United States Department of the Interior
Bureau of Land Management

Environmental Assessment CA-670-2007-88
Case File Number: CACA 49096

Finding of No Significant Impact
And
Decision Record

Project Title
Proposed Verizon Sunrise Butte Communication Site
Imperial County, California

U.S. Department of the Interior
Bureau of Land Management
El Centro Field Office
1661 South 4th Street
El Centro, CA 93342

December 2008

BLM

Finding of No Significant Impact
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Proposed Action Title/Type: Proposed Right-of-Way Grant for Verizon Sunrise Butte Communication Site, Imperial County, CA

Applicant/Proponent: Cellco Partnership dba Verizon Wireless
One Verizon Way
Basking Ridge, NJ 07920

Location of Proposed Action: T. 17 S., R. 11 E., sec. 15, SENE

INTRODUCTION

Verizon proposes to place microwave antennas upon a 100-foot galvanized steel monopole with twelve (12) panel antennas, separated into three (3) sectors with four (4) antennas per sector. A Federal Aviation Administration (FAA)-mandated light will be placed at the top of the monopole which will measure a total of 102 feet. The antennas measure approximately 48 inches by 10.5 inches by 8.5 inches and will have a tip height of 100 feet above ground level. Provisioning for telephone interconnection will be provided via an 8-inch diameter microwave dish mounted at 57-inch on center and directed northwest toward the Ocotillo monopole site. The Sunrise Butte monopole will be designed to carry not only the antennas and internal coaxial cables of Verizon, but also those of up to three (3) additional co-locating carriers in the future. Additionally, Verizon proposes to install an 11.5-foot by 16-foot by 10-foot self-contained equipment shelter located adjacent to the base of the monopole. A 50-foot by 50-foot enclosure behind a six foot high chain link fence will surround the monopole base and shelter. The entire compound within the chain link fence will be paved with a minimum 6-inch base of crushed rock. Provisions will be made for the local power and water purveyor, Imperial Irrigation District (IID), plus AT&T utility service, via a meter pedestal inside the compound as well as an emergency 30 kilowatt generator with 52 gallon diesel fuel tank with either secondary containment or double wall construction. Any necessary utility companies will be required to obtain separate authorization from the BLM where any required service would cross BLM-administered land. Two phases for establishing the project are anticipated. The first phase will entail laying the foundation for the cellular site. Up to eight workers with appropriate equipment and materials will lay the foundation. A second work crew of up to five workers will establish the proposed monopole, electrical connection to the power at the transformer location.

Within the Caltrans Right of Way (ROW) for Highway 98, power will be brought to the site via overhead power lines from an existing power point found approximately 700 feet west of the site on the north side of the road. Power poles and line will be established by IID and power will be brought to within 50 feet north of the site. IID must obtain a separate right-of-way from BLM for those poles placed on federal property. A trench will then bring power to a transformer associated with the site. Electrical power would be tied into the equipment cabinet used to serve the monopole. These systems would be placed with the enclosure associated with the site. A total of 0.08 acres (0.03 hectares) of desert habitat would be permanently lost due to the proposed project that includes the additional power poles within the ROW. A total of 1.29 acres (0.52 hectares) would be temporarily impacted due to construction impacts. A total of 1.37 acres (0.55 hectares) of impacts would be anticipated from the proposed action.

Temporary impacts to areas around these activities will be necessary to allow working space for equipment and construction crews. An easement to place the power poles and trench within the Caltrans ROW has been requested by the project proponent. A 100 foot by 100 foot temporary construction staging area immediately south of the proposed cellular site is also proposed. This area will serve as a lay down yard allowing temporary placement of equipment and materials.

PLAN CONFORMANCE AND CONSISTENCY

This Proposed Action is subject to the following Land Use Plans:

- California Desert Conservation Area Plan 1980 as Amended;
- Western Colorado Desert Routes of Travel Designations 2003;
- Flat-Tailed Horned Lizard Rangewide Management Strategy, 2003; and,
- Yuha Desert Management Plan, 1985;

The Proposed Action has been reviewed for conformance with these plans, and found to be in conformance of the existing land use plans for the Project Area.

FINDING OF NO SIGNIFICANT IMPACT

The El Centro Field Office interdisciplinary review and analysis determined that the proposed action would not trigger significant impacts on the environment based on criteria established by regulations, policy and analysis.

Based on the findings discussed herein, I conclude that the proposed action is not a major Federal action and will result in no significant impacts to the environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27 and do not exceed those effects described in applicable land use plans. Therefore, preparation of an

environmental impact statement to further analyze possible impacts is not required pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969.

This determination is based on the rationale that the significance criteria, as defined by the Council on Environmental Quality (CEQ) (40 CFR 1508.27) have not been met. "Significantly" as used in NEPA requires considerations of both context and intensity. In making this Finding of No Significant Impact (FONSI), the following criteria have been considered, in accordance with the Council on Environmental Quality (CEQ), 40 C.F.R. 1508.27.

Context: This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short and long term effects are relevant.

Environmental impacts associated with the proposed action and alternatives have been assessed by an interdisciplinary team and described in Environmental Assessment (EA) CA-670-2007-88. The context of the EA analysis was determined to be at a local and regional scale in Imperial County, California. The effects of the action are not applicable on a national scale since no nationally significant values were involved.

Intensity: This refers to the severity of impact. The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into BLM's Critical Elements of the Human Environment list (H-1790-1), and supplemental Instruction Memorandum, Acts, regulations and Executive Orders. The following have been considered in evaluating intensity for this proposal:

1) Impacts can be both beneficial and adverse and a significant effect may exist regardless of the perceived balance of effects.

Beneficial Effects: The proposed wireless project is to provide coverage for an area currently experiencing no wireless coverage. The Sunrise Butte site would serve as the network backbone for wireless service to residents, businesses, emergency services and individuals throughout Imperial County. The proposed project would address a critical need for Verizon in meeting its FCC mandate to provide coverage to 95 percent of its licensed Market Trade Area; would help users avoid disruptive signal interference from across an international border and would comply with treaty obligations established by the respective regulatory agencies of the border nations.

Adverse Effects: Construction of the new wireless communication tower would involve temporary ground disturbance and vegetation may be temporarily disturbed by vehicles or equipment while installing or maintaining the structures.

2) The degree to which the selected alternative will affect public health or safety. The proposed action is not anticipated to affect public health or safety. The proposed action may have a beneficial effect on public health and safety by providing extended wireless coverage in remote areas.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas. The proposed wireless communication tower would not be situated in proximity to park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas. The proposed project has been sited so as to avoid cultural or historic resources.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial. It is not likely that construction of the proposed wireless communication tower would result in impacts to the quality of the human environment that would be highly controversial.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. Effects of the proposed action are well understood and would not involve any unique or unknown risks.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The proposed action would not establish precedents for future actions or represent a decision in principle about a future action.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership. The proposed action would not establish precedents for future actions or represent a decision in principle about a future action.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. No significant scientific, cultural or historical resources would be affected by the proposed action.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM's sensitive species list. The flat-tailed horned lizard, a BLM sensitive species, occurs throughout western Imperial County. The proposed wireless communication site is located within the Yuha Management Area for the Flat-tailed horned lizard. BLM has implemented mitigation measures to minimize risk to Flat-tailed horned lizards. Because

of these mitigation measures, the Bureau determined that this project is not likely to adversely affect flat-tailed horned lizards.

10) Whether the action threatens a violation of a federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements. The proposed action does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Reviewed by: _____ 12/22/08
Environmental & Planning Coordinator Date

Approved by: _____ 12/22/08
Vicki L Wood, Field Manager Date
El Centro Ficld Office

Decision Record
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Applicant/Proponent: Cellco Partnership dba Verizon Wireless
One Verizon Way
Basking Ridge, NJ 07920

Location of Proposed Action: T. 17 S., R. 11 E., sec. 15, SENE

1.0 Introduction and Background

The Bureau of Land Management (BLM) received an application (CACA-49096) for a right-of-way (ROW) grant and approval of a proposed project to install an unmanned wireless communications project. The project area is located approximately 19 miles west of Calexico, California on Highway 98 just south of Sunrise Butte in western Imperial County, California (Figure 1).

The government-owned land (APN 059-370-21-01) is surrounded on the north, south and east by BLM managed public lands. Lands located west of the site are privately owned. The applicant, Verizon Wireless, is requesting a right-of-way be granted in order to secure lease of BLM lands. If approved, the lease would be granted immediately. Verizon Wireless would install an un-manned wireless communication cellular device plus necessary equipment. The wireless communications project would provide coverage for an area currently experiencing no wireless cellular coverage. The Sunrise Butte site would serve as the network backbone for wireless service to residents, businesses, emergency services and individuals throughout Imperial County.

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the ROW as proposed by Verizon Wireless. The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action.

2.0 Decision

2.1 Alternatives Considered

Alternative A, the Proposed Action: Verizon proposes to place microwave antennas upon a 100-foot galvanized steel monopole with twelve (12) panel antennas, separated into three (3) sectors with four (4) antennas per sector (Figure 3 in the EA). A Federal

Aviation Administration (FAA)-mandated light will be placed at the top of the monopole which will measure a total of 102 feet. The antennas measure approximately 48 inches by 10.5 inches by 8.5 inches and will have a tip height of 100 feet above ground level. Provisioning for telephone interconnection will be provided via an 8-inch diameter microwave dish mounted at 57-inch on center and directed northwest toward the Ocotillo monopole site. The Sunrise Butte monopole will be designed to carry not only the antennas and internal coaxial cables of Verizon, but also those of up to three (3) additional co-locating carriers in the future. Additionally, Verizon proposes to install an 11.5-foot by 16-foot by 10-foot self-contained equipment shelter located adjacent to the base of the monopole. A 50-foot by 50-foot enclosure behind a six foot high chain link fence will surround the monopole base and shelter. The entire compound within the chain link fence will be paved with a minimum 6-inch base of crushed rock. Provisions will be made for the local power and water purveyor, Imperial Irrigation District (IID), plus AT&T utility service, via a meter pedestal inside the compound as well as an emergency 30 kilowatt generator with 52 gallon diesel fuel tank with either secondary containment or double wall construction. Any necessary utility companies will be required to obtain separate authorization from the BLM where any required service would cross BLM-administered land. Two phases for establishing the project are anticipated. The first phase will entail laying the foundation for the cellular site. Up to eight workers with appropriate equipment and materials will lay the foundation. A second work crew of up to five workers will establish the proposed monopole, electrical connection to the power at the transformer location.

Alternative B, the No Action: Under the No Action alternative, Verizon's application would be denied. Under this alternative, no cellular project would be carried out and the area would remain without cellular coverage. Where cellular signal could be received, potential interference from domestic Mexican cellular coverage would occur. Residents, businesses, emergency services and individuals in this area would continue to have poor or no cellular communication capability. The site would remain in its current condition.

2.2 Actions Considered but Eliminated from Further Consideration

To the north of the proposed project site, Sunrise Butte rises approximately 87 feet above the surrounding terrain. During the site search, the property owner of Sunrise Butte was contacted and discussions regarding a potential lease of a portion of Sunrise Butte ensued. The property owner has developed an open air amphitheater around the summit of Sunrise Butte, possibly for religious purposes, and firmly stated he would not allow Verizon on this property. This alternative was dropped from further consideration because the property owner would not discuss the possibility of a lease to the proponent for a wireless project on his property.

The property adjacent to the proposed site was also evaluated for a potential project location. This property has a pronounced drop in terrain which creates a very unfavorable scenario for a wireless project without increasing the height of the wireless device to almost 200 feet. Due to the excessive height, a lattice tower would be required, rather than a monopole. While lattice towers are considerably less costly to build than, monopoles, they are also visually much more intrusive. Analysis of impacts of the

proposed project on the view shed for both a lattice structure versus a monopole structure as presented in the EA concludes that a monopole device offers a less obtrusive facility. This alternative was dropped from further consideration because construction of a 200-foot lattice tower would have resulted in potentially adverse impacts on the view shed.

There are several security camera and communications towers in the vicinity under the purview of the United States Department of Homeland Security. Co-location of commercial wireless projects on these devices has not been allowed for security purposes. This alternative was dropped from further consideration as the Department of Homeland Security would not consider co-location of a commercial wireless project on their communications and security towers.

2.3 Decision and Rationale

Based on information in the EA and consultation with my staff, I have decided to implement the project as described in the EA. The granting of this right-of-way is needed to improve wireless cellular coverage to the region. The project is not expected to adversely impact any resources.

Alternative A (proposed action) is preferred over Alternative B (no action) for the following reasons:

- Alternative A would improve cellular communications in a remote area of Imperial County, which would improve public health and safety.

- With the mitigation measures listed below, the adverse environmental impacts of Alternative A are not significant and will be only nominally greater than those attributable to Alternative B.

The BLM will impose the following mitigation measures according to the *Flat-tailed Horned Lizard Rangewide Management Strategy 2003 revision.*

1. A preconstruction worker education program shall be developed and implemented. In addition, wallet-cards shall be provided to all construction and maintenance personnel and shall include information regarding the biology and status of the lizard; the protection measures that are being implemented; the function of the flagging around sensitive resources; reporting procedures if a lizard is found within the construction area; and methods of reducing impacts during commuting to and from construction areas.

2. A field contact representative (FCR) shall be designated prior to the start of construction and approved by BLM. The FCR shall be responsible for ensuring compliance with protective measures for the flat-tailed horned lizard and other sensitive biological resources and shall act as the primary resource agency contact. The FCR shall have the authority to halt

construction activities if the project is not in compliance with mitigation required by BLM.

3. The FCR shall coordinate with the construction manager to assure that all surface-disturbing activities are located as much as possible in areas that have been previously disturbed or where habitat quality is lower, and where disturbance to biological resources can be minimized.

4. All work areas shall be clearly flagged or otherwise marked, and all work shall be restricted to these areas. All construction workers shall restrict their activities and vehicles to areas that have been flagged or to clearly recognizable areas, such as access roads, that have been identified as "safe" areas by the FCR.

5. A biological monitor shall be present in each area of active surface disturbance throughout the work day from initial clearing through habitat restoration, except where the project is completely fenced and cleared of FTHLs by a biologist (see measure 11 below). The biological monitor(s) shall meet the requirements set forth in Appendix 6 of the Strategy. The monitor shall ensure that the project complies with all FTHL mitigation measures and shall have the authority and responsibility to halt activities that are in violation. The monitor shall inspect the construction areas periodically for the presence of flat-tailed horned lizards and shall inspect any open trenches or pits prior to backfilling. The monitor shall also work with the construction supervisor to take steps to avoid disturbing the lizards and their habitat. If a lizard is discovered within an affected area, the lizard shall be captured and relocated. The biological monitor shall also excavate all potential flat-tailed horned lizard burrows within the construction areas and relocate any flat-tailed horned lizards encountered.

6. Only persons authorized by the California Department of Fish and Game (CDFG) shall conduct surveys and handle FTHLs. Any workers who discover flat-tailed horned lizards shall avoid disturbing the animals and shall immediately notify their construction supervisor and the biological monitor.

7. The area of vegetation and soil disturbance shall be minimized to the greatest extent possible. When possible, the equipment and vehicles will use existing surfaces or previously disturbed areas. When excavation or grading is necessary, the topsoil shall be stockpiled and restored following completion of the work.

8. Existing roads shall be used to the greatest extent possible for travel and staging areas.

9. The FCR and biological monitors shall keep a record of all sightings of flat-tailed horned lizards and fresh flat-tailed horned lizard scat. Sightings shall be reported in writing to BLM on a schedule established by BLM.

