and wildlife resources as a result of the operation of lights (e.g., location, avoidance of riparian zones, reduction in number of lights used). In addition, we are concerned with the upward illumination of light, and cumulative effects of these lights in relation to other urban lights that may be in the area with regard to fish and wildlife resources. Therefore, the final EA should include: (1) specific locations where lights will be used; (2) distances from sensitive areas including Quino critical habitat; and (3) conservation measures that limit overall light pollution to wildlife habitat through out the project area.

4. The portable lights will be powered by a 6-kilowatt self contained diesel generator. The final EA should include a noise analysis associated with the use of these generators. This should be summarized in a table that clearly depicts the zone of influence from noise, as well as light, associated with each portable unit.

5. Section 4.6 of the draft EA states that the proposed action will impact a total of 10.48 acres of vegetation (1.58 acres from culvert placement + 8.9 acres due to road construction). The draft EA does not describe the vegetation to be impacted. The final EA should provide a summary table that list the vegetation communities by type and amount expected to be temporarily and permanently disturbed.

   We recommend that a detailed mitigation plan be incorporated into the final EA. Unless mitigation measures are proposed, we consider temporary impacts to riparian vegetation to be a permanent loss. We suggest reducing construction pads and access roads to the minimum necessary with a 1:1 replacement ratio for chaparral habitat and 2:1 ratio for coastal sage scrub loss. We are also concerned with the continued loss of riparian habitat from increased development, and recommend a mitigation goal of no net loss of in-kind habitat value, with a replacement ratio of 3:1. Oak woodland should be avoided to the maximum extent practicable, and any unavoidable loss of mature oaks should be mitigated, minimally, at a 10:1 replanting ratio.

   If restoration is proposed, we recommend the final EA include a restoration plan. This plan should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques, and include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used; (c) a schematic depicting the mitigation area; (d) time of year that planting will occur; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the entity(ies) that will guarantee achieving the success criteria and provide for conservation of the mitigation site in perpetuity. We are available to assist INS in an appropriate plant palette.

6. We are concerned that the draft EA does not address a full range of alternatives. The final EA should include all viable alternatives and clarify the potential effects, beneficial and adverse, of the proposed action. Other alternatives to consider include: (1) other types of lighting besides metal halide flood lights; (2) use of lower wattage bulbs and/or solar powered lights; and (3) use of remote video surveillance cameras.

7. The draft EA does not adequately address cumulative impacts (section 4.13) that would result from this proposed action. We suggest that the Final EA address cumulative effects that are reasonably certain to occur or in the process of occurring, such as traffic volume from private citizens, researchers, and Border Patrol, and potential increase in activities as a result of the implementation of the Proposed Action Alternative.

Literature Cited

Ainley, D.G. 2001. The status and population of the Newell's Shearwater on Kaua'i: Insights from modeling. Studies in Avian Biology 22: 108-123.

Baker, J. 1990. Toad aggregations under street lamps. British Herpetology Society Bulletin 31: 26-27.

Buchanan, B. W. 2003. Observed and potential effects of light pollution on anuran amphibians. (In Review) Chapter in Longcore, T., and C. Rich (Eds). Proceedings of Symposium: Ecological Consequences of Artificial Night Lighting. Island Press.

Buchanan, B.W. 1993. Effects of enhanced lighting on the behavior of nocturnal frogs. Animal Behaviour 45: 893-899.

Grigione, M. M. 2003. Personal communication between Michelle Clendenin, U. S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, and Melissa Grigione, Department of Environmental Science and Policy, University of South Florida, Tampa, Florida, on February 12, 2003.

Harder, B. 2002. Deprived of darkness: the unnatural ecology of artificial light at night. Science News 161 (16): 248-249.

Wise, S., and, B.W Buchanan. 2003. The influence of artificial illumination on the nocturnal behavior and physiology of salamanders: studies in the laboratory and field. (In Review) Chapter in Longcore, T., and C. Rich (Eds). Proceedings of Symposium: Ecological Consequences of Artificial Night Lighting. Island Press.

STATE OF CALIFORNIA – THE RESOURCES AGENCY

GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

February 27, 2003

In reply refer to:
INS020408A

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

RE: Environmental Assessment for Various Road Improvements from Canyon City to the Imperial County Line, San Diego County, California

Dear Mr. Fickel:

Thank you for providing me with *Draft Environmental Assessment for Various Road Improvements from Canyon City, California to the Imperial County Line, San Diego County, California.* The Immigration and Naturalization Service (INS) has prepared the Environmental Assessment (EA) to present alternative plans to improve and construct roads, replace fencing, and place portable lights along the U.S.-Mexico International Border from the area of Tecate to Jacumba, California. I understand that you are acting on behalf of the INS and the U.S. Border Patrol in providing this information. Your request for my comments is made pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act. In making this request, I understand that you have determined that this proposed Federal action is an undertaking as defined in Section 800.16(y) of the regulation and that it has the potential to cause effects on historic properties.

Thank you for also providing the *Cultural Resource Survey for Proposed United States-Mexico International Border Infrastructure Improvements from Tecate to Jacumba, San Diego County, California.* Your survey report identifies four previously recorded sites within the APE. Sites CA-SDI-177 and CA-SDI-4460 were both found to be heavily disturbed and potential for subsurface deposits at these sites is extremely low. You have determined that both CA-SDI-177 and CA-SDI-4460 are not eligible for inclusion in the National Register of Historic Places (NRHP). You have determined that two sites, CA-SDI-4458 and CA-SDI-6035 have a greater degree of integrity and both possess potential for intact subsurface deposits that could have data potential. You have determined that both CA-SDI-4458 and CA-SDI-6035 are eligible for inclusion in the NRHP under criterion d.