10. BLM shall require the applicant to provide habitat compensation for residual impacts to Flat-Tailed Horned Lizard habitat according to the Rangewide Management Strategy. In accordance with the strategy, lands within the Yuha Management Area will be compensated according to the formula:

    M = 3 + A + G + E + D

    M = is a multiplying factor for disturbances within the MA……..…….0

    A = Adjacent habitat impacts:
    a. Adjacent lands will not be affected…….…….0
    b. Adjacent habitat will receive direct or indirect deleterious impacts…….0.5

    G = Growth inducing effects within FTHL habitat
    a. The project will have no growth inducing effects……0
    b. The project will have growth inducing effects……..0.5

    E = Existing disturbance on the site
    a. There is moderate to heavy existing habitat disturbance……..0
    b. There is little or no existing habitat disturbance…….……....1

    D = Duration of effect
    a. The effects of the project are expected to be short term (<10 years)……0
    b. the effects of the project are expected to be long term (> 10 years)……..…1

BLM will also require the following mitigation measures:

1. In order to minimize visual impacts:
   - Use earth-tone paints and stains to support structures and fencing;
   - Self-weathering steel should be used where feasible; and
   - Paint surfaces with coatings that have low reflectivity characteristics

2. Waste and garbage generated during construction will be removed from the site on a daily basis.

3. Best management practices would be used to ensure that all equipment used during construction will not drip oils or fuels onto the ground.

4. In the event of a petroleum fuel leak, any fluids on the ground would be contained and removed from the site in proper containers and disposed of at an appropriate facility.

5. If buried cultural materials are identified during construction activities, all work in that area should be halted or diverted until a qualified archaeologist (one meeting the *Secretary of the Interior's Standards and Guidelines*) can evaluate the nature and significance of the finds.

6. If human remains are discovered in the course of boring activities (and/or attendant construction activities), all work in that area should be halted or diverted until the Imperial County Coroner's Office is notified and that office offers an opinion/disposition. Notification of the appropriate County Coroner shall occur within 24 hours of discovery.

3.0 Consultation and Coordination

The project area is located in the Yuha Management Area for the flat-tailed horned lizard. This BLM Sensitive lizard occurs throughout western Imperial County. The BLM has implemented mitigation measures to minimize risk to flat-tailed horned lizards. Because of these mitigation measures, the Bureau determined that this project is not likely to adversely affect flat-tailed horned lizards.

4.0 Public Involvement

The EA was available for a 30 day public comment in April and May 2008. The comment period ended on May 19, 2008. An electronic notice of availability of the EA was forwarded to known interested parties. Two comment letters were received. One letter was received from a representative of the adjacent landowner (#1) and one from the Imperial County Public Works Department (#2).

Following is a summary of the comments and responses.

Comment #1:

The EA fails to acknowledge the existence of adjacent landowner's Conditional Use Permit (CUP) from the County for a tower less than 500' away, and the pending installation of such tower. As a result, the EA's analysis of aesthetic/visual impacts, environmental justice impacts, and cumulative impacts is fundamentally flawed and needs to be corrected and recirculated. Similarly, the EA's failure to disclose this fact also make the EA's "Purpose and Need" (e.g., "a coverage dead zone") and "No Action Alternative" (e.g., that "Cellular reception and access to emergency services in the region would remain poor or nonexistent.") conclusions factually false.

Response:

Several attempts were made to verify the existence of the referenced CUP referenced in the comments. All searches yielded negative results. A Permit Specialist with the Imperial County

Division of Building and Planning and a Planning Specialist within the same Department were both contacted regarding the CUP. Neither was able to locate any permit in the database. In addition, the Imperial County Planning Department Map entitled "Existing and Proposed Communications Tower Map" dated September 21, 2004 was reviewed. This document is the authority under the Department's program to promote collocation on existing towers and no CUP or existing tower is shown anywhere near the landowner's property. The results of the foregoing research indicate no CUP exists for construction of a tower on Mr. Estrada's property.

The EA's "Purpose and Need" and "No Action Alternative" conclusion, and the analysis of aesthetic/visual impacts, environmental justice impacts, and cumulative impacts were based on existing data. No information has been found to the contrary.

Comment #2

The County provided comments to ensure that county regulations are followed.

Response:

BLM's Communications Use Lease contains a standard condition that the Lessee must comply with applicable Federal, State, county, and municipal laws, regulations and standards for public health and safety, environmental protection, siting, construction, operation, and maintenance in exercising the rights granted therein.

5.0 Consistency with Land Use Plans, Regulations and Policies

Based on information in the EA, the project record, and recommendations from BLM specialists, I conclude that this decision is consistent with the following Land Use Plans: California Desert Conservation Area Plan, 1980 (as amended), Western Colorado Desert Routes of Travel Designations, 2003; and the Flat-tailed Horned Lizard Rangewide Management Strategy, 2003 Revision.

The Proposed Action is consistent with the National Energy Policy Act of 2005 and the BLM's National Energy Policy Implementation Plan; the Endangered Species Act; the Native American Religious Freedom Act; other cultural resource management laws and regulations; Executive Order 12898 regarding Environmental Justice; and Executive Order 13212 regarding potential adverse impacts to energy development, production, supply and/or distribution.

6.0 Administrative Remedies

Administrative remedies may be available to those who believe they will be adversely affected by this decision. Appeals may be made to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of Interior, Board of Land Appeals (Board) in accordance with the regulations in 43 CFR Part 4, and the enclosed form 1842-1. Notices of appeal must be filed in this office within 30 days after publication of this decision. If a notice of appeal does not include a statement of reasons, such statement must be filed with this office and the Board within 30 days after the notice of appeal is filed. The notice of appeal and any statement of reasons, written arguments, or briefs must also be

served upon the Regional Solicitor, Pacific Southwest Region, U.S. Department of Interior, 2800 Cottage Way, E-1712, Sacramento, CA 95825

The effective date of this decision (and the date initiating the appeal period) will be the date this notice of decision is posted on BLM's (El Centro Field Office) internet website.

Vicki L. Wood, Field Manager
El Centro Field Office

12/22/08
Date

ENVIRONMENTAL ASSESSMENT
CA670-2007-88

PROPOSED VERIZON SUNRISE BUTTE COMMUNICATION SITE

IMPERIAL COUNTY, CALIFORNIA

Prepared for

Bureau of Land Management
1661 South 4th Street
El Centro, California 92243

April 2008

Prepared by

TETRA TECH
348 West Hospitality Lane, Suite 100
San Bernardino, California 92408

ENVIRONMENTAL ASSESSMENT
CA670-2007-88

PROPOSED VERIZON SUNRISE BUTTE COMMUNICATION SITE

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TETRA TECH
348 West Hospitality Lane, Suite 100
San Bernardino, California 92408-3216

M2129-02

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1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

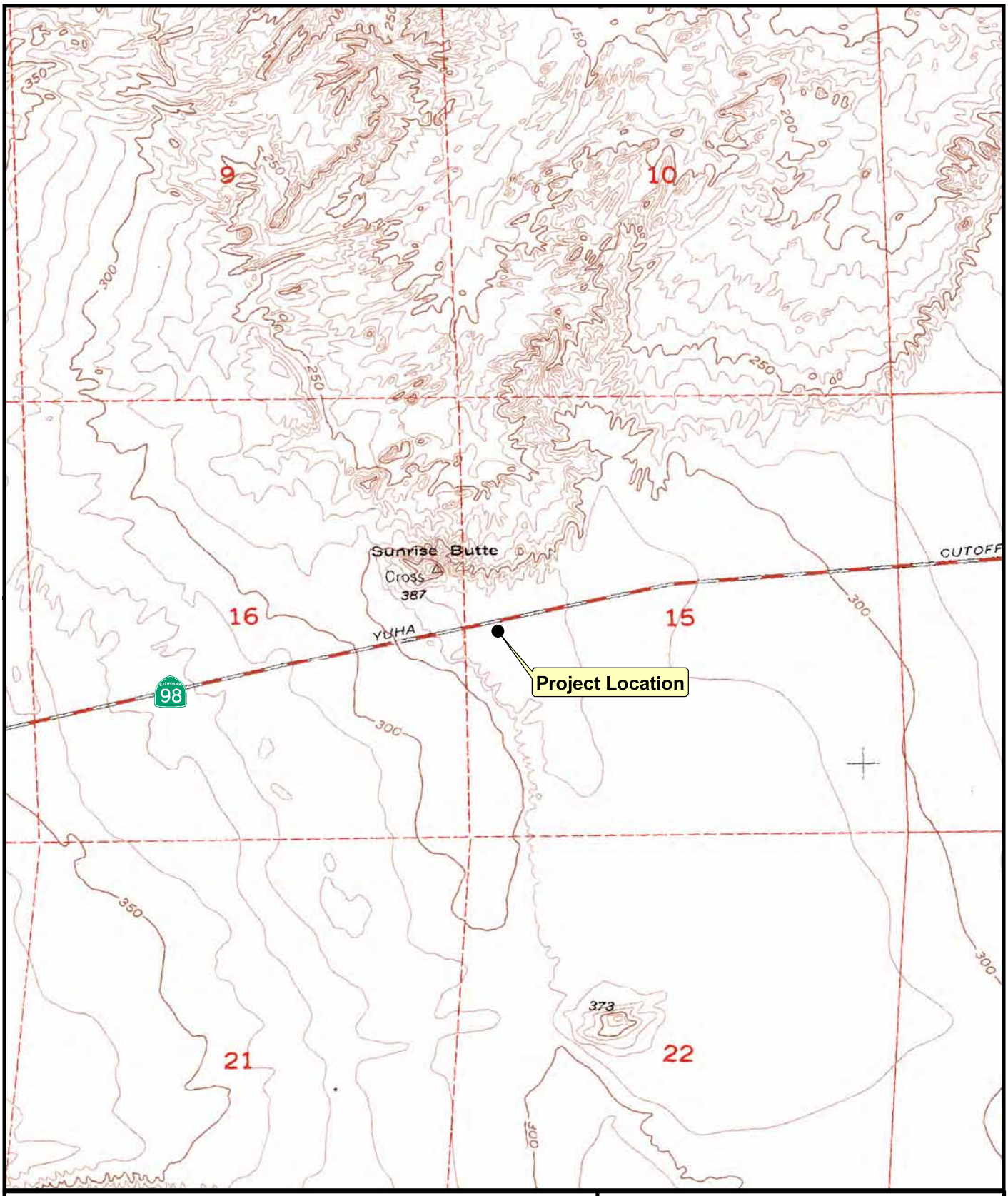
Verizon Wireless ("Verizon"), the project proponent, is licensed by the Federal Communications Commission (FCC) to provide domestic wireless service by transmitting and receiving radio frequency spectrum signals. Verizon is currently undergoing a major system-wide upgrade to its existing network throughout the United States and is upgrading its network throughout the Imperial Valley, Imperial County, California to improve network coverage, reliability and capacity. These upgrades require the strategic location of wireless cell sites throughout the County with emphasis along the United States-Mexican border, where domestic Mexican carriers are utilizing portions of the same spectrum and causing inadvertent international roaming charges to be incurred among its customers on the United States side. Verizon's Radio Frequency ("RF") Engineers and Real Estate Site Acquisition Specialists have identified the Sunrise Butte site that meets both the wireless network technical requirements and the business term objectives (Figure 1). The proposed project site is located on lands administrated by the Bureau of Land Management (BLM), Department of the Interior. The National Environmental Policy Act (NEPA) directs that the BLM to consider environmental consequences of all proposed projects on lands currently under their purview. Accordingly, this Environmental Assessment (EA) in support of NEPA is prepared to analyze the potential environmental consequences of the proposed wireless project.

1.2 PURPOSE AND NEED

The purpose for the proposed wireless project is to provide coverage for an area currently experiencing no wireless coverage. The proposed wireless project at the Sunrise Butte site would handle wireless traffic handed off from Verizon's existing co-location on the American Tower Corporation (ATC) tower at Ocotillo, California located to the northwest of the site and handing it off to the future Verizon co-location with Rio Tel at 513 Brockman Road located north of Mount Signal, east of the proposed site (Figure 2). The Sunrise Butte site would serve as the network backbone for wireless service to residents, businesses, emergency services and individuals throughout Imperial County. The proposed project would address a critical need for Verizon in meeting its FCC mandate to provide coverage to 95 percent of its licensed Market

Trade Area, would help users avoid disruptive signal interference from across an international border and would comply with treaty obligations established by the respective regulatory agencies of the border nations. The proposed wireless project at Sunrise Butte will also act to concentrate wireless carriers in a single location by virtue of its site selection at the point where all carriers are experiencing a coverage dead zone.

X:\GIS\VERIZON\SUNRISE BUTTE\VSAT\OPO.MXD



N
W E
S

0 1,000 2,000 Feet

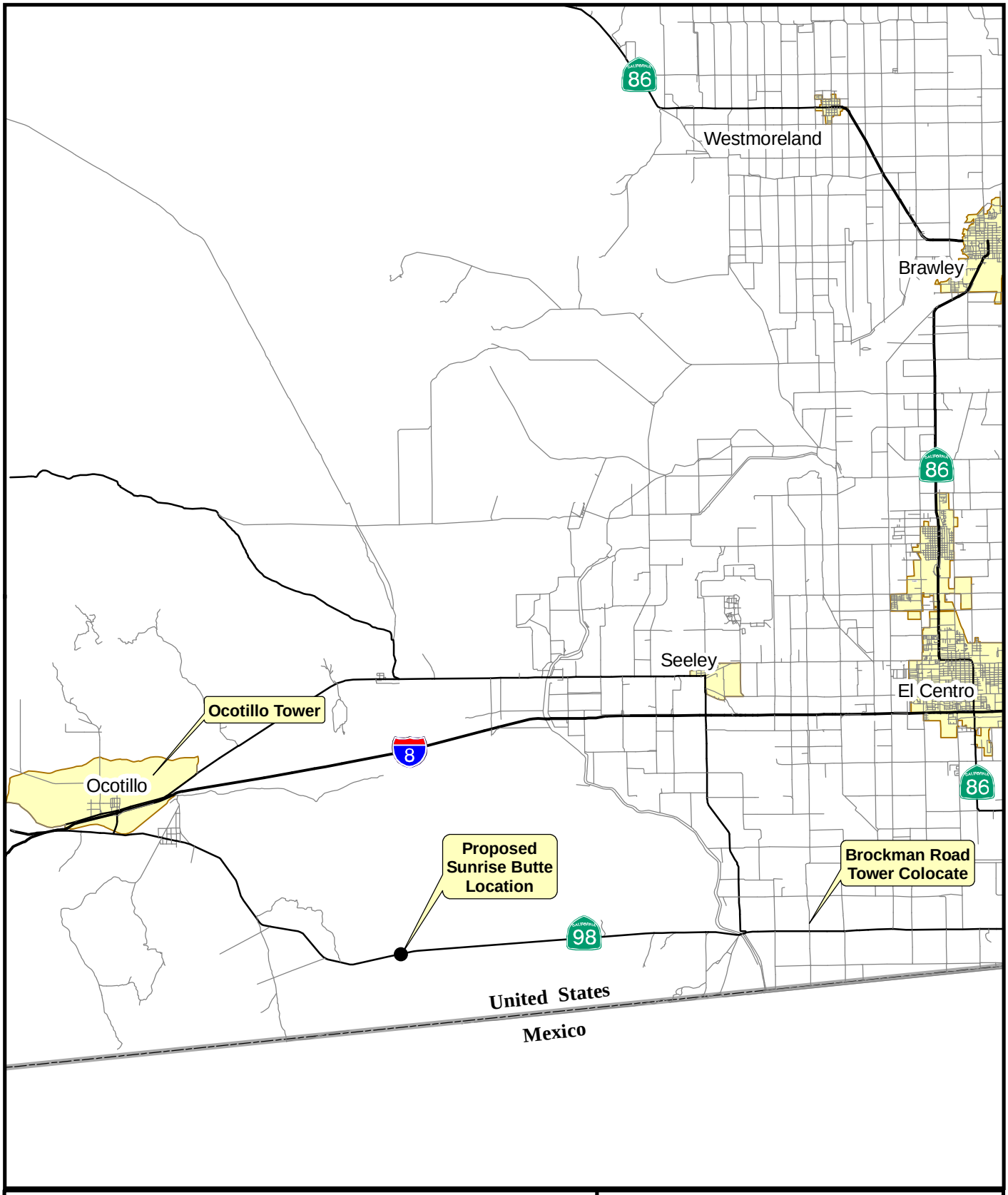
Source: USGS 7.5' topographic map of Yuha Basin, 1957. Revised 1976.

FIGURE 1

LOCATION MAP OF THE
SUNRISE BUTTE SITE,
IMPERIAL COUNTY, CALIFORNIA

TETRA TECH

X:\GIS\VERIZON\SUNRISE BUTTE\AIREGION.MXD



N
W E
S

0 5 10 Miles

Source: U.S. Census Bureau TIGER line data. 2000.

FIGURE 2

REGIONAL LOCATION OF THE PROPOSED SUNRISE BUTTE SITE AND ASSOCIATED WIRELESS INFRASTRUCTURE IMPERIAL COUNTY, CALIFORNIA

TETRA TECH

1.3 PROJECT LOCATION

The proposed site is located on Assessor Parcel Number (APN) 059-370-21-01, on Highway 98, west of Calexico, California on lands administered by the Bureau of Land Management (Figure 1). The site is located in Section 15, T17S, R11E, SBBM of the Yuha Basin 7.5-minute quadrangle (United States Geological Survey 1957, Photo Inspected 1976) (Figure 1).

1.4 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The Federal action that is being requested is approval of the proposed project and issuance of a right-of-way grant by the BLM. The objective of this EA is to provide the BLM with the information necessary to reach a Finding of No Significant Impact (FONSI) or to determine the need for preparing an Environmental Impact Statement (EIS) prior to implementation of the Proposed Action or alternatives. This EA will identify and analyze the impacts associated with the proposed action including the construction of a power line by Imperial Irrigation District (IID) outside the project area. This power line would provide power to the proposed project.

1.5 CONFORMANCE WITH BLM LAND USE PLAN(S)

This Proposed Action is subject to the following Land Use Plans:

- California Desert Conservation Area Plan 1980 as Amended;
- Western Colorado Desert Routes of Travel Designations 2003 ;
- Flat-Tailed Horned Lizard Rangewide Management Strategy, 2003; and.
- Yuha Desert Management Plan, 1985;

The Proposed Action has been reviewed for conformance with these plans. The Project Area is entirely located on BLM administered lands in Imperial County, and is managed under the California Desert Conservation Area Plan (CDCA Plan), as amended (BLM 1980). Most of the lands administered under the CDCA Plan have been designated as one of four “multiple-use classes” Controlled (C), Limited (L), Moderate (M) and Intensive (I). The class designations govern the type and degree of development or management activities allowed within the boundaries of the classes, and must meet the guidelines given for that class.

The entire Project Area is Multiple Use Class L. Class L "protects sensitive, natural, scenic, ecological, and cultural resource values", and are "managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished." Most land use activities, including communication sites, are allowed in Class L after National Environmental Policy Act (NEPA) requirements are met.

Due to higher levels of resource sensitivity in Class L, vehicle access is limited to approved or "open" routes of travel. The Western Colorado OHV Routes of Travel Designation Plan (WECO) amended the CDCA Plan for Imperial County and assigned a designation where none existed in the CDCA Plan. Road 389 near the proposed tower site is designated as ";limited". Limited routes south of Interstate 8 are restricted to street legal vehicles only. Off-road vehicle travel is not allowed without specific authorization.

Under the FTHL Rangewide Management Strategy land use applications are reviewed on a case-by-case basis for impacts on FTHLs and their habitat. New authorizations may be permitted if the habitat disturbance does not pose a significant barrier to lizard movements. Distrubance shall be limited to 10 acres or less per authorization, if possible. Individual disturbances over 10 acres must be reviewed by the Interagency Coordinating Committee (ICC) and Management Oversight Group (MOG). The cumulative new disturbance per Management Areas since 1997 may not exceed 1% of the total acreage on federal land.

The proposed action is not specifically provided for in the Yuha Desert Management Plan. However the plan was designed to meet the goals of the CDCA Plan. Class L lands allow most land use activities, including communication sites, subject to NEPA requirements.

The Proposed Action is in conformance of the existing land use plans for the Project Area.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 INTRODUCTION

2.2 PROPOSED ACTION

Verizon proposes to place microwave antennas upon a 100-foot galvanized steel monopole with twelve (12) panel antennas, separated into three (3) sectors with four (4) antennas per sector (Figure 3). A Federal Aviation Administration (FAA)-mandated light will be placed at the top of the monopole which will measure a total of 102 feet. The antennas measure approximately 48 inches by 10.5 inches by 8.5 inches and will have a tip height of 100 feet above ground level. Provisioning for telephone interconnection will be provided via an 8-inch diameter microwave dish mounted at 57-inch on center and directed northwest toward the Ocotillo monopole site. The Sunrise Butte monopole will be designed to carry not only the antennas and internal coaxial cables of Verizon, but also those of up to three (3) additional co-locating carriers in the future. Additionally, Verizon proposes to install an 11.5-foot by 16-foot by 10-foot self-contained equipment shelter located adjacent to the base of the monopole. A 50-foot by 50-foot enclosure behind a six foot high chain link fence will surround the monopole base and shelter. The entire compound within the chain link fence will be paved with a minimum 6-inch base of crushed rock. Provisions will be made for the local power and water purveyor, Imperial Irrigation District (IID), plus AT&T utility service, via a meter pedestal inside the compound as well as an emergency 30 kilowatt generator with 52 gallon diesel fuel tank with either secondary containment or double wall construction. Any necessary utility companies will be required to obtain separate authorization from the BLM where any required service would cross BLM-administered land. Two phases for establishing the project are anticipated. The first phase will entail laying the foundation for the cellular site. Up to eight workers with appropriate equipment and materials will lay the foundation. A second work crew of up to five workers will establish the proposed monopole, electrical connection to the power at the transformer location.

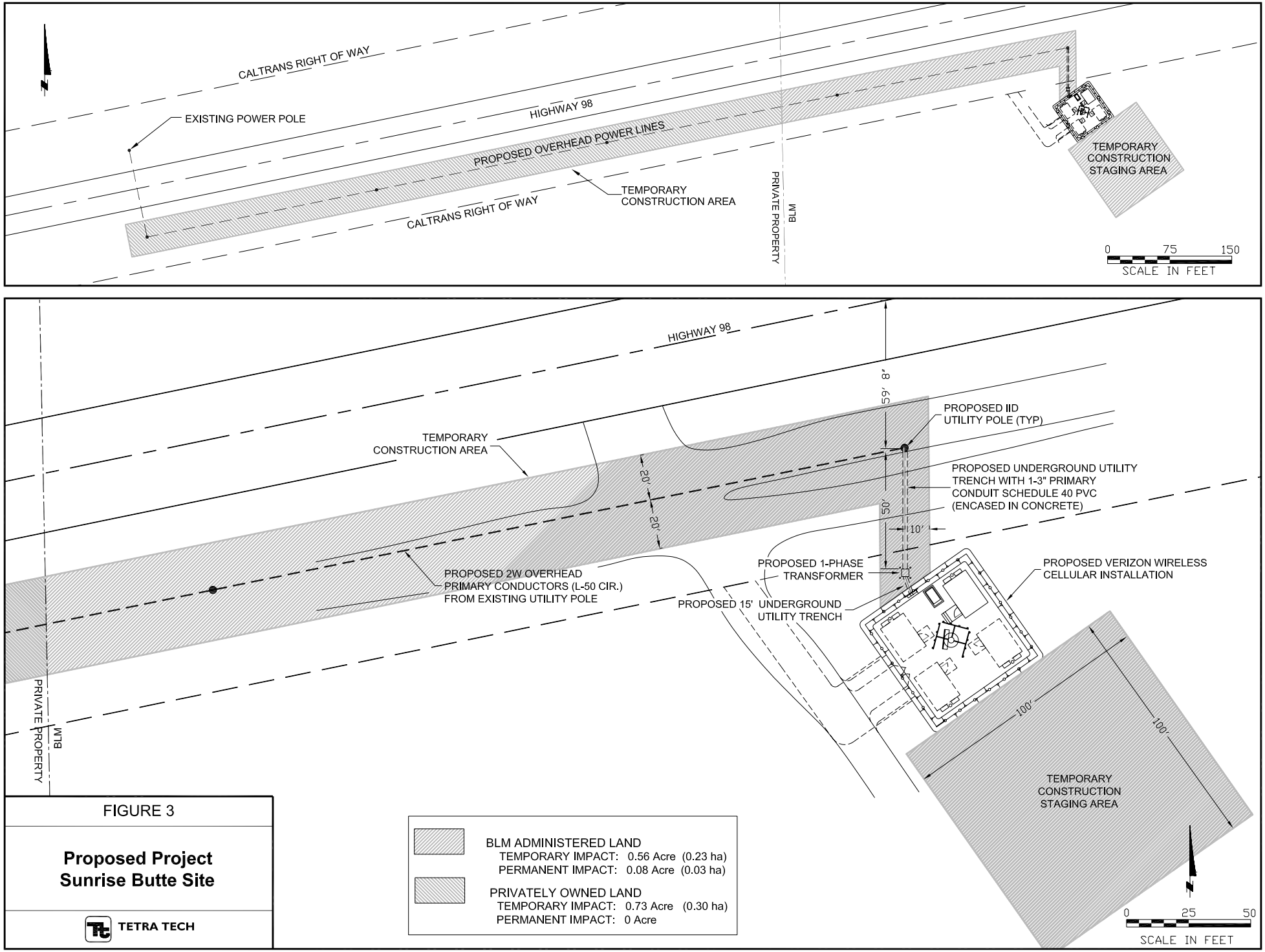


FIGURE 3

Proposed Project
Sunrise Butte Site

TETRA TECH

Within the Caltrans Right of Way (ROW) for Highway 98, power will be brought to the site via overhead power lines from an existing power point found approximately 700 feet west of the site on the north side of the road (Figure 3). Power poles and line will be established by IID and power will be brought to within 50 feet north of the site. IID must obtain a separate right-of-way from BLM for those poles placed on federal property. A trench will then bring power to a transformer associated with the site. Electrical power would be tied into the equipment cabinet used to serve the monopole. These systems would be placed with the enclosure associated with the site. A total of 0.08 acres (0.03 hectares) of desert habitat would be permanently lost due to the proposed project that includes the additional power poles within the ROW. A total of 1.29 acres (0.52 hectares) would be temporarily impacted due to construction impacts. A total of 1.37 acres (0.55 hectares) of impacts would be anticipated from the proposed action (Figure 3).

Temporary impacts to areas around these activities will be necessary to allow working space for equipment and construction crews. An easement to place the power poles and trench with the Caltrans ROW has been requested by the project proponent. A 100 foot by 100 foot temporary construction staging area immediately south of the proposed cellular site is also proposed (Figure 3). This area will serve as a lay down yard allowing temporary placement of equipment and materials.

2.3 NO ACTION ALTERNATIVE

The No Action Alternative would be to deny Verizon's application. Under this alternative, no cellular project would be carried out and the area would remain without cellular coverage. Where cellular signal could be received, potential interference from domestic Mexican cellular coverage would occur. Residents, businesses, emergency services and individuals in this area would continue to have poor or no cellular communication capability. The site would remain in its current condition.

2.4 ACTIONS CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

To the north of the proposed project site, Sunrise Butte rises approximately 87 feet above the surrounding terrain. During the site search, the property owner of Sunrise Butte was contacted and discussions regarding a potential lease of a portion of Sunrise Butte ensued. The property owner has developed an open air amphitheater around the summit of Sunrise Butte, possibly for

religious purposes, and firmly stated he would not allow Verizon on this property. This alternative was dropped from further consideration because the property owner would not discuss the possibility of a lease to the proponent for a wireless project on his property.

The property adjacent to the proposed site was also evaluated for a potential project location. This property has a pronounced drop in terrain which creates a very unfavorable scenario for a wireless project without increasing the height of the wireless device to almost 200 feet. Due to the excessive height, a lattice tower would be required, rather than a monopole. While lattice towers are considerably less costly to build than, monopoles, they are also visually much more intrusive. Analysis of impacts of the proposed project on the view shed for both a lattice structure versus a monopole structure as presented later in this document suggests that a monopole device would offer a less obtrusive facility. This alternative was dropped from further consideration because construction of a 200-foot lattice tower would have resulted in potentially adverse impacts on the view shed.

There are several security camera and communications towers in the vicinity under the purview of the United States Department of Homeland Security. Co-location of commercial wireless projects on these devices has not been allowed for security purposes. This alternative was dropped from further consideration as the Department of Homeland Security would not consider co-location of a commercial wireless project on their communications and security towers.

3.0 AFFECTED ENVIRONMENT

This chapter provides an overview of the affected environment in the project area. The proposed project is located in Imperial County, California. Imperial County encompasses 4,597 square miles and is bordered on the north by Riverside County, on the west by San Diego County. Its eastern boundary is the Colorado River and Arizona and directly to the south is Mexico. Approximately 50 percent of the county is undeveloped and the primary activity is agriculture with almost 3 million acres under irrigation. Irrigation water is largely derived from the Colorado River. The Salton Sea, a 381 square mile lake, is found in the northern portion of the county (United States Department of Energy 2004).

3.1 GEOLOGY AND SOILS

3.1.1 Regional Geology

The project area is located in the Yuha desert that is part of the Colorado Desert geomorphic province. The Colorado geomorphic province is bounded by the Colorado River found to the east of the site and the Peninsular ranges found to the west of the site. The international border to the south of the site represents a political boundary to this province. To the north of the site, the Colorado Desert geomorphic province is bounded by the San Andreas Fault system and the southern extension of the Mojave Desert and the Transverse Ranges to the far north (California Geological Survey 2002). The oldest rocks in the Colorado Desert are Precambrian crystalline gneisses, anorthosites, and schists. Younger plutonic rocks from the late Paleozoic to middle Cenozoic have intruded these ancient rocks (Norris and Webb 1976). Quaternary alluvial, lacustrine, and eolian deposits characterize the subsection of the Colorado Desert geomorphic province that the Yuha Desert is found on and soils found in this area are primarily derived from Pliocene non-marine and marine sedimentary rocks (United States Department of Agriculture 1997).

The Colorado Desert province is characterized by northwesterly structural trends. The San Andreas Fault zone extends along the northeastern side of the Salton basin from the Coachella Valley to the southeastern end of Imperial County (Norris and Webb 1976). Evidence of faulting including offset streams and truncated alluvial fans is strongly marked in the Salton Basin. Towards the south of the Colorado Desert province is the Imperial fault, which was outlined in the surface during an earthquake in 1940. Folding is prominent in the Colorado Desert province, particularly in younger rocks close to fault zones (Norris and Webb 1976). Thick Cenozoic sedimentary materials underlie the Salton Basin. These are land-laid nonmarine deposits. This thickness demonstrates a considerable sinking of the basin floor as sediments accumulated (Norris and Webb 1976). Evidence suggests this sea-floor spreading is widening the Gulf of California at its northern end.