Although you have found CA-SDI-4458 and CA-SDI-6035 to be eligible for the NRHP, the proposed activities have been rerouted to avoid these sites. In your January 21, 2003 letter, you asked for my concurrence with a determination of "no historic properties affected".

Based on the documentation you submitted, I agree that the undertaking's APE has been adequately defined; that historic property identification efforts are satisfactory; and that efforts to involve interested parties, including Native Americans, are likewise satisfactory. I agree that CA-SDI-177 and CA-SDI-4460 are not eligible for the NRHP. I agree that CA-SDI-4458 and CA-SDI-6035 are eligible for the NRHP under criterion d, for their potential to yield data important to prehistory. I acknowledge that project activities have been designed to avoid effects to CA-SDI-4458 and CA-SDI-6035, and I agree that no historic properties will be affected by this undertaking.

Thank you for considering historic properties in project planning. If you have any questions or comments, please contact Jennifer Darcangelo, Staff Archaeologist, at (916) 654-4614 or at jdarc@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

Mach 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Cultural Resources Survey Report for the Immigration and Naturalization Service proposed Border Road and Fence: Construction and Repair Campo to Jacumba, CA. **INS020408A**

Dr. Knox Mellon
California State Historic Preservation Officer
Office of Historic Preservation
ATTN: Jennifer Darcangelo
1416 9TH Street, Room 1442-7
Sacramento, CA 95814

Dear Dr. Mellon,

I wrote to you on January 21, 2003 to provide you with a copy of the draft EA for this project as promised in a previous letter. I also requested your concurrence with our determination that no historic properties would be affected, given the results of the survey and information provided.

Enclosed is a copy of the final cultural resources survey report. Please note that the title of the enclosed document refers to the previous name of the project. The project is now known as, "Various Road Improvements from Canyon City to the Imperial County Line, San Diego County, California." This name more closely describes the geographical extent of the project. There have been no other changes to the project that has been under review.

Also, this final report has been distributed to the tribes that are listed on the previous copy of the Native American distribution list sent to you on January 21st.

Thank you for your assistance in the coordination of this project. I look forward to hearing from you concerning my request for concurrence. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Clifford LaChappa, Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Dear Chairperson LaChappa:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Ralph Goff, Chairman
Campo Band of Mission Indians
36190 Church Road, Suite 1
Campo, CA 91906

Dear Chairman Goff:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Sherry Cordova, Chairperson
Cocopah Indian Tribe
County 15th & Avenue G
Somerton, AZ 85350

Dear Chairperson Cordova:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Harlan Pinto, Chairman
Ewiiaapaayp Band of Mission Indians
P.O. Box 2250
Alpine, CA 91903

Dear Chairman Pinto:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Rebecca Maxcy, Chairwoman
Inaja Band of Mission Indians
P.O. Box 186
Santa Ysabel, CA 92070

Dear Chairwoman Maxcy:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Kenneth Meza, Sr., Chairman
Jamul Indian Village
P.O. Box 612
Jamul, CA 91935

Dear Chairman Meza:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Gwendolyn Parada, Chairwoman
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905

Dear Chairwoman Parada:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Leroy Elliott, Chairman
Manzanita Band of Mission Indians
P.O. Box 1302
Boulevard, CA 91905

Dear Chairman Elliott:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

Thank you for your assistance, participation and patience in this matter. Should you require further information, please contact Ms. Patience Patterson at (817) 886-1723.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Copy Furnished w/o enclosure:

Mr. Joe Lamphear
Regional Environmental Officer
INS Western Region
P.O. Box 30080
Laguna Niguel, California 92677

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Howard Maxcy, Chairman
Mesa Grande Band of Missions Indians
P.O. Box 270
Santa Ysabel, CA 92070

Dear Chairman Maxcy:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Mike Jackson, Sr., President
Quechan Tribal Council
P.O. Box 1899
Yuma, AZ 85366

Dear President Jackson:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Allen E. Lawson, Spokesman
San Pasqual Band of Mission Indians
P.O. Box 365
Valley Center, CA 92082

Dear Spokesman Lawson:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Ben Scerato, Chairman
Santa Ysabel Band of Diegueño Indians
P.O. Box 130
Santa Ysabel, CA 92070

Dear Chairman Scerato:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Georgia Tucker-Kimble, Chairwoman
Sycuan Band of Mission Indians
5459 Dehesa Road
El Cajon, CA 92019

Dear Chairwoman Tucker-Kimble:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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March 3, 2003

Planning, Environmental and Regulatory Division

SUBJECT: Final Archaeological Survey Report for the INS/USBP Project: Various Road Improvements from Canyon City, Ca to the Imperial County Line, San Diego County, CA.

Honorable Steven F. TeSam, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903

Dear Chairman TeSam:

I wrote to continue consultation with you regarding INS and US Border Patrol projects and the proposed project mentioned above on December 10, 2002 and provided you with a draft copy of the cultural resources survey report on the project.

Enclosed is a copy of the final cultural resources survey report. No previously unrecorded archaeological or historic sites were encountered during the field survey. Given the results of the survey and in accordance with 36 CFR Part 800.4(d)(1), we have determined that no historic properties will be affected. We have sought concurrence from the SHPO in that determination.

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