The property is located approximately ¼ mile east of the Laguna Salada fault (California Division of Mines and Geology, 1962, reprinted 1993). This fault is located approximately 650 feet west of the site. A review of the available State of California Special Studies Zones maps indicates that the subject property does not appear in any Alquist-Priolo (AP) Earthquake Fault

Zones (California Department of Conservation, Division of Mines and Geology 2000). The most recent recorded fault surface rupture associated with the Laguna Salada fault zone occurred in 1892 at a magnitude 7 (Jennings 1994).

3.1.2 Soils

Soils in the Yuha desert are primarily Typic Torrifluvents, Typic Torripsamments and Typic Torriorthents developed on alluvial fans and lacustrine sediments. These soils are typically formed due to movement of sediments in riparian scenarios or dune sand movements. Typic Calciorthids and Typic Haplargid soils found in this area have been formed on older alluvial fans and terraces. These are soils that may have calcium carbonate influences or may have signs of pedogenic horizon formations. Soils associated with the Yuha Desert tend to be well drained with the exception of those found in playa areas. The soil temperature regime is hyperthermic (very hot) and soil moisture regime is aridic (very dry) (United States Department of Agriculture 1997).

3.1.3 Farm lands (prime or unique)

The California Department of Conservation Farmland Mapping and Monitoring Program has designated certain soil types in the Imperial Valley as “prime farmland” for both soils that have and have not been irrigated (California Department of Conservation 1995 Updated 2005). These types of soils are subject to protection under the Farmland Protection Policy Act of 1998. Prime or unique farmland soils were considered but not further discussed in this EA as no prime or unique farmland soils are found on the site or in adjacent areas to the site.

3.2 WATER RESOURCES

3.2.1 Surface Water and Flood Plains

Surface water runoff in the Yuha desert is rapid from alluvial fans and slow from basin floors with ultimate drainage to the Salton Sea (United States Department of Agriculture 1997). The Salton Sea is a hypersaline lake that was accidentally formed in 1905, when floodwaters overwhelmed irrigation canals built to divert water from the Colorado River to the Imperial Valley. For two years the full flow of the Colorado River was diverted through the New and Alamo Rivers and emptied into the Salton Basin, creating an accidental replication of a process that has been occurring for thousands of years in this region and flooding approximately 350,000

acres of land (Busch 1995). The present day Salton Sea is a large saline lake lying between the Coachella and Imperial valleys, the northern and southern portions of the Salton Sink, respectively. It is the largest permanent water body found in the Colorado River Delta Region, apart from the Gulf of California. Streams in the Yuha desert are ephemeral in nature; they are dry for most of the year with no water in some years. Temporary ponding does occur on playas or dry lake beds during rainfall events.

Pinto wash, an ephemeral wash, is the closest streambed to the project site and is found approximately two miles to the south of the proposed project. Flood plains in the region have been mapped by the Federal Emergency Management Agency for flooding hazards. The project site has not been mapped within any flood hazards and would not be subject to flooding (Federal Emergency Management Agency 1984).

3.2.2 Water Quality

The Yuha Desert is primarily associated with the Coyote Wells Valley groundwater basin (California Department of Water Resources 2004). This basin is bounded on the north by impermeable metasedimentary rocks of the Coyote Mountains and by the Elsinore fault zone. The Jacumba Mountains bound the basin to the west and southwest with the international border serving as the southeast boundary. The eastern boundary is roughly a north south line from the Superstition Mountain through the Yuha Buttes to the international border. Palm Canyon wash and Coyote wash provide the main surface drainage for this basin. Groundwater is withdrawn from this basin primarily for agricultural uses. Groundwater withdrawn from the Coyote Wells Valley basin has been characterized as a sodium bicarbonate-chloride type. Fluoride levels have been measured as high in some wells likely due to pre-Quaternary sedimentary deposits or from thermal water associated with an extension of the Elsinore fault (California Department of Water Resources 2004).

3.3 AIR QUALITY

3.3.1 Regional Climate

Imperial County is one of the hottest and driest parts of California and is characterized by hot, dry summers and relatively dry winters (County of Imperial 1993). Relative humidity in the summer is very low and can average from 30 percent to 50 percent in the early morning and 10

percent to 20 percent in the afternoon. During the hottest part of the day, relative humidity can drop below 10 percent, although the extensive agricultural operations found in the Imperial Valley tends to raise the humidity locally. The normal maximum temperature in January in the Imperial County region is about 70°F and the normal minimum temperature around 41°F. In July, the normal maximum temperature is more than 107°F while the normal minimum temperature is about 75°F. Average annual precipitation is less than 3 inches (United States Department of Energy 2004).

3.3.2 Air Quality

The Federal Clean Air Act (42 USC Section 7401-7671q; CAA) requires the adoption of the National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare from the effects of air pollution. Current standards are set for sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), fine particulate matter equal to or less than 10 microns in size (PM_{10}), fine particulate matter equal to or less than 2.5 microns in size ($PM_{2.5}$), and lead (Pb). These pollutants are called the criteria pollutants. The State of California Air Resources Board (CARB) has established additional standards for the criteria pollutants that are generally more restrictive than the NAAQS. Federal and state standards are shown in Table 1 (California Air Resources Board 2005).

The newest federal standards, for O_3 averaged over an 8-hour period and for $PM_{2.5}$, became effective on September 15, 1997, and were subsequently challenged and litigated. The U.S. Supreme Court affirmed the standards, and policies and systems to implement these new standards are being developed. On April 15, 2004, the EPA issued a final ruling for the 8-hour O_3 designations and controls. $PM_{2.5}$ data are still being collected at many sites.

In California, local responsibility for air quality is assigned to air quality management districts and air pollution control districts. The project site is located within the Imperial County Air Pollution Control District. The project site is located within the Salton Sea Air Basin that has been designated by the State of California as an ozone non-attainment area and is federally designated by the Environmental Protection Agency (EPA) as a Section 185A ozone non-attainment area. The Section 185A transitional status means that the EPA considers the non-attainment status is due to likely trans-boundary migration of pollutants from Mexico (United

States Department of Energy 2004). The City of Calexico is classified as in a non-attainment status for carbon monoxide and Imperial County is in a non-attainment status for $PM_{2.5}$. The particulate matter is derived from local and agricultural sources and is likely a combination of windblown dust from natural and disturbed lands with a primary source being vehicles, including off-road use of paved and unpaved roads (United States Department of Energy 2004).

Table 1: State and Federal Air Quality Standards

Pollutant	Averaging Time	California Standards [1] (Concentration) [3]	Federal Standards [2]	
			Primary [3, 4]	Secondary [3, 5]
Ozone (O_3)	1 Hour	0.09 ppm	-	
	8 Hour	0.07 ppm	0.08 ppm [6]	0.08 ppm
Particulate Matter (PM_{10})	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	150 $\mu g/m^3$
	Annual Arithmetic Mean	20 $\mu g/m^3$	50 $\mu g/m^3$	50 $\mu g/m^3$
Particulate Matter ($PM_{2.5}$)	24 Hour		65 $\mu g/m^3$	65 $\mu g/m^3$
	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	15 $\mu g/m^3$
Carbon Monoxide (CO)	8 Hour	9 ppm	9 ppm	None
	1 Hour	20 ppm	35 ppm	
	8 Hour (Lake Tahoe)	6 ppm		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean		0.053 ppm	
	1 Hour	0.25 ppm		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean		0.03 ppm	
	24 Hour	0.04 ppm	0.14 ppm	
	3 Hour			0.5 ppm
	1 Hour	0.25 ppm		
Lead [7]	30 Day Average	1.5 $\mu g/m^3$		
	Calendar Quarter		1.5 $\mu g/m^3$	1.5 $\mu g/m^3$
Visibility Reducing Particles	8 Hour	Footnote No. 8		
Sulfates	24 Hour	25 $\mu g/m^3$		
Hydrogen Sulfide	1 Hour	0.03 ppm		
Vinyl Chloride [7]	24 Hour	0.01 ppm		

Notes for Table 1:

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter— PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3. Concentration expressed first in units in which it was promulgated; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

5. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

6. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18,1997.

7. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

8. Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particulates when relative humidity is less than 70 percent.

Source: Information provided in Table 1 is from the California Air Resources Board (11/29/05)

3.4 HAZARDOUS AND TOXIC WASTES

A Phase I Environmental Assessment was performed on the proposed project site to identify whether Recognized Environmental Conditions (RECs) are present on the property (Tetra Tech 2007c). RECs are the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. No RECs were identified from review of historic records, environmental database review, site reconnaissance, or interviews. No further work was recommended. The proposed project would not generate hazardous and/or toxic wastes as part of enhancing wireless service to the region.

3.5 SPECIAL MANAGEMENT AREAS

Special Management Areas can include Areas of Critical Environmental Concern (ACEC), Wilderness, Wilderness Study Areas, and other Management Areas.

The ACEC designation is an administrative designation used by the BLM that is accomplished through the land use planning process. The Federal Land Policy and Management Act of 1976 as Amended states that the BLM will give priority to the designation and protection of ACECs in the development and revision of land use plans.

BLM regulations define an ACEC as an area "within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes, or to provide life and safety from natural hazards" (43 CFR 160). ACECs differ from other special management designations such as wilderness study areas in that the designation by itself does not automatically prohibit or restrict other uses in the area.

The proposed project location is within the Yuha Basin ACEC. The Yuha Basin ACEC was designated as part of the Desert Plan for the continued conservation of the flat tailed horned lizard (*Phrynosoma mcallii*) as well as sensitive cultural and wildlife resources while allowing for mineral material sales, geothermal development and motorized vehicle competitive events (Flat-Tailed Horned Lizard Interagency Coordinating Committee 2003). The Yuha Basin ACEC is managed as a limited use area.

The 1997 edition of the Flat-tailed Horned Lizard Rangewide Strategy (RMS) established five FTHL Management Areas (MAs), and the framework for securing and managing sufficient habitat to maintain several self-sustaining populations of the FTHL. The proposed project is located within the Yuha MA. The RMS, revised in 2003, provides guidance, planning actions and mitigation measures to ensure that the goal of maintaining a "long-term stable" population of FTHL within each MA is achieved.

The California Desert Conservation Area Plan of 1980 as amended designated Wilderness Study Areas, the majority of which were designated as Wilderness Areas by the California Desert Protection Act of 1994. The proposed project is well outside any remaining Wilderness Study

Areas. The Jacumba Mountains Wilderness Area is located approximately 6 miles to the west of the proposed project.

3.6 BIOLOGICAL RESOURCES

The proposed project is located within the Yuha desert where creosote (*Larrea tridentata*)-white bursage (*Ambrosia dumosa*) Sonoran Desert scrub is the common plant association. This plant community is associated with open sandy flat areas and valleys. The available literature on natural resources with reference to plants in and near the project area was reviewed including information from the California Department of Fish and Game (CDFG) California Natural Diversity Data Base (CNDDB) and the California Native Plant Society (CNPS) (CDFG 2007). Table 2 lists sensitive plants and wildlife likely to found in the area. In addition, a detailed biological resources survey was conducted and concluded on 12 March 2007 by Tetra Tech, Inc (Tetra Tech 2007a). The survey of the lease area, temporary construction staging area plus power pole corridor was conducted on foot. Dominant plant species and natural communities were identified. Surveys for special-status species including flat tailed horned lizard and potential habitat to support sensitive species at the site and in the general area were conducted concurrently with the biological field reconnaissance. Based on the field reconnaissance, occurrence probability for the presence of sensitive species is noted in Table 2.

Table 2: Sensitive Biological Resources for Yuha Desert 7.5 Minute USGS Quadrangle

Resource	Habitat and Distribution	Status Designation	Occurrence Probability
Plants			
Crucifixion thorn (*Castela emoryi*)	Mojave desert scrub, Sonoran desert scrub, playas, gravelly soils, sometimes in alkali playas or washes	Federal : None State: None CNPS: 2.3	None; no alkali playas or washes found on the site.
Baja California ipomopsis (*Ipomopsis effusa*)	Sonoran desert scrub, chaparral, alluvial washes in California	Federal : None State: None CNPS: 2.1	None; no alluvial washes found on the site or adjacent to the site.
Brown turbans (*Malperia tenuis*)	Sonoran desert scrub, sand places and rocky slopes	Federal : None State: None CNPS: 2.3	None; no rocky slopes present or adjacent to the site.

Table 2 (Continued)

Reptiles			
Flat-tailed horned lizard (*Phrynosoma mcallii*)	Desert washes and desert flats, fine sandy soils and vegetation cover	Federal: PT***** State: California Species of Concern	High; suitable habitat is present on site and in adjacent areas to the site.

* Proposed Threatened listing withdrawn by the United States Fish and Wildlife Service on 03 January 2003

Notes:
ND No Designation

Federal Status:
C Candidate species
FE Federally listed Endangered
FT Federally listed Threatened
FPD Federally proposed for Delisting
PT Proposed Threatened

State Status:
SE State listed Endangered
ST State listed Threatened
CSC California Department of Fish and Game Species of Concern
P California Department of Fish and Game Protected Species (Fully)

California Native Plant Society (CNPS) List:
1A Plants presumed extinct in California
1B.1 Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3 Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California
2.1 Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
2.2 Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
2.3 Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
3.1 Plants about which we need more information; seriously threatened in California
3.2 Plants about which we need more information; fairly threatened in California
3.3 Plants about which we need more information; not very threatened in California
4.1 Plants of limited distribution; seriously threatened in California
4.2 Plants of limited distribution; fairly threatened in California
4.3 Plants of limited distribution; not very threatened in California

Source: California Department of Fish and Game, Natural Diversity Data Base, Yuha Basin, USGS 7.5' Quadrangle, 16 March 2007

No sensitive plant or wildlife species were observed at the project site during the site reconnaissance. Table 3 provides a list of plants observed during the reconnaissance. No wildlife was observed on the site or in the general area of the site. Conditions may have been too cool (<80°F) for the flat-tailed horned lizard to be observed.

Table 3: Compendium of Flora Observed During Reconnaissance Survey, Sunrise Butte Site

Angiospermae: Monocotyledonae	**Monocot Flowering Plants**
Poaceae	**Grass Family**
Pleuraphis rigida	Big galleta
Schismus barbatus	Mediterranean split grass*
Angiospermae: Dicotyledonae	**Dicot Flowering Plants**
Asteraceae	**Aster Family**
Ambrosia dumosa	White bursage
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens	Fourwing saltbush
Fouquieriaceae	**Ocotillo Family**
Fouquieria splendens	Ocotillo
Zygophyllaceae	**Caltrop Family**
Larrea tridentate	Creosote bush

* Non-native, invasive plant

3.6.1 Invasive, Non-Native Species

Many species of introduced, non-native plants occur in the project area and the desert southwest in general. Most are Mediterranean or Asian annual species that germinate in the winter or spring months. Split grass (*Schismus barbatus*) is common in the project area as well as Sahara mustard (*Brassica tournefortii*) and Russian thistle (*Salsola tragus*) (Flat-Tailed Horned Lizard Interagency Coordinating Committee 2003). Many other non-native annual species may also be present especially as found near agricultural fields. Density, diversity and productivity of both native and non-native plants will vary from year to year due largely to rainfall amounts. While the effect of non-native plants on sensitive species such as the flat-tailed horned lizard is unknown, changes in plant communities do affect the type of forage available to harvester ants which are prey for flat-tailed horned lizards. Invasive, non-native species may indirectly affect flat-tailed horned lizards. Split grass, an invasive non-native plant, was observed in the study

area around the base of on-site shrubs. Split grass was also observed in the area surrounding the site.

3.6.2 Migratory Birds

The Migratory Bird Treaty Act of 1918 decreed that all migratory birds and their parts (including eggs, nests, and feathers) were fully protected. The Migratory Bird Treaty Act is the domestic law that affirms, or implements, the United States' commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each of the conventions protect selected species of birds that are common to both countries (i.e., they occur in both countries at some point during their annual life cycle). While the proposed project area does not have suitable structures for roosts and/or nesting, the property immediately to the north of the site has man-made features that may serve as likely roosting areas and potential nesting spots. Non-native plants (citrus) appear to be watered and maintained and could serve as an attractant for prey that could attract raptors. No sensitive raptors or birds were observed at the proposed project site or in the general vicinity of the site during the reconnaissance survey. Vertical structures found on the private property to the south of the site offer suitable perches for roosting or foraging birds. No birds were observed on these structures during the reconnaissance.

3.6.3 Wetlands/Riparian Zones

No wetlands and/or riparian zones are found near the proposed project area.

3.6.4 Special Status Species

Special status plants and wildlife species are subject to regulations under the authority of both Federal and State agencies. Special status species include those species that are listed or being considered for listing or endangered by the U.S. Fish and Wildlife Service (USFWS), or are designated by the BLM as sensitive species or that are listed as threatened or endangered by the CDFG. No plant or animal species listed as threatened or endangered by the USFWS or CDFG were observed during the field survey conducted at the site. No sensitive species as designated by the BLM were observed during the field survey. The site is located within the Yuha Management Area (MA) for the flat-tailed horned lizard (FTHL), as established by the Rangewide Management Strategy (RMS) (Flat-Tailed Horned Lizard Interagency Coordinating

Committee 2003). While not precluded, the goal of the RMS is to limit land use authorizations that would cause surface disturbance within the MAs. If new authorizations are permitted applicable mitigation and compensation measures for disturbance shall be applied. Disturbance shall be limited to 10 acres or less per authorization, if possible. The cumulative new disturbance per MA since 1997 may not exceed 1% of the total acreage on federal land. Habitat likely to support the flat tailed horned lizard, a sensitive species listed by the BLM occurs at the site.

3.7 CULTURAL RESOURCES

Cultural resources include Native American, prehistoric, and historic-era (>50 yr old) archaeological artifacts, features, and sites that are protected under the National Historic Preservation Act (NHPA) and NEPA. Cultural resources that are judged to meet the criteria for listing on the National Register of Historic Places are considered to be significant historic properties and, as such, must be considered during planning for Federal projects. Federal agencies are also required to consider the effects of their actions on items, resources, and locations of religious significance to Native Americans, as specified in the American Indian Religious Freedom Act (P.L. 95-341). Native American graves and burial grounds, including human remains, sacred and funerary objects, and objects of cultural patrimony, are protected under the Native American Graves Protection and Repatriation Act (P.L. 101-601).

3.7.1 Prehistoric Period

Though it is known that far southern California was populated by Hokan speakers during its very late prehistory, a general cultural chronology for the Colorado Desert region has not yet been clearly established. The archaeological record of the Colorado Desert indicates that cultural systems responded to changing environmental conditions (especially heat and available water resources) through time with a variety of hunter-gatherer subsistence and settlement strategies (Morratto 1984).

Malcolm Rogers, a pioneering California archaeologist, classified the Paleoindian Period in the region from the south coast of southern California to the Arizona Desert as the San Dieguito Complex. In addition to the lack of projectile point technology, indicators of such an early period are said to include assemblages of varnished, crude stone tools, such as primary flakes,

cobble tools, large bifaces, choppers, scraper planes, and ovate bifaces. Such sites often occur on desert pavements and are also sometimes associated with rock rings and cleared circles. The Paleoindian adaptation in this region is featured small, mobile bands differentially exploiting large and small faunal resources and seasonally available floral resources. Seeds and nuts were probably not used to any great degree; milling equipment is lacking in the record (Moratto 1984; Schaefer 1994).

Following the San Dieguito, the native people of the Archaic Period adapted to the Holocene environmental shifts until the Patayan Period and its Yuman culture. Current archaeological research places the beginning of this last prehistoric phase at approximately 1075 years Before Present (BP). Linguistic evidence, however, suggests that a Yuman migration may have occurred out of Baja California as early as 5000 years BP. Takic speakers of the Uto-Aztecan linguistic family apparently moved westward with the Numic migration from the Great Basin about 5,000 years ago and settled in the center of the Salton Trough and regions northward.. This was essentially coincident with the Yuman movement from the south. Takic speakers apparently moved unopposed to the California coast, pushing ancient Hokan groups to both sides and settling along a wide belt from the Sierra Nevada to Orange and Ventura Counties.

Middle Archaic adaptations in California's Colorado Desert were probably similar to those in western Arizona. The Arizona sites, features, and artifacts suggest population increases and use of both forager and collector settlement and subsistence strategies. Sites of the late Pinto period and the Gypsum Period are ascribed to the Late Archaic extending from roughly 4,000 to 1,500 years ago. Subsistence strategies included opportunistic hunting and trapping of large and small fauna and milling of seasonally available nuts and seeds by low population density hunters and gatherers (Schaefer 1994).

The Late Prehistoric adaptation in this region is termed the Patayan cultural pattern (Moratto 1984). It featured dispersed seasonal settlements by mobile groups exploiting both riparian and other desert resources. It is thought to have originated about 500 A.D, from late archaic patterns that had been influenced by the agriculture-based Hohokam culture on the upper Gila River in Arizona. Recovered cultural materials include clay figurines and pipes; small side-notched and serrated projectile points; manos, metates, mortars, pestles; arrowshaft straighteners; abraders; shell beads; worked bone tools; and both buff ware (from lowland clays) and brownwares (of

upland micaceous clays). Also present are examples of rock art, geoglyphs, and cremation burials. People used jacal structures, semi-subterranean houses, and simple ramadas. All groups used ceramic ollas for food storage and the more sedentary groups used elevated granaries.

3.7.2 Historic Period

Along the California coast, the Spanish made brief exploratory visits beginning in AD 1542 and established a permanent settlement in San Diego in 1769. In the interior, contacts and settlement were less frequent and generally occurred much later. Although use and settlement by Euro-Americans came later to the Imperial Valley, many locations traditionally used by the native inhabitants such as wells, other watered locations, and trails were among the first places regularly used by newcomers (Bannon 1974).

The post-contact history of the region can be divided into several themes, including exploration, transportation, economic development, and settlement (Guest 1963). With its harsh environment, this region was explored and settled later than the coastal regions of California; it experienced explosive growth as an agricultural center with the coming of irrigation in the early years of the twentieth century.

Anglo-American exploration of the Imperial Valley region began in 1827 when a trader named Richard Campbell traveled from Santa Fe, New Mexico, to San Diego using the Southern Route. Campbell believed a wagon road could be opened along this trail, but at that time travelers to California preferred the Santa Fe or Old Spanish Trail that followed the Mojave River and entered the Los Angeles Basin via Cajon Pass and the San Bernardino Valley. Around 1828, two parties of American trappers, led by Sylvester Pattie and R. W. H. Hardy, spent time in the vicinity of the Southern Route but left little record of what they observed

The first formal record made by an American was that of Lieutenant-Colonel W. H. Emory, who traveled the Southern Route in 1846. The following year Emory accompanied General Stephen W. Kearny's American Army of the West expedition of 200 dragoons over the same route, with Kit Carson as guide. In 1848, the Mormon Battalion followed the Southern Route and established the first wagon road (Guest 1963).

During the gold rush, thousands of prospectors and other immigrants came to California by the Southern Route. The Butterfield Overland Mail Company offered semi-weekly stage service beginning in 1858. This lasted only till 1861 when a subsidy was lost because of the Civil War.

In 1853 the U.S. government funded an expedition (led by Lieutenant R. S. Williamson) to survey a transcontinental railroad route. The same year an expedition led by Colonel Henry Washington surveyed the San Bernardino Base Line and built a wagon road through San Gorgonio Pass and across Coachella Valley.

An 1862 gold discovery near the Colorado River in Arizona stimulated increased travel, and a direct route eastward from the San Gorgonio pass was established by William D. Bradshaw. The Bradshaw Trail traversed almost all of Riverside County and passed the northern end of what would later be the Salton Sea (Johnston 1977). Prior to the Bradshaw Trail there were only two indirect routes to the gold fields, one using a portion of the Southern Route and the other an extension of the Santa Fe Trail. Until the Southern Pacific Railroad was completed in 1877 east to Santa Fe, the Bradshaw Trail was the principal route of communication between southern California and the eastern part of the United States (Johnston 1977).

The early twentieth century saw the development of automobile transportation across the Colorado Desert. Most car and truck traffic was along previously established wagon roads following the path of least topographic resistance from one watering place to the next between desert settlements (Guest 1963). Most of these roads remained unpaved until the late 1920s.

The most important engine of economic growth in the Imperial Valley has been commercial agriculture, which was possible after the development of irrigation with Colorado River water. To a much lesser degree mining industries, the military, and businesses catering to recreation have also been important parts of the local economy. In recent years, past cross-border trade has become very important.

During the winter of 1904-1905, higher than usual rainfall in the watershed area of the Gila River caused a high rate of discharge into the Colorado River above the new temporary Imperial Canal intake. Temporary dykes and dams gave way and the entire discharge of the Colorado River began to pour into the Salton Sink, creating the Salton Sea (Coachella Valley Water District 1999; DeStanley 1966; Laflin 1995). The flooding permanently altered the New and

Alamo Rivers and the adjacent lands. Deep channels were excavated by the rushing water and the floodwater spread out over a mile wide in places. In addition to the damage done to the main channels, over 13,000 acres were ruined by erosion of side channels.

Mining has a long history in Imperial County. Among the minerals and ores mined are: gypsum, salt, gold, manganese, carbon dioxide (recovered by drilling wells), silver, copper, lead, nickel, mica, barite, silica, pumice, building stone, tungsten, sulfur, volcanic nodules for roofing, kyanite, sand and gravel.

Wells have been drilled, mostly in the southeastern portion of the Salton Sea, to explore for geothermal steam as a source of energy production. The Salton Sea Known Geothermal Resource Area supports 15 geothermal plants south of the Sea, generating an aggregate of 268 million watts of electricity. Between about 1907 and World War II, numerous oil exploration wells were drilled in the Salton Sea area, but no oil was discovered.

The California-Arizona Maneuver Area and the Desert Training Center were established by General George S. Patton in the Colorado Desert in 1942 (Guest 1963). Used to prepare more than 1,000,000 American soldiers for desert warfare in North Africa, the maneuver area was the largest simulated land-war area in history, stretching from the deserts of western Arizona, northwest to the central Mojave Desert of California, and crossing into Imperial County east of the Salton Sea.

Other World War II military facilities were the Old Sandy Beach Naval Station and the Naval Auxiliary Air Station, both on the southwestern shore of the Salton Sea, and Camp Dunlop, a 640 acre training camp for the Marines near Niland. In 1950, the State Lands Commission leased the Naval Auxiliary Air Station facility, which had been a small sea plane base during the war, to the Atomic Energy Commission (AEC). The AEC enlisted the Sandia Corporation, a division of Western Electric Company, to test the ballistic characteristics of nuclear bomb casings. A total of approximately 75 square miles was eventually set aside for this use. A target in the Salton Sea 1.5 miles from the shore was used during the tests by Strategic Air Command bombers. Since World War II, the US Navy has maintained the extensive Chocolate Mountain Naval Aerial Gunnery Range, occupying most of the mountainous area east of the Salton Sink. The Navy also reserves several smaller areas both to the east and west of Brawley and El Centro.

Recreation has been an important industry, especially for the communities located on the shore of the Salton Sea. Especially important have been fishing and the hunting of ducks and geese. Recreational development on the shores of the Salton Sea increased in 1958. Communities such as Salton City, Salton Beach Estates, Desert Shores, and North Shore Beach Estates were all established at about that time. These resorts did not achieve the long term the success their developers envisioned. Currently, fishing, boating, camping, personal watercraft use, hiking, wildlife viewing, and off-highway vehicle use are the major recreational activities (Guest 1963).

3.7.3 Known Cultural Resources

A cultural survey of the Sunrise Butte has been conducted to evaluate the potential for sensitive resources to be found at the proposed project site (Tetra Tech 2007b). An intensive archaeological survey of the project study area on February 14, 2007 did not detect the presence of any prehistoric or historic-era artifacts, features, or sites.

3.8 RECREATION

The Federal Land Policy and Management Act of 1976 established the California Desert Conservation Area (CDCA) in southeast California. The CDCA is roughly 25 million acres of which 12 million acres are managed by the BLM. The CDCA plan designated the Yuha Basin as an ACEC because of the dense concentrations of archeological sites and also due to the presence of habitat likely to support the flat-tailed horned lizard, a BLM-designated sensitive species. The designation of the Yuha Basin as an ACEC provides special land use and management requirements intended to enhance and protect these sensitive resources and is designated as a Class L (limited) multiple use area (Bureau of Land Management 1985). In a limited use area, only low-intensity controlled activities are allowed. The BLM has identified the recreational activities that are allowed in the Yuha Basin ACEC (Bureau of Land Management 2002). Travel is allowed on BLM-designated routes only. Routes designated “Limited Use” south of Interstate 8 is restricted to street legal vehicles only. All vehicles are allowed on routes designated “Open”. Parking is permitted adjacent to routes south of Interstate 8 only during daylight hours, except unoccupied vehicles next to the Jacumba Mountains Wilderness Area left by overnight wilderness visitors. Camping is only permitted in designated areas within the Yuha Basin ACEC

3.8.1 Wild and Scenic Rivers

No wild and scenic rivers are found within the general region of the proposed project.

3.9 INFRASTRUCTURE

Interstate 8 (1-8) is the primary east/west route through the county between San Diego and Yuma, Arizona. It passes through the City of El Centro and provides connections via State Routes 86 and 111 to Heber and Calexico to the south and to Imperial and Brawley to the north. State Route-86 continues along the west side of the Salton Sea to serve the City of Westmorland and the Salton City area, and joins Interstate 10 at Indio in Riverside County (County of Imperial 1993). State Route-111 serves the east side of the Salton Sea, through Calipatria and Bombay Beach/Hot Mineral Spa to also connect with 1-10 in Indio. Both routes carry inter-regional commercial and agricultural traffic from Imperial County and Mexicali, Mexico to markets and transportation centers in Los Angeles and Orange County. These routes are also heavily used by recreational travelers to destinations in Imperial County, Baja California, Mexico; and Arizona. State Route 98 runs east to west and connects the Calexico and Ocotillo (Figure 4). The proposed project would be located adjacent to the Caltrans Right-of-Way of State Route 98 at Sunrise Butte. Access to the project area would be from State Route 98 via BLM 389, a dirt and unimproved road adjacent to the site.

3.10 SOCIOECONOMICS AND PUBLIC SERVICES

To describe the socioeconomic conditions for the project area, an analysis of the Region of Influence (ROI) that encompasses Imperial County would be used. For this type of analysis, the ROI is based on the residential locations of construction workers and operation workers that may be directly related to installation and maintenance of the proposed wireless cellular site. The ROI is used to assess the impacts of site activities on employment, income and housing. It is assumed that construction of the wireless cellular site will require no permanent in-migration of workers, there would be no adverse impacts on population, community services and community fiscal conditions. The level of workers assigned to installation of the wireless cellular site will not cause any short-term impacts on temporary housing in the county. For routine maintenance required by the cellular site, workers visiting the site would be transitory in impacts to county resources and no long term or short term impacts would occur.

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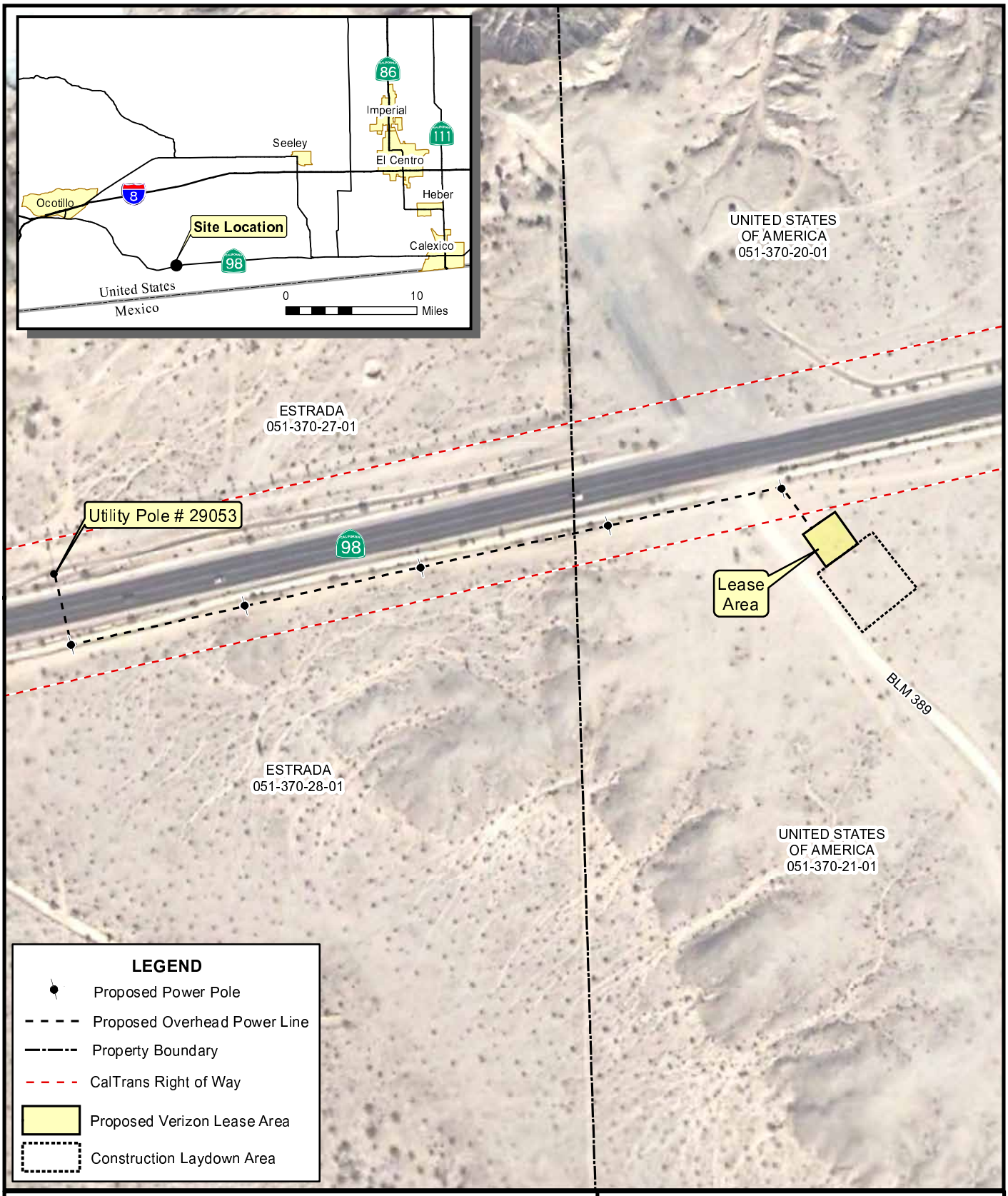

Source: Google Earth aerial photograph, 2005.

FIGURE 4

INFRASTRUCTURE AND
TRANSPORTATION CORRIDOR
SUNRISE BUTTE SITE,
IMPERIAL COUNTY, CALIFORNIA

TETRA TECH

3.11 VISUAL RESOURCES

The BLM has developed a systematic approach to managing scenery and visual resources of landscapes called the Visual Resource Management System (VRM). This system is used for the inventory of visual resources and evaluation of predicted visual effects that could be created by proposed projects. The purpose of the VRM system is twofold: 1) to manage the quality of the visual environment, and 2) to reduce the visual impact of developmental activities while maintaining effectiveness of the BLM's resource programs. The Federal Land Policy and Management Act of 1976 (FLPMA) requires that public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values (43 United States Code 1701). The BLM is concerned with managing visual impact without unduly reducing commodity production or limiting overall program effectiveness.

Because the scenic value and management objectives of public lands vary, it is not practical or desirable to provide a uniform level of visual management for all areas administered by the BLM. The agency has therefore developed a system for evaluating the visual resources of a given area and for determining what degree of protection, rehabilitation, or enhancement is desirable and possible. The VRM system is an analytical process that identifies, sets, and meets objectives for maintaining scenic values and visual quality. It functions in two ways as follows:

First, for management purposes, the BLM conducts an inventory that evaluates visual resources on all lands under its jurisdiction (Inventory/Evaluation). The second step occurs once the lands are inventoried and analyzed and where relative visual ratings are assigned (Management Classification). The development of Visual Resource Management Classes is not project-specific. It is a general process to identify broad visual objectives for all public lands during land management processes.

Visual Resource Management Classes are established through the resource management planning (RMP) process for all BLM-administered lands. During the RMP process, the Class boundaries are adjusted as necessary to reflect resource allocation decisions made in RMPs. In accordance with BLM Manual 8400 (April 5, 1984), it is BLM policy that "interim visual management objectives" are established where a project is proposed and there are no RMP approved Visual Management Classes. These interim objectives are developed using the

guidelines in Manual Section 8410 and must conform to the land allocations set forth in the RMP, which cover the project area (Bureau of Land Management 1986).

3.11.1 VRM Evaluation

The proposed Verizon Wireless cellular site location is in the Salton Trough which is a landward extension of the Gulf of California and lies within the southwest portion of the Basin and Range Physiographic Province (United States Geologic Survey 2003). This subsection is typified by very gently to moderately sloping alluvial fans, terraces, and nearly level basin floors and dry lake beds. Topography in this area is generally flat and allows for views that extend beyond 10 miles before visual acuity of larger land forms diminish.

3.11.2 Scenic Quality Evaluation

Scenic quality is a measure of the visual appeal of a tract of land. In the visual resource inventory process public lands are given an A, B, or C rating based on apparent scenic quality which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. During the rating process each of these factors are ranked on a comparative basis with similar feature within the physiographic province. An important premise of the scenic evaluation is that all public lands have scenic value, but areas with the most variety and most harmonious composition have the greatest scenic value. Another important concept is that the evaluation of scenic quality is done in relationship to the natural landscape. This does not mean that man-made features within a landscape necessarily detract from scenic value. Man-made features that compliment the natural landscape may enhance the scenic value. Evaluations should avoid any bias against man-made modification to the natural landscape (Bureau of Land Management 1986a).

Scenic quality in the area around the proposed project location is comprised of flat sandy terrain with little variation of color, vegetation, or texture. Water features are absent and adjacent scenery has no influence on the visual quality with the exception of the private land north of the site. Cultural modifications are evident and mainly concentrated in the southeast corner of this privately owned parcel with the most noticeable elements being fencing, structures, landscaping and the small building and cross at the top of Sunrise Butte. State Highway 98 is a two-lane asphalt road with dirt shoulders connecting the city of Calexico to the east to Interstate 8 in the

west. An unpaved road (BLM 389) connects to Highway 98 and passes to the west side of the proposed project location. This road trends south and provides OHV access to the desert areas and is frequently patrolled by border agents of the Department of Homeland Security (DHS). Several unmanned observation towers have been erected in this area of the Yuha Desert to provide surveillance and interception of illegal aliens entering the United States from Mexico. The nearest tower observed from the proposed project location is approximately 2 miles west-northwest.

The scenic quality rating summary from key viewpoints around the proposed project location resulted in scores of 5 points at each location. The BLM Visual Resource Inventory guidelines for visual quality are as follows.

- "A" equals a score of 19 or more;
- "B" equals a score from 12 to 18; and
- "C" equals a score of 11 or less

Based on these criteria, the visual quality rating for key viewpoints in the vicinity of the proposed cellular installation is assigned a "C" classification.

3.11.3 Distance Zones

Landscapes are subdivided into three distance zones based on relative visibility from travel routes or observation points. The three zones are foreground-middle ground, background, and seldom seen. The foreground-middle ground zone includes areas seen from highways, rivers, or other viewing locations which are less than 3-5 miles away. Areas beyond the foreground-middleground zone but usually less than 15 miles away are in the background zone. Areas not seen in either of these two zones are in the seldom-seen zone (Bureau of Land Management 1986b). For the proposed project, the foreground-middleground zone is the area where visual impacts would be most visible to commuters on Highway 98 and OHV users south of the site. This area is typified by a large flat basin south of Highway 98 with little contrast on color or texture. Sunrise Butte is the dominant landscape feature directly north of Highway 98 with the butte providing topographic variation to the flat desert landscape. Cultural modifications are evident on the Sunrise Butte property. The background zone consists of Cerro Centinela

(southeast), Cerro Colorado and Sierra Juarez mountain range (southwest), and the Jacumba Mountains (west). Other background zones north of Highway 98, with the exception of Sunrise Butte, offer little variation when compared to the foreground-middleground characteristics (Photos 1 and 2). There is one area of seldom-seen landscape that is north of Sunrise Butte and is blocked from most viewers due to its lower elevation. This area consists of eroded features and is moderately visually different from the majority of surrounding desert landscape.

3.11.4 Viewer Sensitivity

Judging viewer sensitivity to the proposed project is a subjective process. It is difficult to inventory every individual's sensitivity level and their concerns regarding change to the landscape. Generally a viewer's concern level can be quantified through the following factors:

Photo 1 Proposed location of the Verizon Wireless Sunrise Butte cellular tower site. Cerro Centinela (Mexico) in background at approximately 8 miles.

Photo 2 View southwest of site. Cerro Colorado and Sierra Juarez (Mexico) in background at approximately 6 and 10 miles respectively.

- Type of Users. Visual sensitivity will vary with the type of users. Recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change.

- Amount of Use. Areas seen and used by large numbers of people are potentially more sensitive. Protection of visual values usually becomes more important as the number of viewers increase.

- Public Interest. The visual quality of an area may be of concern to local, State, or National groups. Indicators of this concern are usually expressed in public meetings, letters, newspaper or magazine articles, newsletters, land-use plans, etc. Public controversy created in response to proposed activities that would change the landscape character should also be considered.

- Adjacent Land Uses. The interrelationship with land uses in adjacent lands can affect the visual sensitivity of an area. For example, an area within the view shed of a residential area may be very sensitive, whereas an area surrounded by commercially developed lands may not be visually sensitive.

- Special Areas. Management objectives for special areas such as Natural Areas, Wilderness Areas or Wilderness Study Areas, Wild and Scenic Rivers, Scenic Areas, Scenic Roads or Trails, and ACEC, frequently require special consideration for the protection of the visual values. This does not necessarily mean that these areas are scenic, but rather that one of the management objectives may be to preserve the natural landscape setting. The management objectives for these areas may be used as a basis for assigning sensitivity levels.

- Other Factors. Consider any other information such as research or studies that includes indicators of visual sensitivity (Bureau of Land Management 1986a).

Commuters along Highway 98 would be the primary group affected by the visual impacts to the landscape from the proposed cellular tower installation. This highway is mostly a two-lane conventional highway route serving interregional, intra-regional, and international travel, as well as providing an alternate route to Interstate 8. Additionally it supplies access to many

agricultural areas. Current use levels of Highway 98 past the proposed project location place the average daily traffic (ADT) count at 2,000 - 6,300, with a Level Of Service (LOS) rating of "B" (Imperial County, 2002). A LOS "B" rating describes traffic conditions that have no congestion, free to stable flow, with light to moderate volumes. At average travel speed, commuters traveling from west to east would have the cellular tower in view for approximately 1.5 minutes, from east to west the time would be approximately 1 minute. These commuters have a duration of view which is relatively short and would have moderate sensitivity to landscape change since many are frequent users of the travel route whose focus is constrained mainly to the road.

Another group of viewers affected by the proposed project would be recreational/OHV users. Based on current ground conditions, it appears that the proposed lease area has been used as a staging area for OHV use. This area is compacted, free of vegetation and provides access to the OHV roads south of Highway 98. It is likely that this area would continue to be used as an OHV staging area after the construction of the cellular installation. Off road travel in this area would be considered 'dispersed use' and is restricted to established unpaved roads, and because of special restrictions of the Class "L" Multiple Use Zone, OHV use is comparatively light. It is judged that viewers in this group would have low visual sensitivity to the proposed project since most activity takes place beyond the range of visual acuity and typical OHV use is not dependant on scenic quality.

Visitors to the faith-based compound would be affected by the proposed project due to its location immediately southeast of their property. The proposed installation is approximately 100-yards from the paved parking area of the compound and would be a strong impact to the existing visual landscape. It is judged that visitors to this site would have a high sensitivity to visual change due to the angle of observation and length of time the cellular tower would be in view. However, during the site visit it was noted that this compound may not be in active use; landscape vegetation was distressed, and no vehicles or persons were seen.

3.11.5 Visual Resource Management Goals

The visual resource inventory process combines the three elements of scenic quality, distance zones and viewer sensitivity to determine in which VRM the land should be placed. Generally land is assessed using Scenic Quality Rating Units (SQRU's) which subdivide the area into

single units based on physiographic characteristics, similar visual patterns, texture, color, variety, etc. In the case of the proposed Verizon Wireless Sunrise Butte cellular installation, four SQRU's were delineated.

- A foreground / middle ground unit that extends north and south of Highway 98 to a distance of 3-5 miles from the road;
- A second foreground / middle ground unit that defines the raised topography of Sunrise Butte north of Highway 98;
- A background unit that extends beyond the foreground / middle ground extent to the point where visual acuity diminishes; and,
- A seldom seen eroded area north of the Sunrise Butte faith-based compound parking area.

Using the matrix shown below, scores for the scenic quality, distance zones, and viewer sensitivity were applied to determine the VRM Classes.

		VIEWER SENSITVITY LEVEL						
		High			Medium			Low
SPECIAL AREAS		I	I	I	I	I	I	I
SCENIC QUALITY	A	II	II	II	II	II	II	II
	B	II	III	III* / IV*	III	IV	IV	IV
	C	III	IV	IV	IV	IV	IV	IV
		Foreground / Middleground	Background	Seldom Seen	Foreground / Middleground	Background	Seldom Seen	Seldom Seen
		DISTANCE ZONES						

* If adjacent area is Class III or lower assign Class III, if higher assign Class IV.

Table adapted from BLM 1986b.

It was determined that key viewpoints along Highway 98 and south on BLM 389 have a VRM IV rating, and the viewpoint in the parking area north of Highway 98 has a VRM III rating.

Visual Resource Management Classes described below identify the different degrees or modification allowed to the basic elements of landscape for each.

Class I. Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to wilderness areas, wild and scenic rivers, and other similar situations.

Class II. Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. Contrasts are seen, but must not attract attention.

Class III. Contrasts to the basic elements caused by management activity are evident, but should remain subordinate to the existing landscape.

Class IV. Any contrast attracts attention and is a dominant feature of the landscape in terms of scale, but it should repeat form, line, color, and texture of the characteristic landscape.

Class V. This classification is applied to areas where the natural character of the landscape has been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications. The classification also applies to areas where there is a potential to increase the landscape's visual quality. It will, for example, be applied to areas where unacceptable cultural modification has lowered scenic quality; it is often used as an interim classification until objectives of another class can be reached.

3.11.6 Visual Impact Assessment Methodology

To assess and illustrate the effect of the proposed project on visual resources, a series of photographs were taken at locations judged to be key visual viewpoints from the proposed project location (Figure 5). East and west viewpoints were established ¼-mile from the site on Highway 98, ½-mile south on BLM 389, and from the parking area located approximately 100-yards north. Existing condition photographs were taken at these locations and those that represented typical visual conditions were selected as candidates for 'before and after' illustrations of project impacts. Conceptual project elements were digitally added to the existing condition photographs. Photographs were taken of existing cellular installations that are similar in design to the proposed project and were used for the conceptual elements. Also, reference photographs were taken of towers of known heights and set distances (with the camera set at matching focal distance) to provide a method of scaling the conceptual elements.

Contrast ratings were assigned to each viewpoint by considering distance, angle of observation, length of time the project is in view, relativity to size or scale, season of use, light conditions, recovery time, spatial relationships, and atmospheric conditions. Contrasts that would be created by the proposed cellular installation were then rated as follows.

- Strong. The contrast demands attention, would not be overlooked by the average observer, and is dominant in the landscape.
- Moderate. The contrast begins to attract attention and begins to dominate the characteristic landscape.
- Weak. The contrast can be seen but does not attract attention.
- None. The contrast is not visible or not perceived.

Based on a comparison of the existing conditions and the conceptual photographs, an overall degree of visual change (contrast) value was assigned for each viewpoint. These values were characterized as strong, moderate, weak or none. These visual contrast ratings were considered along with the VRM classifications to determine if the management objectives have been met.

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Source: Google Earth aerial photograph, 2005.

FIGURE 5

LOCATION OF PHOTO VIEWPOINTS
SUNRISE BUTTE SITE,
IMPERIAL COUNTY, CALIFORNIA

TETRA TECH

3.11.7 Results of Visual Sensitivity and Contrast Rating Analysis

The results of the viewer sensitivity and contrast rating analysis are presented for each key observation viewpoint.

3.11.7.1 Viewpoint 1 – BLM Road 389

The viewpoint on BLM road 389 was established ½ mile south of the proposed project location (Photo 3 and 4). Photo simulation of the cellular installation shows that the tower would be relatively visible at this distance but would not be a focal point in the scenic landscape. The angle of light falling on the tower would amplify the reflectance of the structure but the scale of the tower and distance from the viewpoint limits the visual acuity. Additionally, the interruption of the predominant line and form by Sunrise Butte serves to further mitigate the additional contrast that would come from the proposed project. The visual resource management objective for this viewpoint is VRM IV which provides for major modifications of the existing characteristic landscape where the level of change can be high. These activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities (Bureau of Land Management 1986a). The visual simulation photograph demonstrates that the visual impact does not exceed this directive and that the VRM objectives for this location have been met.

3.11.7.2 Viewpoint 2 – Route 98 West

This viewpoint was established ¼ mile west of the proposed project location on Highway 98 (Photo 5 and 6). Photo simulation from this location shows the cellular installation situated at the top of a small rise with the tower, equipment building, and new power poles along the south side of Highway 98. The existing highway pavement, power poles and fence line serve to further ameliorate the visual contrast of the proposed project by adding contrast elements to the landscape. The visual resource management objective for this viewpoint is VRM IV and has the same visual objective outlined in viewpoint 1 above. The visual simulation photograph demonstrates that the visual impact does not exceed this directive and that the VRM objectives for this location have been met.

Photo 3 Existing visual conditions from 1/2 mile south of proposed project location. View is looking north along BLM 389.

Photo 4 Photo simulation of project impacts to the visual landscape.

Photo 5 Existing visual conditions from 1/4 mile west of proposed project location. View is looking east along Highway 98.

Photo 6 Photo simulation of project impacts to the visual landscape.

3.11.7.3 Viewpoint 3 – Route 98 East

This viewpoint was established ¼ mile east of the proposed project location on Highway 98 (Photo 7 and 8). Photo simulation from this location shows the cellular installation situated on the south side of Highway 98 with Sunrise Butte to the north and the Jacumba Mountains in the background. The existing highway pavement, the topographic contrast of Sunrise Butte, and the structures seen within the faith-based compound serve to further ameliorate the visual contrast of the proposed project by adding contrast elements to the landscape. The visual resource management objective for this viewpoint is VRM IV and has the same visual objective outlined in viewpoint 1 above. The visual simulation photograph demonstrates that the visual impact does not exceed this directive and that the VRM objectives for this location have been met.

3.11.7.4 Viewpoint 4 – Parking Area

This viewpoint was established approximately 100-yards north of the proposed project location in a parking area (Photo 9 and 10). Photo simulation from this location shows the cellular installation along with the new power poles as being dominate features in the visual landscape. The visual resource management objective for this viewpoint is VRM III which provides for a moderate level of change and should partially retain the existing characteristic landscape. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found predominately in the natural features. The visual simulation photograph demonstrates that strong impacts are noted to form and line by the cellular tower but with 'weak' to 'none' impact in the remaining vegetation and land/water categories. Viewer sensitivity from this viewpoint was judged to be high, but the number of viewers that may be associated with this viewpoint is judged to be extremely low which serves to ameliorate impacts. By comparing the number of viewers that may be affected by the proposed cellular installation against the VRM III objectives it was determined that the management goals have been met for this location. However, mitigation measures should be applied where feasible to minimize the visual impacts.

The Visual Resource Inventory has assigned interim VRM III and VRM IV management objectives to the proposed Verizon Wireless cellular installation. Given this criteria, it was determined that VRM objectives for viewpoints 1, 2, 3 and 4 are met with further mitigation measures recommended to minimize visual impacts observed from viewpoint 4.

Photo 7 Existing visual conditions from 1/4 mile east of proposed project location. View is looking west along Highway 98.

Photo 8 Photo simulation of project impacts on the visual landscape.

Photo 9 Existing visual conditions from parking area of religious compound. View is looking south across Highway 98 with the proposed cellular installation lease area approximately 100-yards from viewpoint.

Photo 10 Photo simulation of project impacts on the visual landscape.

Similar tower structures have been constructed in the vicinity of the proposed project. Several unmanned observation towers for the DHS were noted that have similar height and design as the proposed cellular tower. These towers establish precedence for acceptability for this kind of structure in this location and infer that VRM objectives can be met.

Engineering requirements for a cellular installation do not offer much flexibility for design changes that would mitigate visual impacts. The tower design height and support structure is determined by project needs. However, some cosmetic elements can be incorporated into the design to help the features blend with the existing environment. Examples of possible treatments would be as follows.

- Use earth-tone paints and stains to support structures and fencing;
- Self-weathering steel should be used where feasible; and
- Paint surfaces with coatings that have low reflectivity characteristics.

Incorporation of these mitigation measures alone would not completely eliminate visual impacts since the contrasts to form and line would remain 'strong'; however, the location of the proposed project is in close proximity to Highway 98 and the Sunrise Butte religious compound where cultural impacts have changed the visual landscape with structures, grading, and non-native landscaping. This tends to ameliorate the impact to the visual landscape since there are existing features that disrupt the surrounding natural environment.

3.12 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

In this chapter, consequences to the environment from the proposed project and the no-action alternative are analyzed. The purpose of the environmental evaluation is to identify the maximum potential environmental effects of the proposed action and to discuss mitigation measures for identified impacts.

3.13 PROPOSED PROJECT AND NO ACTION ALTERNATIVE

3.14 GEOLOGY

3.14.1 Criteria for Geologic Resources Impacts

An adverse impact on geologic resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Construction activities or siting of the proposed wireless cellular site would worsen existing unfavorable geologic conditions; or
- Geologic hazard could cause a rupture or failure that could cause substantial damage to the project that would present an increased threat to public safety.

3.14.2 Impact and Mitigation for Proposed Action

Construction and operation of the wireless cellular facility would not materially alter the geological conditions of the project area. The project would be an un-manned facility and any damage to the structure from a rupture along the Laguna Salada fault zone located approximately ¼ mile to the west would not present an increased threat to public safety.

3.14.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. Geologic conditions in the area would remain unaltered. The Laguna Salada fault zone activity would remain unchanged.

3.15 SOILS

3.15.1 Criteria for Soils Resources Impacts

An adverse impact on soils resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Increase erosion rates or reduce soil productivity by compaction or soil mixing to a level that would prevent successful rehabilitation and eventual re-establishment of vegetative cover to the recommended or preconstruction composition and density; or

- Reduce agricultural productivity for longer than three years as a result of soil missing, structural damage or compaction.

3.15.2 Impact and Mitigation

The soils associated with the proposed project are classified as sandy soils with little or no soil horizon formation. These soils have not been identified as prime or unique farmland soils requiring conservation. No adverse impacts would occur to soils classified as prime and/or unique farmland soils. Construction of the project will place equipment on soils causing compaction from heavy wheels. A total of 1.37 acres will be impacted by project construction. A total of 0.64 acres located on lands managed by the BLM would be impacted (Figure 3). Of the 0.64 acres impacted, 0.56 acres and 0.08 acres would be temporarily and permanently impacted, respectively by the proposed project. A total of 0.73 acres (0.30 hectares) of private land located within the CalTrans ROW would be impacted by the proposed project. This would be a temporary impact during construction of utility access to the site. The ROW and the area adjacent to BLM Road 389 have been impacted by off-road users accessing the area and soils have been disturbed. As a result, no adverse impacts to undisturbed soils would occur from the proposed project.

3.15.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The soils associated with the project area would remain unaltered.

3.16 WATER RESOURCES AND FLOODPLAINS

3.16.1 Criteria for Water Resources Impacts

An adverse impact on water resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Alter the flow of groundwater to local springs or wetland areas;
- Interrupt or degrade groundwater used for private or municipal purposes; or
- Result in either short- or long-termed violations of Federal, tribal, or State agency numerical water quality standards or water quality objectives.

3.16.2 Impact and Mitigation

Construction of the proposed project would not require groundwater or surface water resources for implementation. Operation of the wireless cellular site would not require groundwater or surface water resources. No adverse impacts in groundwater or surface water resources wouldoccur from the proposed project. Water quality parameters associated with groundwater and surface water resources in the area would not be adversely impacted from the proposed project.

3.16.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The water resources associated with the project area would retain their current status for withdrawal rates and quality standards.

3.16.4 Criteria for Floodplain Resources Impacts

An adverse impact on floodplain resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Increase the potential for flooding outside the stream channel; or
- Place permanent structures within the 100-year floodplain that would be damaged by flooding.

3.16.5 Impact and Mitigation

The proposed project will not be built or operated in a flood plain. Based on a review of the Federal Emergency Management Agency (FEMA) flood plain map for the region, the project is not near a flood plain. Therefore no adverse impacts on the floodplain and consequently increases to flooding hazards downstream would occur from the proposed project.

3.16.6 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The

floodplains found in the region would remain unaffected. Flood plain hazards would remain as currently mapped by FEMA.

3.17 AIR QUALITY

3.17.1 Criteria for Air Quality Resources Impacts

An adverse impact on air quality resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Conflict with or obstruct implementation of an applicable air quality or attainment plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in cumulatively considerable net increase of any criteria pollutant for which the proposed project region is in a non-attainment status under an applicable Federal or State ambient air quality standard including releasing emissions that exceed quantitative thresholds for ozone precursors;
- Expose the public especially sensitive receptors such as schools, day care centers, hospitals, retirement homes, convalescences facilities and residences to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to one in a million and/or a hazard index (non-cancerous risk) greater than or equal to 0.1; or
- Create objectionable odors affecting a substantial number of people or affecting a less number of people for a substantial duration.

3.17.2 Impact and Mitigation

Construction and operation of the proposed wireless cellular site will not violate Federal or State ambient air quality standards. A diesel fuel powered generator that will comply with current standards for controlling emissions from a diesel fuel burning engine, will be on site for emergency use only. The occasional and rare use of the generator would not adversely impact air quality locally or regionally. Construction workers will use motor vehicles to travel to and from the site during construction adding minor emissions to the air and will not adversely impact

ambient air quality associated with the region and will maintain compliance with Imperial County's Air Pollution Control District.

3.17.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. Air quality for the region would remain in its current status. No impacts in air quality would occur.

3.18 HAZARDOUS AND TOXIC WASTES

3.18.1 Criteria for Hazardous and Toxic Waste Impacts

An adverse impact from hazardous and toxic waste would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- If Recognized Environmental Concerns (RECs) were present within the proposed project area.

3.18.2 Impact and Mitigation

A Phase I Environmental Site Assessment was completed for the project area and no RECs were identified (Tetra Tech 2007c). Identified hazardous and toxic waste is not present on the site and no records of hazardous and toxic waste have been identified within a one-mile search radius from the site. Therefore, no adverse impacts to the site or proposed project would occur from hazardous and toxic waste.

Waste and garbage generated during construction will be removed from the site on a daily basis. Best management practices would be used to ensure that all equipment used during construction will not drip oils or fuels onto the ground. In the event of a petroleum fuel leak, any fluids on the ground would be contained and removed from the site in proper containers and disposed of at an appropriate facility.

3.18.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The condition of no RECs with the general area would potentially remain the same.

3.19 BIOLOGICAL RESOURCES

3.19.1 Criteria for Biological Resources Impacts

An adverse impact on biological resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- If the project disturbed a substantial portion of the vegetation type within a local region to the point where natural or enhanced regeneration could not restore the vegetation to its preconstruction condition within three years;
- Result in long term (more than five years) reduction or alteration of unique, rare or special concern vegetation types, riparian vegetation, or natural communities;
- Introduce new or lead to the expansion of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities;
- Change the diversity or substantially alter the numbers of a local population of any wildlife or aquatic species, or interfere with the survival, growth or reproduction of affected wildlife and fish populations;
- Substantially interfere with the movement or range of migratory birds and other wildlife;
- Substantially reduce the abundance of species under the protection of the Migratory Bird Treaty Act;
- Result in a substantial long-term loss of wildlife;
- Reduce the abundance of sensitive species that occur within the project area;
- Result in the loss or alteration of designated or proposed critical habitat or ACEC for one or more listed species;
- Cause a temporary loss or alteration of habitat important for one or more listed species that could cause increase mortality or lowered reproductive success of the species; or

- Result in direct or indirect impacts on candidate or sensitive species populations, or habitat that would contribute to or result in the Federal or State listing of the species.

3.19.2 Impact and Mitigation

Although no sensitive species were observed, the proposed project is located in an ACEC and Flat-tailed Horned Lizard Management Area where management goals have been set for the conservation of flat-tailed horned lizard. Implementation of the project would disturb a total of 1.37 acres of both permanent and temporary impacts of potential habitat likely to support the flat-tailed horned lizard. Habitat surrounding the project site is relatively undisturbed and likely to support the flat tailed horned lizard making it likely for this lizard to be found on the project site during construction. A total of 0.64 acres located on lands managed by the BLM would be impacted (Figure 3). Of the 0.64 acres impacted, 0.56 acres and 0.08 acres would be temporarily and permanently impacted, respectively by the proposed project. A total of 0.73 acres (0.30 hectares) of private land located within the CalTrans ROW would be impacted by the proposed project. This would be a temporary impact during construction of utility access to the site. The ROW and the area adjacent to BLM Road 389 have been impacted by off-road users accessing the area and soils have been disturbed. Although habitat quality on the proposed project site is poor due past disturbances in the Caltrans right of way for the flat tailed horned lizard, the following mitigations that are consistent with the 2003 Management Strategy are specified for ensuring no accidental take of this sensitive reptile (Flat-Tailed Horned Lizard Interagency Coordinating Committee 2003).

Prior to construction within the lease area, staging construction equipment within the temporary staging area or placement of the power poles, the area will require clearance for any lizards present.

1) During construction, a biologist will flag or clearly mark the boundaries of the project area. All work will be conducted and/or staged within the delimited area.

2) A field contact representative and/or biological monitor will ensure project compliance with all designated protective measures for flat-tailed horned lizard. The field contact representative will have the authority and responsibility to halt activities that are in violation with terms and conditions that ensure project compliance.

3) A biological monitor will be present at the project area throughout the work day from the initial staging and clearing to project completion. If the project area is fenced and cleared for flat tailed horned lizard, an on-site monitor may not be required. If fencing is determined to be required, mesh size and design of the fence must be approved by the BLM. The biological monitor will perform the following activities.

    a. Develop and implement a worker education program. Wallet cards summarizing this information will be provided to all construction workers and maintenance personnel. The education program will include the following information.

        i. Biology and status of the flat tailed horned lizard;

        ii. Protection measures designed to reduce potential impacts to the species;

        iii. Function of flagging designated authorized work areas;

        iv. Reporting procedures to be used in a flat tailed horned lizard is encountered in the field; and

        v. Importance of exercising care when commuting to and from the project area to reduce mortality of flat tailed horned lizards on road.

    b. Ensure that all project-related activities comply with these measures. The biological monitor will have the authority and responsibility to halt activities that are in violation of these terms and conditions.

    c. Examine areas of active surface disturbance periodically (at least hourly when surface temperatures exceed 85° F) for the presence of flat tailed horned lizards. In addition, all hazardous sites (e.g., open pipeline trenches, hole or other deep excavations) shall be inspected for the presence of flat-tailed horned lizards prior to backfilling.

    d. Work with the project supervisor to take steps, as necessary, to avoid disturbance to flat tailed horned lizards and their habitat. If avoiding disturbance is not possible or if a flat tailed horned lizard is found trapped in an excavation, the affected lizard shall be captured by hand and relocated.

4) The proposed project is a permanent facility where continuous activities such as routine maintenance are planned. The BLM may require lizard fencing to prevent flat tailed horned lizards from wandering into the project site. If required, fencing as specified in Flat-Tailed Horned Lizard Rangewide Management Strategy (Flat-Tailed Horned Lizard Interagency Coordinating Committee 2003) will be placed around the project area to prevent lizards from entering into the project area.

In addition to mitigations identified by the BLM, monetary compensation for the permanent loss of habitat as represented by the project will be required. The compensation ratio will be determined by the BLM based on the total acres of habitat loss. If the project is approved, a right-of-way from the BLM will not be finalized until mitigation compensation has been received from the proponent.

A portion of the project is located in the Caltrans right of way that has been disturbed in the past due to construction and maintenance activities associated with State Route 98. As identified earlier in this section, the permanent structures associated with the permanent project as well as temporary construction areas are mostly associated with areas disturbed by the CalTrans ROW and off-roader users accessing BLM Road 389. As a result, the proposed project would not introduce or cause substantial increase in non-native plants already found in the area. Native vegetation in the project area is sparse and removal of those native plants, primarily creosote, would not disturb a substantial portion of the desert scrub plant community characteristic of the region.

With proper mitigations such as preconstruction clearance and monitoring during construction in place, the project is not likely to adversely affect flat-tailed horned lizard and will help to reduce any potential impacts to non-sensitive wildlife common to the area. Project construction and operation will not substantially change the diversity or alter the numbers of wildlife found in the area.

Project construction and operation will not substantially interfere with the movement or range of migratory birds or wildlife or reduce their numbers. The overall permanent area for the project is approximately 3,521 square feet in dimension.

Project construction and operation will not result in substantial long-term loss of wildlife or reduce the abundance of sensitive species in the project area. A total of 1.37 acres of desert habitat in the Yuha ACEC will be impacted by the proposed project. This loss will be mitigated by payment of a compensatory fee paid by the project proponent. With the mitigations in place, the proposed project will not cause a direct or indirect impact on a candidate or sensitive species population.

3.19.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The biological resources associate with the region would remain unaffected. Habitat likely to support flat-tailed horned lizard would remain undisturbed.

3.20 CULTURAL RESOURCES

3.20.1 Criteria for Cultural Resources Impacts

An adverse impact on cultural resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Physical destruction of or damage to all or part of a historic or prehistoric property;
- Change in the character of a historic or prehistoric property's use or of physical features within a property's setting that contribute to its historic significance such as isolating the property from its setting; and
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

3.20.2 Impact and Mitigation

"Historic properties," as defined by the Advisory Committee on Historic Preservation (the body charged with implementing the National Historic Preservation Act of 1966 [as amended]) include any "…prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" Title 36 Code of Federal Regulations (36 CFR) §800.16(1). The National Park

Service (NPS) has developed four criteria for determining eligibility for inclusion in NRHP (36 CFR 60.4):

'The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity, design, setting, materials, workmanship, feeling, and association; and

That are associated with events that have made a significant contributions to the broad patterns of our history; or

That are associated with the lives of persons significant in our past; or

That embody the distinctive of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

That has yielded, or may be likely to yield, information important in prehistory or history'.

Section 106 of the National Historic Preservation Act of 1966 (as amended) requires that federal agencies take into account the effects of their undertakings on "historic properties" and seek ways to avoid, minimize, or mitigate any adverse effects on such properties (36 CFR 800.1(a)).

No cultural resources were identified within the proposed project area for the construction of the proposed wireless cellular site. Thus, no "historic properties" shall be affected by the undertaking as currently proposed.

No further cultural resources investigation is necessary for the proposed undertaking unless project plans undergo such changes as to include areas not covered by this investigation.

If buried cultural materials are identified during construction activities, all work in that area should be halted or diverted until a qualified archaeologist (one meeting the *Secretary of the Interior's Standards and Guidelines*) can evaluate the nature and significance of the finds.

If human remains are discovered in the course of boring activities (and/or attendant construction activities), all work in that area should be halted or diverted until the Imperial County Coroner's Office is notified and that office offers an opinion/disposition. Notification of the appropriate County Coroner shall occur within 24 hours of discovery.

3.20.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The cultural resources associate with the region would remain unaffected.

3.21 RECREATION

3.21.1 Criteria for Recreation Impacts

An adverse impact on recreational resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Result in reduction in the quality of the recreation experience for more than one visitor use season (such as from increased noise and dust, reduced visual quality from landscape modifications and night illumination, and reduced visibility.); or
- Prevent access to an established recreation area during its peak use periods or for more than one year.

3.21.2 Impact and Mitigation

The proposed project would not restrict access to the Yuha Desert ACEC for recreational visitors. Operation of the project would not generate dust or emissions that would degrade the recreational use of the area. Construction of the project would occur in a small area (less than 2 acres) and no restrictions for approved recreational use of the Yuha Desert ACEC would occur.

3.21.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The recreational resources associated with the region would remain unaffected.

3.22 SOCIOECONOMICS AND PUBLIC SERVICES

3.22.1 Criteria for Socioeconomics and Public Services

An adverse impact on socioeconomic and public services resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Cause a permanent population increase of three percent or more in a county affected by the proposed project;
- Cause the vacancy rate for temporary housing to fall to less than five percent; or
- Increase the short- or long-term demand for public services in excess of existing and projected capacities.

3.22.2 Impact and Mitigation

The proposed project would provide cellular coverage for an area currently not experiencing reception. This area is an ACEC as designated by the BLM and not likely subject to extensive development. No permanent increase on the population for the region would occur from the project. Up to eight workers will be needed to lay the foundations for the cellular site and up to five workers to complete the project. No adverse impacts on temporary housing status or an increase to the short- or long-term demand on public service would occur from the project.

3.22.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The socioeconomics and public safety associate with the region would remain unchanged.

3.23 VISUAL RESOURCES

3.23.1 Criteria for Visual Resource Impacts

An adverse impact on visual resources would be dependent on the extent and degree to which implementation of the proposed project would impact this resource as follows.

- Cause inconsistency with adopted VRM plans or local ordinances;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

3.23.2 Impact and Mitigation

The Visual Resource Inventory has assigned interim VRM Class III and VRM Class IV management objectives to the proposed Verizon Wireless cellular installation. VRM Class III allows for contrasts to basic elements caused by management activity to be evident but remain subordinate to the existing landscape. VRM Class IV allows for any contrast to attract attention and to be a dominant feature of the landscape in terms of scale, but that it should repeat form, line, color, and texture of the characteristic landscape. Given this criteria, it was determined that VRM objectives for viewpoints 1, 2, 3 and 4 are met with further mitigation measures recommended to minimize visual impacts observed from viewpoints 3 and 4.

Similar tower structures have been constructed in the vicinity of the proposed project. Several unmanned observation towers for the Department of Homeland Security were noted that have similar height and design as the proposed cellular tower. These towers establish precedence for acceptability for this kind of structure in this location and infer that VRM objectives can be met.

Engineering requirements for a cellular installation do not offer much flexibility for design changes that would mitigate visual impacts. The tower design height and support structure is determined by project needs. However, some cosmetic elements can be incorporated into the design to help the features blend with the existing environment. Examples of possible treatments would be as follows.

- Use earth-tone paints and stains to support structures and fencing;
- Self-weathering steel should be used where feasible; and
- Paint surfaces with coatings that have low reflectivity characteristics.

Incorporation of these mitigation measures alone would not completely eliminate visual impacts since the contrasts to form and line would remain ‘strong.’ However, the location of the proposed project is in close proximity to Highway 98 and the Sunrise Butte religious compound where cultural impacts have changed the visual landscape with structures, grading, and non-native landscaping. This tends to ameliorate the impact to the visual landscape since there are existing features that disrupt the surrounding natural environment.

3.23.3 No Action Alternative

Under the No Action Alternative, the BLM would not approve the project. Cellular reception and access to emergency services in the region would remain poor or non-existent. The visual resources associated with the region would remain unchanged.

4.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

A discussion of potential irreversible and irretrievable commitments of resources under the build and the No Action Alternative is a required topic under NEPA. This section describes what important resources would be used or removed by the project and the No Action Alternative. These include materials, labor and energy needed to build and operate the project, land and present uses of that land directly taken to build the project, environmental conditions degraded or destroyed by the project and public services capabilities used by the project.

The following resources will not be used or removed by the proposed wireless cellular site and therefore, no loss of a non-renewable resource would occur. No adverse impacts would occur from the proposed project.

- Geology and Soils;
- Water Resources and Flood Plans;
- Air Quality;
- Hazardous and Toxic Wastes;
- Cultural Resources;
- Recreation; and
- Socioeconomics.

For Biological Resources, a direct and indirect loss of habitat designated for use by flat-tailed horned lizards as part of their continued management would occur from the project. The direct loss of habitat from the project footprint would be 3,521 square feet (0.08 acres) and indirect loss due to construction disturbance would be 56,472 square feet (1.29 acres) for a total of 59,993 square feet (1.37 acres). This loss would be mitigated at a negotiated rate per acre of loss and the

subsequent mitigation fee paid by the proponent into a conservation bank designated by the BLM, the lead agency for this project. The project would allow other wireless carriers the opportunity to co-locate their devices thus reducing impacts associated with other similar projects. On-site biological monitoring activities during construction would prevent direct injury or death to any flat-tailed horned lizards that wander on site.

The Visual Resource Inventory has assigned interim VRM Class III and VRM Class IV management objectives to the proposed project. Although no direct loss from the proposed project were determined for viewpoints 1, 2, 3 and 4, further mitigation measures were recommended to minimize visual impacts observed from one viewpoint associated with the faith-based facility immediately north of the project site. These mitigations would ameliorate impacts to the viewscape such that the wireless cellular facility will blend in better with existing structures.

5.0 GROWTH-INDUCING IMPACTS

This section discusses ways in which the proposed project could foster economic or population growth or induce additional housing, either directly or indirectly, in the surrounding area. The proposed project would provide cellular coverage for the region where cellular reception and access to emergency services is currently poor or non-existent. Improvement to cellular coverage would improve emergency services as well as general communication in the region. The demand for cellular coverage in this area is already in place based on existing customer demand and projected regional development. The proposed project would meet existing need as well as projected growth of the region but in and of itself would not induce the projected growth in demand for cellular telephone coverage. Therefore, the proposed expansion of cellular coverage for the region as enhanced by the proposed project would not have intrinsic growth-inducing impacts.

6.0 ENVIRONMENTAL JUSTICE

On February 11, 1994, President Clinton issued Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority and Low Income Populations. This order requires that “each federal agency make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-

income populations" (EO 12898, 59 FR 7629 [Section 1-101]). Environmental justice requires fair treatment of all people regardless of race, color, national origin, or income level and that no group should bear a disproportionate share of the environmental cost or other burdens of federal, state or local projects or programs. The proposed project would be located in an undeveloped part of Imperial County. No minority or low-income populations are located adjacent or within the region of the Proposed Action. There are no disproportionately high and/or adverse human health or environmental effects from the Proposed Action or the No-Action Alternative on minority populations and low-income populations.

7.0 CUMULATIVE IMPACTS

The Council on Environmental Quality (CEQ) regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or persons undertakes such other actions." (Council on Environmental Quality 1997) Cumulative effects are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur at the same time or in a similar location. Actions overlapping with or close to the Proposed Action would be expected to have more potential for a relationship than actions that are more geographically separated. Actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

7.1 CUMULATIVE PROJECTS AND PLANS

The proposed project site would allow co-location of other wireless carriers. These projects would be located within the proposed Area of Potential Effect described by this project. Thus, foreseeable similar projects would not cause a cumulative impact to biological resources or to visual resources. Co-location of other wireless carriers at the project site would prevent cumulative impacts on biological and visual resources associated with the project area. Enhancement of wireless communication coverage in adjacent areas from this proposed project or subsequent co-location of other wireless carriers will not cause foreseeable cumulative impacts to biological or visual resources. Any impacts to biological or visual resources would have already occurred and appropriate mitigations would have been enacted and/or applied.

7.2 MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES FOR CUMULATIVE IMPACTS

No cumulative effects from the proposed project are likely to occur from the proposed project. No mitigation measures or Best Management Practices for cumulative effects are required.

8.0 CONSULTATION AND COORDINATION

The agencies and individuals that were contacted during the course of preparing this document are listed below.

8.1 FEDERAL AGENCIES

Bureau of Land Management

Information from the following Federal Agencies as it related to the proposed project or region was gathered from the Internet

United States Department of Agriculture

United States Department of Energy

United States Fish and Wildlife Service

8.2 STATE AGENCIES

California Department of Fish and Game (California Natural Diversity Database)

8.3 LOCAL/REGIONAL AGENCIES

Information from the following Local/Regional Agencies as it related to the proposed project or region was gathered from the Internet.

County of Imperial

Air Quality Management District

9.0 ACRONYMS

ACEC	Area of Critical Ecological Concern
AP	Alquist-Priolo
APE	Area of Potential Effect
APN	Assessor Parcel Number
ATC	American Tower Corporation
BLM	Bureau of Land Management
BP	Before Present
CARB	California Air Resources Board
CDCA	California Desert Conservation Act
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
CO	Carbon Monoxide
DHS	Department of Homeland Security
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FEMA	Federal Emergency Management Agency
FLMP	Federal Land Policy Management
FONSI	Finding of No Significant Impact
IID	Imperial Irrigation District
LOS	Level Of Service
NAAQS	National Ambient Air Quality Standards

NADB	National Archeological Data Base
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO2	Nitrogen Oxide
NPS	National Park Service
O3	Ozone
OHV	Off Road Vehicle
Pb	Lead
PPM	Part per Million
REC	Recognizable Environmental Concern
RF	Radio Frequency
ROI	Region of Influence
SO2	Sulfur Dioxide
SQRU	Scenic Quality Rating Unit
ROW	Right of Way
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management

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